

**Appendix-I**

**Government of Gilgit-Baltistan  
Syllabus for Gilgit-Baltistan Combined Competative Examination  
(GB-CCE), 2021 onwards**

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**GILGIT-BALTISTAN COMBINED COMPETATIVE EXAMINATION  
SCHEME OF GB COMPETATIVE EXAMINATION  
MAIN EXAMINATION (900 MARKS)**

**A: COMPULSORY SUBJECTS (600 MARKS)**

| Code No. | Subjects   | Marks |
|----------|--|-------|
| 1        | English General and Essay  | 150   |
| 2        | Urdu General and Essay   | 150   |
| 3        | Current Affairs and Pakistan Affairs   | 150   |
| 4        | Islamic Studies <b>OR</b> Comparative study of Major Religions (for Non-Muslims) | 150   |
|          | <b>Total</b>   | 600   |

**B: OPTIONAL SUBJECTS (300 MARKS)**

A candidate shall take two of the optional subjects with the condition that not more than one subject shall be taken from each group.

**Group-I** (To select one subject of 150 marks)

| Code No. | Subjects                | Marks |
|----------|-------------------------|-------|
| 5        | Accountancy & Auditing  | 150   |
| 6        | Economics               | 150   |
| 7        | Computer Science        | 150   |
| 8        | Political Science       | 150   |
| 9        | International Relations | 150   |

**Group-II** (To select one subject of 150 marks)

| Code No. | Subjects            | Marks |
|----------|---------------------|-------|
| 10       | Physics             | 150   |
| 11       | Chemistry           | 150   |
| 12       | Applied Mathematics | 150   |

|    |                  |     |
|----|------------------|-----|
| 13 | Pure Mathematics | 150 |
| 14 | Statistics       | 150 |
| 15 | Geology          | 150 |

**Group- III** (To select one subject of 150 marks).

| Code No. | Subjects                           | Marks |
|----------|------------------------------------|-------|
| 16       | Business Administration            | 150   |
| 17       | Public Administration              | 150   |
| 18       | Governance and Public Policies     | 150   |
| 19       | Town Planning and Urban Management | 150   |

**Group- IV** (To select one subject of 150 marks).

| Code No. | Subjects                      | Marks |
|----------|-------------------------------|-------|
| 20       | History of Pakistan and India | 150   |
| 21       | Islamic History and Culture   | 150   |
| 22       | British History               | 150   |
| 23       | European History              | 150   |
| 24       | History of USA                | 150   |

**Group- V** (To select one subject of 150 marks).

| Code No. | Subjects               | Marks |
|----------|------------------------|-------|
| 25       | Gender Studies         | 150   |
| 26       | Environmental Sciences | 150   |
| 27       | Agriculture & Forestry | 150   |
| 28       | Botany                 | 150   |
| 29       | Zoology                | 150   |
| 30       | English Literature     | 150   |
| 31       | Urdu Literature        | 150   |

**Group- VI** (To select one subject of 150 marks).

| Code No. | Subjects                   | Marks |
|----------|----------------------------|-------|
| 32       | Law                        | 150   |
| 33       | Constitutional Law         | 150   |
| 34       | International Law          | 150   |
| 35       | Muslim Law & Jurisprudence | 150   |
| 36       | Mercantile Law             | 150   |
| 37       | Criminology                | 150   |
| 38       | Philosophy                 | 150   |

**Group- VII** (To select one subject of 150 marks).

| Code No. | Subjects                        | Marks |
|----------|---------------------------------|-------|
| 39       | Journalism & Mass Communication | 150   |
| 40       | Psychology                      | 150   |
| 41       | Geography                       | 150   |
| 42       | Sociology                       | 150   |
| 43       | Anthropology                    | 150   |
| 44       | Persian                         | 150   |
| 45       | Arabic                          | 150   |

**Note-1.** The question papers in Urdu, Persian and Arabic should be answered in the respective languages. However, questions relating with translation from respective language into English or vice versa may be answered as directed in the question paper.

**Note-2.** Ratio of MCQs in compulsory papers will be atleast 20 MCQs in each paper. Similarly, there will be 20 MCQs from each optional paper except Pure Mathematics and Applied Mathematics.

**Note-3.** The question paper in Islamic Studies OR Comparative Study of Major Religions (for Non-Muslims) is to be answered in English OR Urdu only. All other papers must be answered in English unless otherwise directed in the question paper.

**Note-5.** Non-Muslim candidates may either opt Islamic Studies OR Comparative Study of Major Religions as may suit to them.

**PAPER: ENGLISH GENERAL & ESSAY**

**(150 MARKS)**

The examination in this subject will be based upon a paper carrying 150 marks to Test the candidate's abilities to handle Precis Writing, Reading Comprehension, Sentence Structuring, Translation, Grammar, Vocabulary, etc. and Essay Writing.

**I. Precis Writing (20 marks)**

A careful selected passage with an orientation of generic understanding and enough flexibility for compression shall be given for précising and suggesting an appropriate title. Out of the total 20 marks allocated to this question, 15 shall go to précising the text and 5 to suggesting the title.

**II. Reading Comprehension (20 marks)**

A carefully selected passage that is rich in substance but not very technical or discipline-specific shall be given, followed by five questions, each carrying 4 marks.

**III. Grammar and Vocabulary (20 marks)**

Correct usage of Tense, Articles, Prepositions, Conjunctions, Punctuation, Phrasal Verbs, Synonyms and Antonyms etc.

**IV. Sentence Correction (10 marks)**

The sentences shall be given each having a clear structural flaw in terms of grammar or punctuation. The candidates shall be asked to rewrite them with really needed correction only, without making unnecessary alterations. No two or more sentence should have exactly the same problem, and 2-3 sentences shall be based on correction of punctuation marks.

**V. Grouping of Words (10 marks)**

A random list of twenty words of moderate standard (neither very easy nor utterly unfamiliar) shall be given, to be grouped by the candidates in pairs of those having similar or opposite meaning, as may be clearly directed in the question.

**VI. Pairs of Words (10 marks)**

Ten pairs shall be given of seemingly similar words with different meanings, generally confused in communication, for bringing out the difference in meaning of any five of them by first explaining them in parenthesis and then using them in sentences.

**VII. Translation (10 marks)**

Ten short Urdu sentences involving structural composition, significant terms and figurative/idiomatic expressions shall be given, to be accurately translated into English.

**VIII. English Essay (50 marks)**

Candidates will be required to write one or more Essay in English. A wide choice of topics will be given.

Candidates are expected to reflect comprehensive knowledge on a selected topic. Candidate's articulation, expression and technical treatment of the style of English Essay writing will be examined.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>                 | <b>Author</b>   |
|--------------|------------------------------|---|
| 1.           | English Grammar in Use       | Raymond Murphy (Cambridge University Press).                            |
| 2.           | Practical English Usage      | M.Swan (Oxford University Press).                                       |
| 3.           | The Little, Brown Handbook   | H. Ramsey Flower & Jane Aaron (The Little, Brown & Co; Harper Collins.) |
| 4.           | A University English Grammar | R. Quirk & S. Greenbaum (ELBS; Longmans)                                |
| 5.           | Write Better, Speak Better   | Readers Digest Association.   |
| 6.           | Modern English in Action     | Henry Christ (D.C. Heath & Co.)   |

## PAPER: URDU GENERAL &amp; ESSAY

(150 MARKS)

## اردو (لازمی)

|  |     |                     |   |
|--|-----|---------------------|---|
| تاریخ زبان و ادب   | 35  | ۶- (نثر)            |   |
| تلخیص  | 15  | (الف) شبلی نعمانی   | سیرت النبیؐ   |
| مضمون  | 25  | (ب) عبدالحق         | چندہم عصر   |
| متون نظم و نثر کی تشریح  | 40  | (ج) چوہدری فضل حق   | زندگی   |
| شعرا اور ادب کے افکار کا تنقیدی جائزہ                              | 35  | (د) عبداللہ حسین    | اُداس نسلیں   |
| کل نمبر:   | 150 | (ح) احمد ندیم قاسمی | کپاس کا پھول  |
| موضوعات  |     | (د) مشتاق یوسفی     | خاکم بدھن   |
|  |     | (ر) بانو قدسیہ      | رہچرگدھ   |
| ۱- اردو زبان، اس کے مختلف ادوار اور اس کا پس منظر                  |     |                     |   |
| ۲- (الف) برصغیر میں مسلمانوں کی آمد اور اس کے لسانی اثرات          |     |                     |   |
| (ب) مسلم ثقافت اور اردو زبان                                       |     |                     |   |
| (ج) اردو زبان و ادب کی اسلامی شناخت                                |     |                     |   |
| ۳- اردو زبان کا عربی، فارسی، بلوچی، پشتو، سندھی اور پنجابی سے تعلق |     |                     |   |
| ۴- مندرجہ ذیل عنوانات کے تحت اردو کی ادبی تاریخ کا خصوصی مطالعہ    |     |                     |   |
| (پس منظر، رجحانات اور خصوصیات)                                     |     |                     |   |
| (الف) اردو ادب کا ارتقاء۔۔۔۔۔ دور قدیم                             |     |                     |   |
| (ب) اردو ادب کا ارتقاء۔۔۔۔۔ دور جدید                               |     |                     |   |
| (ج) انیسویں اور بیسویں صدی کی ادبی تحریکیں                         |     |                     |   |
| (د) پاکستان میں اردو کی ادبی روایات                                |     |                     |   |
| (ر) اردو ادب کا پاکستانی دور                                       |     |                     |   |
| ۵- نظم   |     |                     |   |
| (الف) میر  |     |                     | انتخاب کلام میر (مولوی عبدالحق)                               |
| (ب) غالب   |     |                     | دیوان غالب  |
| (ج) حالی   |     |                     | مُسدسِ حالی   |
| (د) اقبال  |     |                     | طلوع اسلام، حضر راہ اور ساقی نامہ (نغمیں)، بال جبریل کی غزلیں |
| (ر) حفیظ جاندھری   |     |                     | شاہ نامہ اسلام  |
| (س) فیض  |     |                     | بر وادی سینا  |
| (ص) مجید امجد  |     |                     | ہب رفتہ   |
| (ط) مختار صدیقی  |     |                     | غزلِ شب   |



**PAPER: CURRENT AFFAIRS AND PAKISTAN AFFAIRS (150 MARKS)**

**CURRENT AFFAIRS (75 Marks)**

Candidates will be expected to display such general knowledge of history, politics and International Affairs, as deemed necessary to interpret current affairs.

**I. Pakistan's Domestic Affairs (15 marks)**

Political  
Economic  
Social

**II. Pakistan's External Affairs (30 marks)**

Pakistan's relations with its Neighbors (India, China, Afghanistan, Russia)  
Pakistan's relations with the Muslim World (Iran, Saudi Arabia, Indonesia, Turkey)  
Pakistan's relations with the United States  
Pakistan's relations with Regional and International Organizations (UN, SAARC, ECO, OIC, WTO, CW)

**III. Global Issues (30 marks)**

International Security  
International Political Economy  
Human Rights  
Environment: Global Warming, Kyoto Protocol, Copenhagen Accord  
Population: world population trends, world population policies  
Terrorism and Counter Terrorism  
Global Energy Politics  
Nuclear Proliferation and Nuclear Security  
Nuclear Politics in South Asia  
International Trade (Doha Development Round and Bali Package)  
Cooperation and Competition in Arabian Sea, Indian and Pacific Oceans.  
Millennium Development Goals, Current Status,  
Globalization  
Middle East Crisis  
Kashmir Issue  
Palestine Issue

**PAKISTAN AFFAIRS (75 Marks)**

- I. Ideology of Pakistan-----definition and elucidation, historical aspects: Muslim rule in the Sub-Continent, its downfall and efforts for Renaissance. Movements for reforms- Shaikh Ahmad Sarhindi, Shah Waliullah, Sayyid Ahmad Shaheed, Aligarh, Deoband, Nadwah, and other educational institutions-----Sindh Madrassah and Islamia College Peshawae. Ideology of Pakistan in the light of Speeches and statements of Allama Iqbal and Quaid- i Azam Muhammad Ali Jinnah.
- II. Land and people of Pakistan - ---- Geography, Society, Natural Resources, Agriculture, Industry and education with reference to characteristics, trends and problems.
- III. Pakistan and Changing Regional Apparatus
- IV. Nuclear Program of Pakistan, its Safety and Security; International Concerns
- V. Regional Economic Cooperation (SAARC,ECO,SCO) and the Role of Pakistan
- VI Civil-Military Relations in Pakistan
- VII. Economic Challenges in Pakistan
- VIII. Non-Traditional Security Threats in Pakistan: Role of Non-State Actors
- IX. Pakistan's Role in the Region
- X. The Palestine Issue
- XI. Changing Security Dynamics for Pakistan: Challenges to National Security of Pakistan.
- XII. Political Evolution Since 1971
- XIII. Pakistan and US War on Terror
- XIV. Foreign Policy of Pakistan Post 9/11
- XV. Evolution of Democratic System in Pakistan
- XVI. Ethnic Issues and National Integration
- XVII. Hydro Politics ; Water Issues in Domestic and Regional Context
- XVIII. Pakistan's National Interest
- XIX. Challenges to Sovereignty
- XX. Pakistan's Energy Problems and their Effects
- XXI. Pakistan's Relations with Neighbors excluding India
- XXII. Pakistan and India Relations Since 1947 XXIII.
- XXIII. The Kashmir Issue
- XXIV. The war in Afghanistan since 1979 and its impact on, and challenges to Pakistan, in the Post 2014 era.
- XXV. Proxy Wars: Role of External Elements
- XXVI. Economic Conditions of Pakistan, the Most Recent Economic Survey, the Previous and Current Budgets, and the Problems and Performance of Major Sectors of Economy.
- XXVII. The Recent Constitutional and Legal Debates, the Latest Constitutional Amendments and Important Legislations, Legal Cases and the Role of Higher Courts.

XXVIII. The Prevailing Social Problems of Pakistan and the Strategies to Deal with Them, Poverty, Education, Health and Sanitation.

**SUGGESTED READINGS (CURRENT AFFAIRS)**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>                                       |
|--------------|---|---|
| 1.           | Pakistan Foreign Policy 1947-2005: A Concise History, 2011                            | Abdul Sattar,                                       |
| 2.           | Issue in Pakistan's Economy, 2010   | Akbar S. Zaidi                                      |
| 3.           | Pakistan: A Hard Country, 2012  | Anatol Lieven                                       |
| 4.           | Government & Politics in South Asia, 6th ed., 2009                                    | Baxter, Malik, Kennedy & Oberst,                    |
| 5.           | Introduction to International Political Economy, 2010                                 | David Balaam & Bradford Dillman                     |
| 6.           | International Organization (Second Edition) 2012                                      | Volker Rittberger, Bernhard Zangl and Andress Kruck |
| 7.           | The Age of Deception: Nuclear Diplomacy in Treacherous Times (2011)                   | Mohamed Elbaradei                                   |
| 8.           | International Relations, 2012   | Joshua Goldstein                                    |
| 9.           | World Politics: Trends & Transformation, 2011   | Kegley & Blanton                                    |
| 10.          | Pakistan Beyond the Crisis, 2011  | Maleeha Lodhi                                       |
| 11.          | Globalization in Question, 2009   | Paul Hirst  |
| 12.          | International Political Economy: Interests & Institutions in the Global Economy, 2010 | Thomas Oatley                                       |
| 13.          | Politics and Change in the Middle East, 10th Ed., Pearson, 2012                       | Andersen, Seibert, and Wagner                       |
| 14.          | Eating Grass: The Making of the Pakistani Bomb, (2012)                                | Feroz Khan  |
| 15.          | Pakistan and World Affairs  | Shamshad Ahmad (Edition-2015)                       |
| 16.          | World Times Magazine  |   |

**SUGGESTED READINGS (PAKISTAN AFFAIRS)**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>   |
|--------------|---|---|
| 1.           | Federalism and Ethnic Conflict Regulation in India and Pakistan.              | Adeney, Katharine. , New York: Palgrave Macmillan, 2007.                    |
| 2.           | Labor, Democratization and Development in India and Pakistan.                 | Candland, Christopher, New York: Routledge, 2007.                           |
| 3.           | Perception, Politics and Security in South Asia: The Compound Crisis in 1990. | Chari, P.R. at al, New York: Routledge, 2003.                               |
| 4.           | The Future of Pakistan.   | Cohen Stephen P. et al. Washington: Brookings Institute Press, 2011.        |
| 5.           | Frontline Pakistan: The Struggle with Militant Islam.                         | Hussian, Zahid. New York: I.B.Tauris, 2007.                                 |
| 6.           | Modern South Asia: History, Culture, Political Economy.                       | Jalal, Aisha and Bose, Sugata. New York: Routledge, 1998.                   |
| 7.           | Democracy and Authoritarianism in South Asia.                                 | Jalal, Aisha, Cambridge: Cambridge University Press, 1995.                  |
| 8.           | Conflict Between India and Pakistan: an Encyclopedia.                         | Lyon, Peter. California: ABC-CLIO, 2008.                                    |
| 9.           | Back to Pakistan: A Fifty Year Journey.                                       | Mass, Leslie Noyes. Plymouth: Rowman & Littlefield Publishers, 2011.        |
| 10.          | Judging the State: Courts and Constitutional Politics in Pakistan.            | Newberg, Paula R. Cambridge: Cambridge University Press, 1995.              |
| 11.          | Pakistan: Manifest Destiny.   | Qureshi, Atiff. London: Epic Press, 2009.                                   |
| 12.          | Pakistan, America, and the Future of Global Jihad.                            | Riedel, Bruce. Deadly Embrace: Washington: Brookings Institute Press, 2011. |
| 13.          | Kashmir in Conflict: India, Pakistan and the Unending War.                    | Schofield, Victoria. New York: I.B.Tauria, 2003.                            |
| 14.          | Islamic Law and the Law of Armed Conflict: The Armed Conflict in Pakistan.    | Shah, Niaz A. New York: Routledge, 2011.                                    |
| 15.          | Making Sense of Pakistan.   | Shaikh, Farzana. New York: Colombia University Press, 2009.                 |
| 16.          | A Brief History of Pakistan.  | Wynbrandt, James. New York: Infobase Publishing, 2009.                      |
| 17.          | Powering Pakistan: Meetings Pakistan Energy Needs in 21 <sup>st</sup> Century | Robert M. Hathaway and Michael Gugelman                                     |
| 18.          | Pakistan's Energy Sector: From Crisis to Crisis-Breaking the Chain            | Zaid Alahdad  |

**PAPER: ISLAMIC STUDIES (150 MARKS)**

**I Introduction of Islam.**

Concept of Islam.  
Importance of Deen in Human Life.  
Difference between Deen and Religion.  
Distinctive Aspects of Islam.  
Islamic Beliefs & its Impact on Individual & Society and the Fundamental of Islam  
Islamic Worships: Spiritual, Moral and Social Impact.

**II. Study of Seerah of Prophet Mohammad (PBUH) as Role Model for:-**

Individual  
Diplomat  
Educator  
Military Strategist  
Peace Maker

**III. Human Rights & Status of Woman in Islam.**

Human Rights and Status of Woman in Islam  
Dignity of Men and Women

**IV. Islamic Civilization and Culture:**

Meanings and the Vital Elements  
Role of Civilization in Development of Human Personality and Communities  
Distinctions of Islamic Civilization (Tauheed, Spiritualism, Dignity of Man, Equality, Social Justice, Moral Values, Tolerance, Rule of Law)

**V. Islam and World.**

Impact of Islamic Civilization on the West and Vice Versa  
The Role of Islam in the Modern World.  
Muslim World and the Contemporary Challenges.  
Rise of Extremism.

**VI. Public Administration and Governance in Islam**

Concept of Public Administration in Islam  
Quranic Guidance on Good Governance  
Concept of Governance and its Applications in the light of Quran, Sunnah and Fiqh.  
Governance Structure in Islam i.e. (Shura, Legislation, Sources of Islamic Law)  
Governance under Pious Khelifat  
Particular letters of Hazrat Umar (R.A) and Hazrat Ali (R.A) to different Authority.  
Responsibilities of Civil Servants  
System of Accountability in Islam

**VII. Islamic Code of Life.**

Salient Features of Islamic Systems, Social System, Political System,  
Economic System, Judicial System, Administrative System,  
Procedure of Ijmah and Ijtihad

Paper:

Islamic Studies

(150 Marks)

## 5. اسلام اور دنیا

- اسلامی تہذیب کے مغرب اور مغرب کے اسلامی تہذیب کے اثرات
- جدید دنیا میں اسلام کا مقام
- اسلام اور عصر حاضر کے چیلینجز
- انتہا پسندی کا فروغ

## 6. پبلک ایڈمنسٹریشن اور اسلامی طرز حکمرانی

- پبلک ایڈمنسٹریشن کا اسلامی تصور
- اچھے طرز حکمرانی کے لئے قرآنی تعلیمات
- قرآن و سنت اور فقہ کی روشنی میں طرز حکمرانی کا تصور اور عمل درآمد کا طریقہ کار
- اسلامی نظام حکمرانی کا ڈھانچہ (شوری، مقننہ اسلامی قانون کے ماخذ)
- خلفاء راشدین کا طرز حکمرانی
- حضرت عمر رض اور حضرت علی رض کے حکومتی عہدے داروں کے نام خطوط
- سرکاری ملازمین کی ذمہ داریاں
- اسلام میں احتساب کا نظام

## 7 اسلامی ضابطہ حیات

- اسلامی نظام کی نمایاں خصوصیات
- سماجی نظام، سیاسی نظام، اقتصادی نظام، عدالتی نظام، انتظامی نظام
- اجتماع اور اجتہاد کے اصول و ضوابط

## 1. تعارف اسلام

- تصور اسلام
- اسلامی زندگی میں دین کی اہمیت
- دین اور مذہب میں فرق
- اسلام کے نمایاں پہلو
- اسلامی عقائد کے انفرادی و اجتماعی زندگی پر اثرات اور اساس دین / دین کی بنیادیں
- اسلامی عبادات کے روحانی اخلاقی اور سماجی اثرات

## 2. سیرت طیبہ کا مطالعہ نمونہ عمل

- انفرادی زندگی
- سفارت کار
- معلم انسانیت
- سپہ سالار اور جنگی منصوبہ ساز
- پیغمبر امن

## 3. انسانی حقوق اور اسلام میں خواتین کا مقام و مرتبہ

- انسانی حقوق اور اسلام میں خواتین کا مقام اور مرتبہ
- وقار انسانی (مرد و خواتین کا انسانی وقار عزت و احترام)

## 4. اسلامی تہذیب و ثقافت

- معانی اور اہم اجزا
- سماج اور انسانی شخصیت کی تعمیر میں تہذیب کا کردار
- اسلامی تہذیب کے نمایاں اوصاف (توحید تذکیہ نفس، انسانی عزت و وقار، مساوات سماجی انصاف اخلاقی اقدار، صبر و برداشت، قانون کی حکمرانی)

**REQUIRED READINGS**

| <b>Sr. No.</b> | <b>Title</b>                                      | <b>Author</b>       |
|----------------|---|---------------------|
| 1.             | Introduction of Islam                             | Dr. Hamidullah      |
| 2.             | Islam: its meaning and Message                    | Khurshid Ahmad      |
| 3.             | Islam: The Misunderstood Religion                 | Muhammad Qutub      |
| 4.             | Islam at the crass road                           | MohummadAsad        |
| 5.             | Islam and the Economic Challenge                  | Umer Chapra         |
| 6.             | A brief Survey of Muslim Science and Culture      | M. Abdur Rahman     |
| 7.             | Administrative Development an Islamic Perspective | Muhammad Al-Buraey  |
| 8.             | Quranic Sciences                                  | Afzalur Rahman      |
| 9.             | Islamization of Pakistan                          | Iqbal Zafar         |
| 10.            | Islamic Law and Constitution                      | Abul A' la Mawdudi, |
| 11.            | Insan e Kamil                                     | Dr Khalid Alvi      |
| 12.            | Islami Tehzeeb Kay Chund Darakhshan Pehloo        | Mustafa Sabbai      |
| 13.            | Islam Aur Tahzeeb -e -Maghrib Ki Kash Makash      | Dr Muhammad Ameen,  |
| 14.            | Aurat Maghrib aur Islam                           | Serwat Jamal Asmaui |
| 15.            | Seerat-un-Nabi Vol. I                             | Shibli Nu'mani      |
| 16.            | Islam and Secular Mind                            | Edited by Tarik Jan |
| 17.            | Khilafat-o-Malookiat                              | Abul A' la Mawdudi, |

**RECOMMENDED READING**

|    |  |                      |
|----|--|----------------------|
| 1. | Towards Understanding Islam                                      | Abul A' la Mawdudi,  |
| 2. | Ideals and Realities of Islam                                    | Hussain Nasr,        |
| 3. | Administrative Development; an Islamic Perspective, KP.L. London | Alburacy Muhammad A. |
| 4. | Arab Administration  | Hussain Shah         |
| 5. | The Islamic Republic : Politics, Law and Economy                 | Hassan Dr. S. Farooq |
| 6. | Studies in Muslim Political Thoughts and                         | Sherwani, H.K.S.     |

|     |  |   |
|-----|--|---|
|     | Administration   |   |
| 7.  | Reconstruction of Religious Thoughts in Islam                      | Allama Iqbal                                  |
| 8.  | Islamic Political System in the Modern age:<br>Theory and Practice | Ahmad Manzooruddin                            |
| 9.  | Sovereignty-Modern and Islamic:                                    | Ilays Ahmad                                   |
| 10. | Islam in Transition: Muslim Perspectives                           | Donohue J, John A. and Esposito L. John (eds) |
| 11. | Islam Aik Nazar Main   | Sudderud Din Islahi                           |
| 12. | Islami Nazria e Hayat  | Khurshid Ahmad                                |
| 13. | Islami Nizam e Zindgi aur us kay Bunyadi Tassworat                 | Abul Aala Maudoodi                            |
| 14. | Jadah o Manzil   | Seyyed Kotub                                  |
| 15. | Islam ka Nizam e Hakoomat  | Maulana Hamid ul Ansari                       |
| 16. | Islami Nizam   | Dr Yousof Qerzawi,                            |
| 17. | Bonyadi Haqooq   | Muhammad Salahuddin                           |
| 18. | Islam Ka Muashi Nizam  | Justice Taqi Usamani,                         |
| 19. | Tahzeeb o Tamaddon e Islami  | Rasheed Akhter Nadvi                          |
| 20. | First Principle of Islamic Economics                               | Abul A' la Mawdudi                            |
| 21. | Islamic Civilization Foundations Belief & Principles               | Abul A' la Mawdudi                            |
| 22. | Workship in Islam  | Abul A' la Mawdudi                            |
| 23. | Let us be Muslims  | Khurram Murad                                 |
| 24. | Women and Social Justice; an Islamic Paradigm                      | Prof. Dr. Anis Ahmad                          |



**PAPER:      COMPARATIVE STUDY OF MAJOR RELIGIONS (150 MARKS)**  
(Alternative Paper in Lieu of the Compulsory Islamic Studies)

**I. Introduction**

- Definition(s) of religion
- Emergence of the study of religion as a discipline
- Theological and academic study of religion
- An overview of religious landscape of the World

**II. Hinduism**

- Historical Background
- Indus valley civilization, Aryan invasion theory, Vedic Dharma, Brahmanism
- Scriptures:  
*Sruti*: Vedas, Upanishads, *Smirti*: Manu Smirti, Sutras, Puranas, Great epics: Ramayana, Mahabharata
- Hindu Doctrines:  
Dharma, Vedanta, Karma, Transmigration of Souls, Moksha (Liberation)
- Ways to Liberation:  
Karma marga (Works/Rituals), Jnana marga (Wisdom), Bhakti marga (Devotion)
- Hindu gods:  
Brahma, Vishnu, Shiva, Trimurti, other gods and divinities
- Major Hindu Sects:  
Vaishnavism (Manifestation avatars), Saivism (Supreme God & Phallic worship), Saktism (Goddess worship)
- Hindu society:  
Caste System, Ashramas (Stages of life)
- Hinduism in the Modern World  
19<sup>th</sup> century reform and revival movements, Contemporary Hindu Tendencies and movements

**III. Buddhism**

- Historical Background  
Life of Gautama Buddha, Formation and spread of Buddhism, Rivalry between Brahmanism and Buddhism
- Scriptures:  
Tripitaka: Sutta Pitaka, Vinaya Pitaka, Abhidhamma Pitaka
- Teachings and Doctrines  
Three Jewels of Buddhism: Buddha, Dhamma, Sangha, The four noble truths, Eight fold Path
- Buddhist Sects:  
Theravadas (Hinayana), Mahayana, other schools and sects
- Buddhism in the Modern world

#### IV. Judaism

- A brief history of Jews and Judaism:  
From Abraham to Moses, peace be upon them all, From Moses to establishment of Jewish rule, Destruction of Jerusalem and dispersion of Jews in the world,
- Jewish Scriptures:  
Tanakh (The Torah, the Prophets, and the Writings), Mishnah and Talmud
- Articles of faith and basic teachings:  
Ten Commandments, The thirteen principles of faith propounded by Moses Maimonides (1138-1204)
- Jewish holidays and festivals:  
Yom Kippur (The Day of Atonement), Pesach (Passover), Sukkot (Tabernacles) Purim
- Jewish Worship:  
Daily prayer, fasting, Sabbath
- Jewish sects and movements  
Orthodox Judaism, Conservative Judaism, Reform Judaism, Zionism, Kabbalah, Hasidism

#### V. Christianity

- Historical background:  
Jewish background of Christianity, Life and of Jesus Christ (Through the Four Gospels), Life and the role of Paul (Through the Letters of Paul), Formation and spread of the Christian Church, Christianization of the Roman Empire, Reform movement
- Scriptures:  
The Holy Bible (Old Testament and New Testament)
- Basic Doctrines:  
Original Sin, Incarnation of God, Crucifixion and Resurrection of Jesus Christ, Atonement, Trinity
- Christian Sects:  
Catholicism, Eastern Orthodoxy, Protestantism  
Sub-denominations: Lutherans, Reformed and Presbyterians, Anglicans, Baptists, Methodists, Unitarians
- Christian Festivals and Holidays:  
Advent, Christmas, Easter, Pentecost
- Christian worship and Sacraments  
Baptism, Eucharist, Communion, Lord's Supper, prayer, fasting, psalms, music,
- Christianity in the Modern Times  
Encounter with modernity, modern theological trends, Missionary movement, Dialogue and relationship with other religions

#### VI. Islam

- Introduction and Historical Background  
Islamic concept of religion, universality of religion and diversity of shari'ahs, *Sirah* (Life) of the Holy Prophet Muhammad, peace be upon him, The era of rightly guided caliphs of Islam

- **Sacred Scriptures:**  
The Holy Quran, Hadith
- **Basic Doctrines and Creed:**  
*Tawhid* (Oneness of God), *Risalah* (Belief in Prophets and finality of the prophet-hood with the Prophet Muhammad), *Akhirah* (Belief in Hereafter and the final reckoning by Allah the Almighty), Belief in angels, previous scriptures, predestination and human responsibility before God, infallibility of the Quran
- **Five Pillars of Islam:**  
Utterance of *Shahadatayn* (To proclaim the Oneness of Allah and that Prophet Muhammad is his messenger, *salah* (five daily prayers), *zakah* (compulsory charity), *sawm* (fasting in the month of Ramadan) and Hajj (pilgrimage to Makkah who can afford travelling to it)
- **Other Teachings of Islam**  
Equality of mankind, simplicity, spiritual purity and bodily hygiene, patience, contentment, moderation, social justice, Jihad, tolerance towards other religions,
- **Sects and Schools**  
Sunnis (mainstream Muslims), Shi'ahs (Special devotion for Hazrat Ali and Family of the Prophet), Khawarij (literalists), Mu'tazilah (rationalists)
- **Contemporary Islamic movements and tendencies:**  
Ikwan al Muslimun (Muslim Brotherhood), Jama'at-i-Islami, Tablighi Jama'at, Salafi movement, Fethullah Gulen movement in Turkey, Iranian revolution, extremist groups.

### SUGGESTED READINGS

| S.No. | Title   | Author                       |
|-------|---|------------------------------|
| 1.    | Approaches to the Study of Religion, 1999                 | Peter Connolly (ed.)         |
| 2.    | The Penguin Hand Book of World's Living Religions, 2010.  | John R. Hinnells (ed.)       |
| 3.    | Hinduism: A Short Introduction, 2006.                     | Klaus K. Klostermaier        |
| 4.    | Exploring Buddhism, , 2012.                               | Christmas Humphreys          |
| 5.    | Judaism: A Short Introduction, 1999.                      | Lavinia and Dan Cohn-Sherbok |
| 6.    | Christianity: An Introduction, 2006.                      | Alister E. McGrath           |
| 7.    | The Messenger: The Meanings of the Life of Muhammad, 2008 | Tariq Ramadan                |
| 8.    | Ideals and Realities of Islam, 1993.                      | Seyyed Hossein Nasr          |
| 9.    | Towards Understanding Islam, 1992.                        | Syed Abul 'Ala Maududi       |

**PAPER: COMPARATIVE STUDY OF MAJOR RELIGIONS (150 MARKS)**  
(Alternative Paper in Lieu of the Compulsory Islamic Studies)

پرچہ: تقابل ادیان

- (۱) تعارف ☆
- ☆ مذہب کی تعریف
- ☆ مطالعہ مذہب کا بطور مضمون ارتقاء
- ☆ مذہب کا الہیاتی اور تدریسی مطالعہ
- ☆ دنیا کے مذہبی پس منظر کا جائزہ
- (۲) ہندومت: ☆
- ☆ تاریخی پس منظر
- ☆ وادی سندھ کی تہذیب، آریاؤں کی آمد، ویدک دھرم، برہمنیت
- ☆ مذہبی کتابیں
- ☆ سروتی، وید، ایشد، سمرتی، ہنوسمرتی، سوترا، پران۔ عظیم رزمیہ شاعری: رامائن، مہا بھارت۔
- ☆ ہندوؤں کے عقائد فلسفے
- ☆ دھرم، ویدانت، کرم، عقیدہ تناخ، موکشا (نجات)
- ☆ کتی (نجات) کے طریقے:
- ☆ (۱) کرما مارگ (راہ عمل) (۲) جنان مارگ (راہ علم) (۳) بھگتی مارگ (راہ ریاضت)
- ☆ ہندوؤں کے دیوتا:
- ☆ برہما، وشنو، شیو، تریمورتی، ان کے علاوہ دوسرے دیوتا اور مورتیاں۔
- ☆ ہندوؤں کے بڑے فرقے:
- ☆ ویشوازم (Vaishavism)، سانیوازم (Saivism)، سیکٹ ازم (Sakitsm)۔ دیویوں کی عبادت۔
- ☆ ہندو معاشرہ:
- ☆ ذات پات کا نظام، آشرم (زندگی کے مراحل)
- ☆ ہندومت اور جدید دنیا:
- ☆ انیسویں صدی میں اصلاح اور احیاء کی تحریکات
- ☆ معاصر ہندو رجحانات اور تحریکات
- (۳) بدھ مت: ☆
- ☆ تاریخی پس منظر:

- کو تم بدھ کے حالات زندگی، بدھ مت کی تشکیل اور ترویج
- بدھ مت اور برہمنیت کے درمیان مماثلت
- ☆ مذہبی کتابیں:
- ☆ تری پتا کا، ستاپتا کا، وونیہ پتا کا، ابھی دھما پتا کا
- ☆ بدھ مت کے تعلیمات اور نظریات:
- ☆ بدھ مت کے تین جواہر: بدھا، دھما، سینگا
- ☆ چار اعلیٰ صدائیں، آٹھ اصول
- ☆ بدھ مت کے فرقے
- ☆ ہنیانہ، مہایانہ، اور دوسرے فرقے و مذاہب
- ☆ بدھ مت جدید دنیا میں
- ☆ (۴) یہودیت:
- ☆ یہود اور یہودیت کی مختصر تاریخ
- ☆ حضرت ابراہیم سے حضرت موسیٰ تک، حضرت موسیٰ سے یہودی حکومت کے قیام تک،
- ☆ یروشلم کی تباہی اور یہودیوں کا دنیا کے مختلف علاقوں میں پھیلاؤ۔
- ☆ یہود کی الہامی کتابیں:
- ☆ تورات، انبیاء کی کتابیں اور تحریرات، مثنیٰ اور تلمود۔
- ☆ عقائد اور بنیادی تعلیمات کے مقالہ جات
- ☆ احکام عشرہ، موسیٰ میونس کے پیش کردہ عقیدہ سے متعلق تیرہ اصول (۱۳۸-۱۴۰۴)
- ☆ یہود کے تہوار اور چھٹیاں
- ☆ یوم کپور (توبہ استغفار کا دن)، عید فصح (passover)، سکوت، مظہ، پوریم
- ☆ یہود کی عبادت: نماز، روزے، سبت۔
- ☆ یہودیوں کے فرقے اور تحریکات:
- ☆ صحیح العقیدہ یہودیت، اعتدال پسند یہودیت، اصلاح شدہ یہودیت، صہیونیت، کبالہ، ہسادیم
- ☆ (۵) عیسائیت:
- ☆ تاریخی پس منظر:
- ☆ عیسائیت کا یہودی پس منظر۔ حضرت عیسیٰ کی حیات طیبہ (انا جیل اربعہ کی روشنی میں)
- ☆ سینٹ پال کے حالات زندگی اور کردار (انا جیل اربعہ کی روشنی میں)، عیسائیت کی تشکیل اور اشاعت
- ☆ سلطنت روم کا عیسائیت قبول کرنا، اصلاحی تحریک
- ☆ الہامی کتابیں:
- ☆ بائبل مقدس (عبدناہد مقدیم، عبدناہد جدید)
- ☆ بنیادی عقائد اور نظریات:

اصلی گناہ: تجسم خدا، حضرت عیسیٰ کی مصلوبیت اور دوبارہ جی اٹھنا، کفارہ، تثلیث۔

☆ عیسائیوں کے فرقے:

رومن، کیتھولک، پروٹسٹنٹ، صحیح العقیدہ مشرقی عیسائیت، لوتھر، برطانوی کلیسا، اصطہباغی، میتھوڈسٹ، خدائے واحد کے پرستار۔

☆ عیسائی تہوار اور چھٹیاں:

بعثت مسیح، کرسمس، ایسٹر، پنکیوسٹ۔

☆ مسیحی عبادات اور رسوم:

ہپتسمہ، عشاء ربانی، نماز، روزہ، ترانہ حمد اور موسیقی۔

☆ عیسائیت دو رجحانوں میں:

عیسائیت اور جدیدیت، جدید الہیاتی رجحانات، مشنری تحریک، مطالعہ بین المذاہب۔

(۶) اسلام:

☆ تعارف اور تاریخ پس منظر:

اسلام کا تصور، مذاہب، مذہب کی عالمگیریت اور شریعتوں کا اختلاف، سیرۃ رسول اللہ ﷺ (حیات طیبہ ﷺ) خلفائے راشدین کا عہد زریں۔

☆ الہامی کتب:

قرآن مجید اور احادیث نبوی ﷺ

☆ بنیادی عقائد اور مسالک / عقائد و نظریات

توحید، رسالت، ختم نبوت، آخرت، یوم حساب، فرشتوں پر ایمان، سابقہ الہامی کتابوں پر ایمان، تقدیر اور اللہ کے سامنے انسان کی جوابدہی، قرآن مجید کا غلطیوں سے پاک ہونا۔

☆ ارکان اسلام:

شہادتیں، اللہ تعالیٰ کی وحدانیت والوہیت کا اقرار اور محمد ﷺ کی رسالت کا اقرار۔ نماز، زکوٰۃ، روزہ، حج

☆ اسلام کی دیگر تعلیمات:

مساوات، سادگی، روحانی پاکیزگی اور جسمانی طہارت، صبر و تحمل، قناعت، سماجی انصاف، جہاد

برداشت: دوسرے مذاہب کے لئے رواداری

☆ فرقے:

سنی، شیعہ، خوارج، معتزلہ

☆ معاصر اسلامی تحریکات اور رجحانات:

اخوان المسلمون، جماعت اسلامی، تبلیغی جماعت، سلفی تحریک، فتح اللہ گیلان کی تحریک ترکی میں، ایرانی انقلاب، انتہا پسند گروپس۔



## \*\*\*\*\*SUGGESTED READINGS\*\*\*\*\*

| Sr. No. | Title  | Author                       |
|---------|--|------------------------------|
| 1       | Approaches to the Study of Religion , 1999               | Peter Connolly (ed.)         |
| 2       | The Penguin Hank Book of World's Living Religions, 2010  | John R. Hinnels (ed.)        |
| 3       | Hihduism: A Short Introduction , 2006                    | Klaus K. Klostermaier        |
| 4       | Exploring Budhism, 2012                                  | Christmas Humphreys          |
| 5       | Judaism: A Short Intruduction , 1999                     | Lavinia and Dan Cohn-Sherbok |
| 6       | Christianity: An Introduction, 2006                      | Alister E. McGrath           |
| 7       | The Messenger: The Meaning of the life of Muhammad, 2008 | Tariq Ramadan                |
| 8       | Ideas and Realities of Islam, 1993                       | Seyyed Hossein Nasr          |
| 9       | Towards understandig Islam, 1992                         | Syed Abdul 'Ala Maududi      |
| 10      | دنیا کے بڑے مذاہب  | عماد الحسن فاروقی            |
| 11      | اسلام اور مذاہب عالم                                     | مظہر الدین صدیقی             |
| 12      | نصرانیت قرآنی کے آئینے میں                               | سید ابوالاعلیٰ مودود دی      |
| 13      | یہودیت قرآن کے آئینے میں                                 | سید ابوالاعلیٰ مودودہ        |
| 14      | ادیان و مذاہب عالم کا تقابلی مطالعہ                      | مولانا رحمت اللہ کیرانوی     |
| 15      | اظہار الحق   | ڈاکٹر عبدالرشید              |
| 16      | عیسائیت کیا ہے؟  | مولانا تقی عثمانی            |
| 17      | تاریخ مذاہب  | پروفیسر ارشاد احمد           |
| 18      | آئینہ تثلیث  | مولانا کوثر نیازی            |

**PAPER: ACCOUNTANCY & AUDITING (150 MARKS)**

**A. Financial Accounting (30 Marks)**

- I. **Fundamental Accounting Principles, Concepts, Assumptions and Conventions:** Nature and Scope of Accounting, Accrual/Matching Concept, Consistency of Presentation and Comparability, True and Fair View, Neutrality, Materiality, Prudence, Completeness, Understandability and Usefulness, Going Concern, and Substance over Form.
- II. **Accounting Cycle/Process and Financial Statements:** Transactions and/or Events, General Journal, General Ledger, Trial Balance (Unadjusted), Adjusting Entries and **Adjusted Trial Balance, Work Sheet, Financial Statements including Income** Statement, Statement of Financial Position (Balance Sheet), Statement of Cash Flows and Statement of Changes in Equity in accordance with the Financial Reporting Framework as specified by International Accounting Standard Board (IASB) through IFRSs/IASs, and by Securities and Exchange Commission of Pakistan through Companies Ordinance 1984, and Closing and Reversing Entries.
- III. **Attributes, and Significance of Accounting Information:** Attributes of Accounting Information, Information/Reporting Requirements of various Users/Stakeholders of Financial Statements including External (Investors/Shareholders, Creditors, Suppliers, Lenders/Financiers, Government Agencies etc.) and Internal (Board of Directors, Partners, Managers, Employees etc.) Stakeholders.
- IV. **Accounting for common Legal Forms of a Business:** Accounting Principles and Financial Statements of Sole-proprietorships, Partnerships and Joint Stock Companies including Banking Companies (Excluding Advanced Topics like Amalgamation, Capital Reduction, Consolidation etc.)
- V. **Accounting for Associations Not-for-profit, and for Public Sector:** Accounting Principles and Financial Statements - of Associations Not-for-profit, and – of Public Sector Entities as per Standardized Financial Reporting Framework provided by International Public Sector Accounting Standards (IPSAS) Board and Practices being followed in the country.
- VI. **Accounting for Non-current Tangible Assets:** Fundamental Concepts and Principles concerning Non-current Assets: Cost; Depreciable Amount; Depreciation; Fair Value; Property, Plant and Equipment; Residual Value; and Useful Life. Depreciation Methods and their Application (as specified by International Accounting Standards Board): Straight-line Method; Reducing Balance Method; Number of Units Produced and basic know-how of other Methods/Techniques being commonly used by the Industry.
- VII. **Fundamental and Technical Analysis of various Forms of Organizations:** Financial Statements' Analysis including both Horizontal (Measuring Change) and Vertical (Ratio) Analysis including Liquidity Ratios, Activity Ratios, Debt Ratios, Profitability Ratios and Market Ratios; Technical and Industry Analysis.



**(B) Cost and Managerial Accounting (30 Marks)**

**VIII. Fundamental Cost Accounting Principles and Concepts:** Nature and Scope of Cost and Managerial Accounting; Cost Concepts, Elements and Classification; Underlying Differences among Financial, Cost, and Management Accounting.

**IX. Accounting for Material, Labour and Factory Overheads (FOH):** Recognition and Valuation Principles for Material Inventory, and Methods to control Material Inventory; Calculation/Measurement and Accounting for Payroll for all forms of Labour, Time Rate and Piece Rate Systems; Commonly used Group Incentive Schemes; Factory Overhead Costs and FOH Rate, Departmentalization of FOH Costs, their Allocation, Apportionment and Reapportionment (Primary and Secondary Distributions), Methods for Secondary Distribution including both Repeated Apportionment/Distribution and Algebraic Method.

**X. Costing for Specific Jobs, and Process Costing:** Nature of a Specific Job, and Job-order Costing; Process Flow and Process Costing by the use of Cost of Production Report (CPR).

**XI. Management Accounting for Planning, Decision-making and Control:**

**Budgeting and its Use:** Meaning and Nature of a Budget; Major Forms of a Budget including Production and Sales Budget, Cash Budget, Flexible Budgets, Zero-based Budget, Master Budget etc.

**Break-even Analysis:** Difference between Marginal and Absorption Costing Techniques; Concept of Relevant Cost; Application and Use of Contribution Margin and other Concepts for Planning and Decision-making (under Break-even Analysis)

**Variance Analysis:** Meaning and Use of Standards and Variances; Major Classification of Variances including Material, Labour and FOH Variances, and their Computation.

**(C) Auditing (30 Marks)**

**XII. Fundamental Auditing Principles and Concepts:** Audit and Auditing, True and Fair View, Audit Assertions, Reasonable Assurance, Documentation and Audit Evidence, Audit Program, Audit Risks, Computer Information Systems (EDP Systems) and Computer-assisted Audit Techniques (CAAT), Inspection, Fraud, Going Concern, Audit Materiality, Misstatement, Governance and Premise, Tests of Control and Substantive Procedures.

**XIII. Audit Considerations, Dimensions and Conduct:** Internal Control System and Internal Audit, Internal VS External Audit, Responsibility for Financial Statements, Audit Planning, Scope of an Audit, Objectives of an Audit, Inherent Limitations of an Audit, Risk Assessment and Management, Internal Audit and Corporate Governance, Classification of Audit, Qualities of an Auditor, Auditing in Computer Information Systems (EDP Systems) and Computer-assisted Audit Techniques, General Auditing

Principles and Techniques commonly applicable to various Types of Undertakings including Merchandizing, Manufacturing, Banking, Insurance, Investment Entities etc., Audit Performance and Audit Completion.

**XIV. Role and Responsibilities of an Auditor:** Auditor's professional and legal Rights, Responsibilities & Duties, and Liabilities; Auditor's Opinion and Report, and their classification (Types); - as specified under the Companies Ordinance 1984, and in the handbook of IFAC.

**(D) Business Taxation (30 Marks)**

**XV. Tax Structure, and Fundamental Concepts vis-à-vis Income Tax in Pakistan:** Tax Structure in Pakistan; Fundamental Definitions/Terminologies defined under Section 2 of the Income Tax Ordinance 2001.

**XVI. Income Tax and Sales Tax Principles, and their Application:** Selected Provisions from Income Tax - Income for Tax Purposes [Section 4, 9 & 10], Heads of Income [Section 11], Tax Payable on Taxable Income [First Schedule to the Ordinance], Salary Income and Taxation [Sections 12 to 14], Income from Property [Sections 15 & 16], Income from Business [Sections 18 to 20], Capital Gains [Sections 37 to 38], Income from other sources [Section 39, 40, 89, 101(6), 111], Tax Credits [Sections 61 to 65], Taxation of Individuals, AOPs and Companies [Sections 86, 92, 94], Due Date for Payment of Tax [Section 137], Deduction of Tax at Source/With-holding Tax [Sections 147, 149, 153, 155] and related Income Tax Rules 2002.

Selected Definitions and Provisions from Sales Tax – Scope of Tax [Section 3], Exempt supply [Section 2(11)], Goods [Section 2(12)], Input Tax [2(14)], Registered person [Section 2(25)], Supply [Section 2(33)], Tax [Section 2(34)], Retail Price and Retailer [Section 2(27) & 2(28)], Taxable Activity [Section 2(35)], Taxable Supply [Section 2(41)], Tax Fraction [Section 2(36)], Tax Period [Section 2(43)], Time of Supply [Section 2(44)], and Determination of Tax Liability [Section 7].

**(E) Business Studies, and Finance (30 Marks)**

**XVII. Business Studies:** Nature and Scope of a Business Entity, Contemporary Challenges posed to a Business; Common Legal Forms of a Business Entity – Sole-proprietorship, Partnership, Joint Stock Company, their Features, Formation and Management; Business Combinations and their Scope; Business Cycle and its Implications; Role of Information Technology in Business.

**XVIII. Finance:** Meaning, Nature and Scope of Finance, and Financial Management; Common Modes (Types) of Business Finance – Short-, Medium-, and Long-term Financing; Nature and Scope of Financial Markets and Institutions; Features and Classification of Financial Markets; Financial Management Techniques for Decision-making: Time Value of Money, Cost of Capital and Capital Budgeting Techniques.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title of Books</b>   | <b>Author</b>                                    |
|--------------|---|--|
| 1            | Financial Accounting, and Intermediate Accounting                               | Kieso, Weygandt and Warfield                     |
| 2            | Fundamentals of Accounting Principles   | Wild, Larson, Chiappetta                         |
| 3            | Accounting for Decision-making  | Meigs, William and Haka                          |
| 4            | IFRSs / IASs  | ICAP / IFAC                                      |
| 5            | Principles and practice of Book Keeping and Accounts                            | Vickery, B.G                                     |
| 6            | Financial Accounting  | M. Hanif and A. Mukherjee                        |
| 7            | Principles of Accounting, and Advanced Accounting                               | Sohail Afzal                                     |
| 8            | Principles of Accounting, and Advanced Accounting                               | M.A Ghani and Ejaz                               |
| 9            | Cost Accounting – Planning and control  | Usry, Hammer, Matz                               |
| 10           | Managerial Accounting   | Peter C. Brewer, Ray H. Garison, Eric W. Noreen. |
| 11           | Cost Accounting   | Jain and Narang                                  |
| 12           | Cost Accounting   | Nisar ur Din.                                    |
| 13           | Auditing- Principles and Techniques   | S. K. Basu                                       |
| 14           | Auditing  | Dicksee, L.R                                     |
| 15           | Practical Auditing  | Spiecer and Pegler                               |
| 16           | Companies Ordinance 1984  | SECP   |
| 17           | Auditing  | S. K. Millichamp, ELBS                           |
| 18           | Handbook of International Quality Control, Auditing, Review and Other Assurance | ICAP / IFAC                                      |
| 19           | Auditing  | M. Irshad  |
| 20           | Advanced Auditing   | Prof. Dr. Khuaja Amjad Seed                      |
| 21           | Income Tax Ordinance 2001   | FBR  |
| 22           | Introduction to Taxation / Synopsis of Taxes in Pakistan                        | Mirza Munawar Hussain                            |
| 23           | Law in Practice – Income and Sales Tax  | Abdul Razzaq                                     |
| 24           | Business Taxation   | Ijaz Ali Waince                                  |
| 25           | Principles of Managerial Finance  | Lawrence J.Gitman                                |
| 26           | Fundamental of Financial Management   | Van Horne, Wachowicz Jr. Bhaduri                 |
| 27           | Basic Business Finance  | Hunt, Williams and Donaldson                     |

| <b>S.No.</b> | <b>Title of Books</b>                             | <b>Author</b>                        |
|--------------|---|--------------------------------------|
| 28           | Business Studies                                  | Hall, Jones and Raffo                |
| 29           | Foundations of Financial Markets and Institutions | Fabozzi, Modigliani, Jones and Ferri |
| 30           | Contemporary Business                             | Kurtz and Boone                      |
| 31           | Principles and Practice of Commerce               | Stephenson                           |
| 32           | Introduction to Business                          | M. Saeed Nasir                       |

**PAPER: AGRICULTURE & FORESTRY (150 MARKS)**

**Part-I: Agriculture (75 marks)**

- I. Concept of Integrated Agriculture:** Components of natural resources as bases for agriculture production (Land, Water, biological, Environmental, Solar, Energy)
- II. Challenges in Pakistan's Agriculture:** Present scenario and future prospects. Analytical overview: issues and strategies for improvement of crop management, livestock management, fisheries, cottage industry, resource management and rural development. Institutions and policies: issues and options.
- III. Elements of Climate and their Relationship with Crop Growth:** Farming Systems, biological nitrogen fixation, soil profile, structure and texture, soil fertility, soil erosion and conservation, water logging and salinity
- IV. Genetic Improvement for Crop Production:** GM crops, Seed production technology.  
**Horticulture:** Floriculture, landscaping, pests and diseases of agriculture crops and their control, integrated pest management.
- V. Rainfed and Irrigated Agriculture:** Agriculture mechanization, land tenure and land reforms, role of agriculture in national economy.

**Part-II Forestry = (75 Marks)**

Forest, range lands and wild life importance and significance

Forest management and utilization, wood based industries in Pakistan, silviculture

Range management and utilization

Role of wildlife as value addition to forestry

- VI.** Forest based wildlife resources of Pakistan and their management, eco-tourism
- VII.** Forestry, agroforestry, social forestry and forest biometrics
- VIII.** Socio-economic and ecological impact of manmade forests
- IX.** Watershed Management and role of forests in prevailing climate change dilemma  
National forest laws and policies at national level, biodiversity & environment

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>                                   |
|--------------|--|---|
| 1.           | Shaping the Future of Water for Agriculture                            | World Bank, USA                                 |
| 2.           | Participatory Rural Development in Pakistan                            | Khan, M. H                                      |
| 3.           | Agriculture in Pakistan  | Khan M. H.                                      |
| 4.           | Economic Survey of Latest Years  |   |
| 5.           | Agric/Livestock/Machinery/Rural Developments<br>Censes of Latest Years |   |
| 6.           | Fundamentals of Soil Science   | Henry D. Foth                                   |
| 7.           | Manual of Plant Production   | Abdul Manan.                                    |
| 8.           | Principles of Field Crop Production                                    | Martin., J.H. & Leonard,<br>W.H.                |
| 9.           | Diseases of Field Crops  | Dickson, J.G                                    |
| 10.          | Irrigation Principles & Practices                                      | Isrealson, O.W.<br>Vaughn, E. Hansen.           |
| 11.          | A Text Book of Plant Pathology   | A.V.S.S. Sambamurti                             |
| 12.          | Breeding Field Crops   | Poehlman  |
| 13.          | The Principles of Agronomy.  | Harris, Franklin Stewart                        |
| 14.          | Forest Types of Pakistan   | Champion, H.G., S.K.<br>Seth and, G.M.Khattak   |
| 15.          | Manual of Silviculture for Pakistan                                    | Champion, H.G., S.K.<br>Seth and G.M.Khattak    |
| 16.          | Trees of Pakistan  | M.I. Sheikh                                     |
| 17.          | Range Management in Pakistan   | M.A.A. Qureshi                                  |
| 18.          | Comprehensive Forestry   | B.A. Raza                                       |
| 19.          | Farm Forestry in Pakistan,   | M.A.A. Qureshi                                  |
| 20.          | Forest Management  | G.M. Khattak,                                   |
| 21.          | Wildlife Ecology, Conservation and Management                          | A. R. E. Sinclair, J. M.<br>Fryxell, G.Caughley |
| 22.          | Basics of Forestry & Allied Sciences                                   | Dr. Masood A.A.<br>Qureshi                      |

**PAPER: ANTHROPOLOGY (150 MARKS)**

**I. Anthropology**

Definition of anthropology, its historical development and recent trends

**II. Social Anthropology**

Definition of culture, its characteristics and functions

Relationship of anthropology with other social sciences

Sub fields of anthropology:

Biological Anthropology

Archeology,

Linguistic Anthropology

Socio-Cultural Anthropology

**Institution of Family and Marriage**

(Definition, types, structure, functions, family organization)

**Kinship and Social Organization**

(Definition, types, functions, kinship terminology etc)

**Economic Organization:** Definition, evolution, substantivism versus formalism, reciprocity, production, consumption, distribution, barter and primitive economic systems.

**Political organization:** Definition, evolution of political system, characteristics of Band, tribal, Chiefdom, and State societies, theories of the origin of state societies (Internal conflict theories, external conflict theories, Population and irrigation theories, institutionalization of leadership and the emergence of state, system theories), origin of civilization, the politics of identity, ethnicity and ethnic relations, nationalism, modernism, post-modernism etc.

**Religion:** Definition, evolution of primitive religions, functions of religion, comparison of divine religions and other world religions such as Hinduism, Buddhism, Jainism etc.

**Contemporary Human Problems;** Poverty, social inequality, political instability, population problems and ethnic violence and terrorism etc.

**III. Urban Anthropology**

Rural-urban migration, expansion of cities, major environmental issues, sanitation problems, Urbanization and development, establishment of slums and squatter settlements, refugees, Yankees, betties, gypsies, wars and conflict, conversion of power from feudal to industrialists, institutionalization, education system, change in the mode of production: (agriculture to Capitalists), poverty (theories and remedies), management of city life (psychological, cultural,

economical, political, religious, physical, environmental, ecological, demographical, lingual etc.), Karl Marx and Conflict theory, problems created by the mechanization and automation.

#### **IV. Socio-Cultural Changes**

Definitions, difference between social and cultural change, various Dimensions of cultural change, barriers to cultural change including (Culture, psychological and political), internal dynamics for change, external dynamics for change, population increase and change, diffusion of innovations, socio-religious barriers in accepting the innovations and new ideas, media and cultural change, dynamics of change in Pakistan (Trends and Prospects)

#### **V. Ethnicity and race**

Theories related to ethnicity and race, ethnicity and racism, nations and nationality, ethnic conflict, degree of social variation, rank societies, caste and class societies and social stratification etc.

#### **VI. Anthropological Theories**

Contributors: (Edward Burnett Taylor, Lewis Henry Morgan, James Frazer, Karl Marx, Edmund Leach, Franz Boas, Margaret Mead, Ruth Benedict, Alfred L. Kroeber, Alfred Reginald Radcliffe-Brown, Bronislaw Kasper Malinowski, Clifford Geertz, Talal Asad, Akbar S Ahmad, ibne-Khaldoon, Shah Waliullah)

Classical Theories: (Degenerations, Evolutionism, Neo Evolutionism, Diffusions)

Modern Theories: (Functionalism, Structural-functionalism, Class struggle, Structuralism, Historical Particularism, Feminism, Culture and personality)

Current Trends in Anthropological Thoughts: (Post Modernism, Romanticism, Poetics and Political of Ethnography)

#### **VII. Anthropological Research Methods**

Meaning, definition, types and aims of anthropological research

Qualitative and Quantitative research

Purpose of research, research question, variables, hypothesis, research objective(s), research design, sampling, field data collection, tools of data collection (questionnaire, interview, participant observation), data classification, data analysis, and report writing.



**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>                                      |
|--------------|--|--|
| 1.           | Anthropology   | William A Haviland                                 |
| 2.           | Cultural Anthropology  | Onrad Philip Kottak                                |
| 3.           | Diffusion of Innovation  | Evert M. Roger                                     |
| 4.           | Socio Cultural Dynamics and impact of Technological Change                     | G. M. Foster                                       |
| 5.           | Pakistani Society  | Akber S. Ahmed                                     |
| 6.           | Economic Anthropology  | Sutti Ortiz  |
| 7.           | Political Anthropology: An introduction  | Ted. C. Lawellen                                   |
| 8.           | Pukhtun economy and society  | Akber S. Ahmed                                     |
| 9.           | Principles of Anthropology   | Eliot Dismore Chapple and Carleton Stevens Coon    |
| 10.          | Anthropology and Modern life   | Franz Boas   |
| 11.          | Anthropology and Contemporary Human Problem                                    | John H. Bodley                                     |
| 12.          | Sindh and the Races that inhabit the Valley of the Indus                       | Richard Burton                                     |
| 13.          | The People of Pakistan   | Yu. V. Gankorvsky                                  |
| 14.          | Anthropology and Development   | Jean-Pierre Olivier de Sardan                      |
| 15.          | An Introduction to Theory in Anthropology                                      | Robert Layton                                      |
| 16.          | Anthropological Theory   | John R. McGee and Richard L. Warms                 |
| 17.          | Anthropology in Pakistan   | Stephen Pastner and Louis Flam                     |
| 18.          | Anthropology (13th edition)  | Carol R. Ember, Melvin R Ember and Pet N Peregrine |
| 19.          | Other Cultures   | John Beattie                                       |
| 20.          | A Hand Book of Social Science Research   | Bevelry R. Dixon, Gary D Bouma and G.B.J. Atinson  |
| 21.          | Frontier Perspectives: Essays in Comparative Anthropology                      | Clarlies Lindholm                                  |
| 22.          | Generosity and Jealousy: The Swat Pukhtun of Northern Pakistan                 | Clarlies Lindholm                                  |
| 23.          | Friend by Day and Enemy by Night: Organized Vengeance in a Kohistani Community | Lincoin Keiser                                     |
| 24.          | A Punjabi Village in Pakistan  | Zekiye Eglar                                       |

| <b>S.No.</b> | <b>Title</b>                                | <b>Author</b>                     |
|--------------|---|-----------------------------------|
| 25.          | The social organization of the Marri Baluch | Robert Niel Pehrson               |
| 26.          | Introducing Anthropology                    | Park, MA 2007                     |
| 27.          | Peoples and Cultures of Asia                | Scupin, R 2005                    |
| 28.          | Outlines and Highlights for Anthropology    | Scupin, R and Decorse, CR<br>2010 |
| 29.          | Economic Anthropology                       | Stuart plattner                   |
| 30.          | Economies and Culture                       | Richard Wilk                      |
| 31.          | Introduction to Anthropology of Religion    | Brian Moris                       |

**PAPER: APPLIED MATHEMATICS (150 MARKS)**

**I. Vector Calculus (15%)**

Vector algebra; scalar and vector products of vectors; gradient divergence and curl of a vector; line, surface and volume integrals; Green's, Stokes' and Gauss theorems.

**II. Statics (15%)**

Composition and resolution of forces; parallel forces and couples; equilibrium of a system of coplanar forces; centre of mass of a system of particles and rigid bodies; equilibrium of forces in three dimensions.

**III. Dynamics (15%)**

Motion in a straight line with constant and variable acceleration; simple harmonic motion; conservative forces and principles of energy.

Tangential, normal, radial and transverse components of velocity and acceleration; motion under central forces; planetary orbits; Kepler laws;

**IV. Ordinary differential equations (30%)**

Equations of first order; separable equations, exact equations; first order linear equations; orthogonal trajectories; nonlinear equations reducible to linear equations, Bernoulli and Riccati equations.

Equations with constant coefficients; homogeneous and inhomogeneous equations; Cauchy-Euler equations; variation of parameters.

Ordinary and singular points of a differential equation; solution in series; Bessel and Legendre equations; properties of the Bessel functions and Legendre polynomials.

**V. Fourier series and partial differential equations (30%)**

Trigonometric Fourier series; sine and cosine series; Bessel inequality; summation of infinite series; convergence of the Fourier series.

Partial differential equations of first order; classification of partial differential equations of second order; boundary value problems; solution by the method of separation of variables; problems associated with Laplace equation, wave equation and the heat equation in Cartesian coordinates.

**VI. Numerical Methods (45%)**

Solution of nonlinear equations by bisection, secant and Newton-Raphson methods; the fixed-point iterative method; order of convergence of a method.

Solution of a system of linear equations; diagonally dominant systems; the Jacobi and Gauss-Seidel methods.

Numerical differentiation and integration; trapezoidal rule, Simpson's rules, Gaussian integration formulas.

Numerical solution of an ordinary differential equation; Euler and modified Euler methods; Runge-Kutta methods.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>                                 |
|--------------|---|---|
| 1.           | An Introduction to Vector Analysis                  | Khalid Latif,                                 |
| 2.           | Introduction to Mechanics                           | Q.K. Ghori                                    |
| 3.           | An Intermediate Course in Theoretical Mechanics     | Khalid Latif,                                 |
| 4.           | Differential Equations with Boundary Value Problems | D. G. Zill and M. R. Cullen                   |
| 5.           | Elementary Differential Equations                   | E.D. Rainville, P.E. Bedient and R.E. Bedient |
| 6.           | Introduction to Ordinary Differential Equations     | A.L.Rabenstein                                |
| 7.           | Advanced Engineering Mathematics                    | E. Kreyszig                                   |
| 8.           | An Introduction to Numerical Analysis               | Mohammad Iqbal                                |
| 9.           | Numerical Analysis                                  | R.L Burden and J.D Faires                     |
| 10.          | Elements of Numerical Analysis                      | F. Ahmad and M.A Rana                         |
| 11.          | Mathematical Methods                                | S. M. Yousaf, Abdul Majeed and Muhammad Amin  |

**PAPER: ARABIC****(150 MARKS)****A. Pre-Islamic period** (العصر الجاهلي)

1. Influence of poets and poetry in *Jahiliia* period.  
(أثر الشعر و الشعراء في العصر الجاهلي)
2. Literary markets in pre-Islamic Arabs especially *Ukkaz*  
(أسواق الأدب في العصر الجاهلي خاصة سوق عكاظ)
3. Purposes and features of pre-Islamic poetry special reference to *Mu'allaqat*.  
(أغراض الشعر الجاهلي و مزاياه مع التركيز على المعلقات)

**B. Dawn of Islam** (عصر صدر الإسلام)

1. Eloquence and Rhetoric of Holy Quran with examples from Quranic verses.  
(فصاحة القرآن و بالغة مع الأمثلة من القرآن الكريم)
2. Impact of Quran and Hadith on the subsequent literature.  
(أثر القرآن و الحديث في الأدب العربي)
3. Poetry at the Dawn of Islam (الشعر في عصر صدر الإسلام)

**C. Umayyad Period** (العصر الأموي)

1. Art of Flyting (فن النقائض)
2. Erotic and platonic *ghazal* (الغزل الصريح والغزل العذري)

**D. Abbasid and Spanish Period** (العصر العباسي والأندلسي)

1. Purposes and features of Abbasid poetry with special emphasis on the poetry of Mutanabbi, Abu Tammam, Abu Nuwas, AbulAtahia  
(أغراض الشعر العباسي و ميزات مع التركيز على شعر المتنبي و أبي تمام و أبي نواس و أبي العتاهية)
2. Prose and its different styles with special emphasis on style of IbnulAmeed, IbnulMuqaffa, Al-Jahiz and Al-Qazi al Fazil.  
(أسلوب ابن العميد و ابن المقفع والجاحظ و القاضي الفاضل) (النثر و أساليبه المختلفة خاصة)
3. Spanish poetry, with special reference to poetry of Ibn e Zaidoon  
(الشعر الأندلسي خاصة شعر ابن زيدون)

**E. Contemporary Arabic literature** (الأدب العربي المعاصر)

1. Development of Drama with special focus on services of Toufeeq al Hakeem  
(تطور المسرحية مع التركيز على أعمال توفيق الحكيم)
2. Development of Novel with special reference to the novels of Taha Husain and Nageeb Mahfooz (تطور الرواية مع التركيز على روايات طه حسين و نجيب محفوظ)
3. Development of short story with special focus on short stories of Mahmood Taimoor  
(تطور القصة القصيرة مع نموذج من القصص القصيرة عند محمود تيمور)
4. Poetry with special focus on poetry of Ahmad Shouqi and Hafiz Ibraheem  
(خصائص الشعر مع التركيز على شعر أحمد شوقي و حافظ إبراهيم)

## F. Common Topics of different periods

1. Criticism from pre-Islamic era to the 4th Islamic Century  
(النقد في الأدب العربي: من العصر الجاهلي إلى القرن الرابع الهجري)
2. Art of Oratory from pre-Islamic era to Umayyad period  
(الخطابة: من العصر الجاهلي إلى العصر الأموي)
3. Development of Arabic literature in the Sub-Continent: (Ghulam Ali Azad in poetry and Shah WaliUllah in prose)  
(تطور الأدب العربي في شبه القارة الهندية: غلام علي آزاد في الشعر و شاه ولي الله في النثر)

## G. Poetry for Arabic paper

1. Verses from ode of ImraulQais (1-10)  
من: (قفاتبمذكري حبيبو منزل... إلى : ولا سيما يومبادرة جلجل)
2. Verses from Qaseedah of Zuhair bin AbiSulma (50-62).  
من: (ومن لا يصانع في أمور كثيرة... إلى: فلم يبق إلا صورة اللحم والدم)
3. Verses from poetry of Hassan bin Thabit (14-28)  
من: (فإما تعرضوا عنا اعتمرنا... إلى: لعرض محمد منكم وقاء)
4. Verses from poetry of Ka'b bin Zuhair (33-40)  
من: (يسعى الوشاؤا بجنبيها وقوله... إلى: أرى وأسمع ما لو نسمعا الفيل)
5. Verses from poetry of Hafiz Ibrahim (1-10)  
من: (رجعت لنفسي فإني هممت بخصاتي... إلى: فياليتكلمات تو نبال الكلمات)
6. Verses from ode of Ahmad Shouqi (1-10)  
من: (وليد الهدى قال كابتنا ضياع... إلى: دوننا لأتاموا أحرز تخواء)
7. Verses from Qaseedah of Imam Al Booseri (15-24)  
من: (من ليبرر نوجما جينغوايتها... إلى: فانتشغركم في ذنوب الخصب والحكم)

## H. Arabic Grammar (قواعد العربية)

1. Syntax (النحو): Kinds of Sentence (Nominal and Verbal), kinds of Noun ("Proper and Common", "Masculine and Feminine", "Singular, Dual and Plural", "Mu'rab and Mabni"), Case-Ending.

(أقسام الجملة: الفعلية و الإسمية - أقسام الاسم: "المعرفة و النكرة", "المؤنث و المذكر"

"المفرد و التنثية و الجمع", "المعرب و المعنوي - الإعراب)

2. Morphology (الصرف): Etymology (roots), Mujarrad, Mazeed-fee, Transitive and Intransitive verb, Active and passive voice.

(الإشتقاق - المعرر و المزيد فيه - الفعل اللازم و المعتدي - الفعل المعنوي المعطوم و المعنوي المجهول)

## Suggested Readings

- A Literary History of the Arabs by Reynold A. Nicholson, Published by Cambridge University Press.
- History of Arabic Literature (تاريخ الأدب العربي) by Ahmad Hasan Zayyat, Published by Darul Marifat دار المعرفة Beirut Lubnan.
- The Contribution of India to the Arabic Literature by Dr. Zubaid Ahmad, Published by Idara Saqafat Islamia, Lahore.
- Muallim-ul-Insha'a (معلم الانشاء) by Maulana Abdul Majid Nadavi, Majlis Nashriyat Islami, Karachi.
- Arthur J. Arberry, Modern Arabic Poetry, Cambridge University Press London 1962.
- Selections from Arabic Poetry & Prose (شذرات من الشعر والنثر العربي) by Dr. Khaliq Dad Malik, Published by Azad Book Depot, Lahore.
- Applied Arabic Grammar (تطبيق القواعد العربية) by Dr. Khaliq Dad Malik, Published by Azad Book Depot, Lahore.
- Tasheel Al-sarf wa Al-Nahv تسهيل الصرف وتسهيل النحو by Khan Muhammad, Published by Zia ul Quran Lahore.
- "Jawahir al-Sharh" جمع وترتيب وشرح الشاعر / الشربيني شريفة، طبع بدار الحديث القاهرة، Published by Darul Hadith Cairo.
- Arabic Literature (الأدب العربي) (Elective Arabic Course B.A. Punjab University Lahore).
  - الجامع في تاريخ الأدب العربي، حنا الفاخوري، دار الكتب العلمية، بيروت.
  - تاريخ الأدب العربي، الدكتور شوقي ضيف، دار المعارف، مصر.

**PAPER: BOTANY (150 MARKS)**

**I. Algae, Fungi and Bryophytes**

Phycology: Distribution, Classification, Structure, Life History and Economic importance of the main groups of Algae.

Mycology and Plant Pathology: Structure, Reproduction, Classification and Economic importance of the main groups of Fungi. Diseases of economically important crops and general principles of their control

Bryology: Structure and reproduction of bryophytes, Evolution of Gametophyte and Sporophyte.

**II. Pteridophyta and Gymnosperms**

General account with special reference to structure, life history and affinities of both Pteridophytes and Gymnosperms. Ontogeny and structure of seed, classification and economic importance of Gymnosperms.

**III. Anatomy and Embryology**

Primary and secondary tissues. Meristems. Secondary growth in dicot stem. Anatomy of leaf, stem and root.

Micro and megasporogenesis, pollination mechanism, fertilization, development of Embryo and Endosperm, Seed dispersal.

**IV. Taxonomy of Angiosperms**

Systems of classification. Rules of botanical nomenclature. Concepts of speciation. Introduction to modern trends in plant taxonomy: bio-systematic, chemotaxonomy and numerical taxonomy. General characters and economic importance of common angiosperm families.

**V. Plant Physiology**

Plant water relations, Osmotic Quantities, component potentials of water and their role in transport, water absorption by roots, transpiration. Role of essential mineral elements and their uptake. Plant hormones. Photoperiodism, Vernalization. Dormancy and Seed germination. Enzymes.

Photosynthesis: Plant pigments, Light reaction, CO<sub>2</sub> fixation, Mechanism of photophosphorylation.

Respiration: Glycolysis, Krebs cycle, Mechanism of oxidative phosphorylation.

**VI. Ecology**

Influence of climatic, edaphic and biotic factors on plant growth. Vegetation sampling techniques. Concepts of ecosystems and their productivity, ecological energetics, Pyramids (of numbers, biomass and energy), trophic levels, food chains and food webs. Biogeochemical cycles (Hydrological and Nitrogen). Succession. Causes and reclamation of soil salinity and water logging in Pakistan. Soil erosion, its control and soil conservation methods. Deforestation. Biodiversity conservation. Pollution.



**VII. Cytology**

Cell cycle, cellular morphology, chemistry of cell wall and cell membrane, cell to cell communication, plant tissue and cell culture, cell senescence and cell death.

Ultra-structure of various cell organelles: Mitochondria, Golgi bodies, Endoplasmic reticulum, Plastids, Ribosomes, Glyoxysomes, Vacuoles, Nucleus.

**VIII. Genetics**

Mendelian Genetics, Multiple Alleles, Polygenic inheritance, Gene interaction, Epistasis and pleiotropy, Sex-linked inheritance, Chromosomal aberrations, Mutations, DNA repair.

**IX. Evolution**

Introduction of Evolution, Evolutionary history, Evolution of life, Convergent Evolution, Divergent Evolution, Parallel Evolution and Natural selection

**XI. Molecular Biology**

Nucleic acids, DNA as hereditary material, DNA replication, Transcription, Genetic code, Protein synthesis, Genetic engineering and its application, Genetically Modified Organisms (GMO).

**SUGGESTED READINGS**

| <b>S. No.</b> | <b>Title</b>  | <b>Author</b>  |
|---------------|---|--|
| 1.            | Esau's Plant Anatomy: Meristems, Cells and Tissues of the Plant Body: Their Structure, Function and Development | Evert, F.F. and S. Hichhorn 2006   |
| 2.            | Cryptogamic Botany-Algae and Fungi  | Smith, G. M. 2001  |
| 3.            | Cryptogamic Botany-Bryophyte and Pteridophyte   | Smith, G. M. 2001  |
| 4.            | Comparative Morphology of the Vascular Plants   | Foster, A.S. and E.H. Gifford. 1989  |
| 5.            | Plant and Environment   | Daubermine, R, F, 1974   |
| 6.            | Plant Taxonomy and Biosystematics   | Stac, C. A. 1980   |
| 7.            | Plant Physiology  | Taiz, L.& E. Zeiger 2006   |
| 8.            | Genetics: A Conceptual Approach. 4 <sup>th</sup> edition  | Pierce, B. A. 2012   |
| 9.            | Molecular Cell Biology  | Lodish,H., A. Berk, S.L. Zipursky, P. Matsudaira, D. Baltimore and J. Darnell 2000 |
| 10.           | Concepts of Genetics. 10 <sup>th</sup> edition  | William S. Klug. 2012  |
| 11.           | Ilmi Biomolecules, Cell Biology and Genetics.   | Cheema, T.A. and Cheema Z.T. 2009  |

| <b>S. No.</b> | <b>Title</b>   | <b>Author</b>                          |
|---------------|--|--|
| 12.           | Carvan Textbook of Botany Paper " A"<br>(Morphology of Plants)                   | Malik, T. A. 2006                      |
| 13.           | Ecology (Principles and applications). 1st ed.<br>Cambridge University Press UK. | Chapman, J.L. and Reiss,<br>M.J. 1992. |
| 14.           | Fundamentals of Ecology  | Odum, E.P. and Barrett,<br>G.W. 2004   |
| 15.           | Advanced Plant Taxonomy  | Mondal, A. K., 2009                    |
| 16.           | Growth and Differentiation in Plants   | Phillips and Wareings                  |

**PAPER: BRITISH HISTORY (150 MARKS)**

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**Part –I (Marks 75)**

- I. The Glorious Revolution (1688)**
  - Causes, and Results
  - William III and Mary II (1689-1702)
  - Queen Anne (1702-1714)
- II. Hanoverian Era (1714-1790)**
  - Jacobite Rebellions (1715 and 1745)
  - Robert Walpole and Whig Oligarchy
  - American War of Independence (1776)
- III. The Union of England and Scotland**
- IV. Union of England and Ireland**
- V. The Old Colonial system**
- VI. The French Revolution and Napoleonic Wars**
  - Causes
  - Britain and Napoleonic Wars
  - Impact on Britain
- VII. Industrial and Agricultural Revolution**
  - Causes
  - Effects on Political and Social Life of Britain
  - Party Politics
  - The Methodist Movement
  - Socialism
  - Liberalism
  - Colonization
  - Chartest Movement
- VIII. Robert Peel and return of Torries**
  - Internal policies
  - Irish Problem
- IX. Victorian Era (1837-1901)**
  - Internal Reforms
  - Liberals
  - Foreign Policy
  - Disraeli, Gladstone and Problems in Ireland
  - Great Britain and Free Trade

**X. Edwardian Era (1901-1910)**

Domestic and Foreign Policies (1901-1910)

The Origins of Labor Party

**XI. Britain, World War I and its Aftermath**

Causes

Britain and Peace settlement

Effects of War on Britain

League of Nations

The Great Depression

Appeasement and Rearmament

**Part –II (Marks 75)**

**XII. Britain ,World War II and its Aftermath**

Causes and events

Churchill, War Conferences

Creation of U.N.O

Effects of war

Reforms of Labour Government

**XIII. Great Britain and Cold War**

Creation of Common Wealth

NATO

Decolonization of the British Empire

Internal Policies and EEC

Foreign Policy

**XIV. Thatcherism to Cameroun (1979-2012)**

Internal Policy

Society and culture

Foreign Policy

Falkland War

John Major and his Policies

European Common Market and the Great Britain

Formation of EU

Tony Blair “New Labour” Economic Crunch, War on Terror and his Policies

Global Financial Crisis 2008 and the Great Britain

Reforms under Cameroun

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>                                  | <b>Author</b>                              |
|--------------|---|--|
| 1.           | The Conservative Party from Peel to Thatcher  | Blake, Robert, 1985                        |
| 2.           | A New History of England, 410-1975.           | Oxford, New York,<br>Pergamum Press, 1968. |
| 3.           | Trends in Britain Politics since 1945         | Cook,Chris and John<br>Ramsden eds. 1978   |
| 4.           | The Hanoverians, 1714-1815                    | Green, V.H. 1976                           |
| 5.           | The People's Peace: British History 1945-1990 | Morgan,Kenneth O,1992                      |
| 6.           | Textbook of Modern English History 1714-1960  | Southgate,G.W.A, 1961                      |
| 7.           | English History, 1914-1945                    | Taylor, A.J.P. 1965                        |
| 8.           | Europe Since Napoleon                         | Thompson, David.1983                       |
| 9.           | English Social History                        | Trevelyan, G.M.                            |
| 10.          | Britain and Empire.                           | L.J. Butler.                               |
| 11.          | Democracy: Great Britain 1815—1914            | Bentley, Michael                           |
| 12.          | England in the Eighteenth Century             | Serlley, W.T.                              |
| 13.          | History of Britain                            | Carter, E.H.                               |
| 14.          | Mastering Modern British History              | Norman Lowe                                |
| 15.          | The Struggle for Mastery in Europe 1848—1918  | Taylor, A.J.P.                             |

**PAPER: BUSINESS ADMINISTRATION (150 MARKS)**

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**Management**

Defining Organization, Management, and Management in Organizations  
Four Management Functions, Management Roles, Management Skills  
Organizational Internal-External Environment  
Management Planning, Goal Setting, and Decision Making  
Strategic Management Process: Strategy Formulation and Implementation  
Developing Organizational Structure and Design  
Designing Adaptive Organizations  
Managing Change and Innovation  
Leadership and Motivation

**HR Management**

Role of Human Resource Management in Organizational Performance  
Functions of HRM  
Process and Methods of Job Analysis  
Planning and Forecasting Personnel Needs  
Recruitment and Selection  
Training and Development  
Performance Management and Appraisal: Methods and Processes  
Establishing Strategic Pay Plans  
Compensation and Benefits  
Ethics, Justice, and Fair Treatment in HR Management  
Labor Relations and Collective Bargaining

**Financial Management**

**An overview of Financial Management**

Introduction and significance of financial markets, Differentiation between real assets and financial assets, Types of Financial Markets, Role of capital and money markets in economic development, Organizational goals and shareholder wealth maximization perspective

**Time Value of Money**

Cost of money and the factors effecting the cost, Interest rate fundamentals and determinants of market interest rate, Role of Time value of money in finance, Concept of future value and present value, Making timelines, Annuities, Perpetuities and mixed stream of cash flows, with and without growth, Present value and future value of cash flow streams, Compounding Interest; discrete and continuous, Loan amortization

## **Analysis and Interpretation of Financial Statements**

Reading the financial statements, Horizontal and vertical analysis including common size, ratio, comparative and index number trend analysis, Forecasting financials for future decision making, Evaluating credit, management, profitability, risk etc using financial statements

### **Risk, Return and Introduction to Pricing**

Measures of Risks and return, Investment return and expected rate of return, Standalone risk: standard deviation and coefficient of variation, Risk aversion and required rate of return, Portfolio risk: Diversifiable vs. Market risk, Security Market Line and CAPM, Calculating WACC, Discounting process for price determination, Relevant risk and return for valuation

### **Cash flow and Budgeting**

Significance of budgeting, Making cash budgets, Making financial forecasts, Difference between profit and cash flow, Read and analyze Statement of Cash flow.

### **Capital Budgeting**

Significance of Capital budgeting, Cash flow calculations: incremental cash flows, Capital budgeting decision rules: NPV, IRR, MIRR, Return, Finding optimal capital structure, calculating appropriate discount rate, Capital Rationing

## **IV. Operations and Supply Chain Management**

### **a. Operations Management**

#### **Operations & Productivity**

Operations Management (OM) as one of the Three Core Functions in an Organization. Significance and contributions of OM in the field of management. Future trends in OM and differences between goods and services.

#### **Operations Strategy in Global Environment**

Developing mission & OM strategies, Critical Success Factors (CSF), Aligning Core Competencies with CSF

#### **Process Strategy**

Four Process Strategies, Process Analysis and Design, Process Mapping, Flow Diagrams, Process Charts, Service process design, Process Re-engineering

#### **Capacity Planning**

Design & Effective Capacity, Capacity Cushion, Capacity considerations, Managing demand, Capacity Planning, Leading vs Lagging Strategies, Single & Multiple Product Break Even Analysis for Capacity Planning

#### **Location Strategies**

Factors Affecting Location Decisions, Methods for Evaluating Location Alternatives, Factor Rating Method, Load-Distance Methods, Center of Gravity Method, Service location Strategy

### **Layout Strategies**

Types of Layout, Layout Design, Fixed Position Layout, Process- Oriented Layouts, Office Layout, Retail Layout, Assembly Line Balancing

### **Inventory Management**

Role of Inventory in Operations, ABC analysis, Record accuracy, Cycle counting, Inventory Models, Fixed Period Systems, Continuous Review Systems, Basic EOQ Inventory Model, Safety Stock, Service Level

## **b. Supply Chain Management**

### **Introduction to supply chain management and logistics management**

What is supply chain management and logistics management, Objectives, Importance, Examples of supply chain management and logistics management, Decision phases in supply chains

### **Supply chain performance**

Achieving strategic fit, Challenges in achieving strategic fit, Supply chain cost, Supply chain quality, Supply chain lead time

### **Supply chain drivers**

Facilities as a driver, Inventory as a driver, Information as a driver, Transportation as a driver, Sourcing as a driver, Pricing as a driver

### **Balancing supply and demand**

Bullwhip effect, Demand collaboration, Information sharing in supply chains, accurate response strategy

### **Supply chain coordination**

Obstacles in coordination, Vendor managed inventory, Collaborative planning forecasting and replenishment, Managerial levers to achieve coordination

### **IT in supply chain management**

Role of IT in supply chain management, Customer relationship management, Supplier relationship management, Risk management in IT, Supply chain IT in practice

## **Marketing**

Introduction to marketing

Developing marketing strategies and plans

Scanning the marketing environment

Analyzing consumer markets

Market segmentation

Managing marketing information

Branding

Product life cycle

Pricing

Managing distribution channels

Integrated marketing communications



**SUGGESTED READINGS**

| <b>S.No</b> | <b>Title</b>  | <b>Author</b>  |
|-------------|---|--|
| 1.          | Management  | Richard L. Daft,   |
| 2.          | Management  | Stephen P. Robbins, Mary Coulter, and NeharikaVohara             |
| 3.          | The Practice of Management                                  | Peter F. Drucker   |
| 4.          | Human Resource Management                                   | Gary Dessler and BijuVarkkey                                     |
| 5.          | Human Resource Management                                   | Noe, Hollenbeck, Gerhart, Wright.                                |
| 6.          | Human Resource Management                                   | David A. DeCenzo& Stephen P. Robbins                             |
| 7.          | Human Resource Management                                   | Derek Torrington & Laura Hall                                    |
| 8.          | Essentials of Corporate Finance                             | Ross, Westerfield and Jordan                                     |
| 9.          | Principles of Finance                                       | Besley and Brigham   |
| 10.         | Financial statement Analysis                                | George Foster  |
| 11.         | Principles of Managerial Finance                            | Gitman and Zitter  |
| 12.         | Fundamentals of Corporate Finance                           | Brealey, Myers and Marcus  |
| 13.         | Advanced Corporate Finance                                  | Ogden, Jen and O' Conner   |
| 14.         | Operations Management for Competitive Advantage, 2006       | Chase, Richard B., Aquilano, Nicholas J., and Jacobs, F. Roberts |
| 15.         | Principles of Operations Management 2005                    | Raturi, Amitabh S., Evans, James R                               |
| 16.         | Operations Management 2008                                  | Heizer, Jay and Render, Barry,                                   |
| 17.         | Supply Chain Management: Strategy, Planning, and Operations | Sunil Chopra, Peter Meindl, and D.V. Kalra,                      |
| 18.         | Supply Chain Management: From Vision to Implementation      | Stanley E. Fawcett, Lisa M. Ellram, and Jeffrey A. Ogden         |
| 19.         | Business Logistics & Supply chain Management                | Ronald H. Ballou   |
| 20.         | Principles of Marketing                                     | Kotler, Armstrong, Agnihotri and Haque                           |
| 21.         | Basic Marketing   | Perreault and McCarthy   |
| 22.         | Marketing a Practical Approach                              | Peter Rix  |

**PAPER: CHEMISTRY (150 MARKS)**

**PART-I**

**I. Atomic Structure and Quantum Chemistry**

Electromagnetic spectrum, photoelectric effect, Bohr's atomic model, wave and particle nature of matter, de Broglie's equation, Heisenberg's uncertainty principle, wave functions and Born interpretation of wave functions, probability density, Eigen functions and Eigen values, Hamiltonian operator, Schrödinger wave equation and its solution for particle in one and three dimensional boxes.

**II. Electrochemistry**

Ions in solution, measurement of conductance and Kohlrausch's law, mobility of ions and transport number, conductometric titrations, Debye-Hückel theory and activity coefficient, determination of activities, Redox reactions, spontaneous reactions, electrochemical cells, standard electrode potentials, liquid junction potential, electrochemical series, Nernst's equation, measurement of pH, electrolytic cells, potentiometry, reference and indicator electrodes, fuel cells, corrosion and its prevention.

**III. Thermodynamics**

Equation of states, ideal and real gases, the van der Waals equation for real gases, critical phenomena and critical constants, four laws of thermodynamics and their applications, thermochemistry, calorimetry, heat capacities and their dependence on temperature, pressure and volume, reversible and non-reversible processes, spontaneous and non-spontaneous processes, Hess's law, The Born-Haber cycle, relations of entropy and Gibbs free energy with equilibrium constant, Gibbs Helmholtz equation, fugacity and activity.

**IV. Chemical Kinetics**

The rate and molecularity of reactions, Factors affecting rate of a chemical reaction, zero, first, second and third order reactions with same initial concentrations, half-lives of reactions, experimental techniques for rate determination of order of reaction (integration, half-life, initial rate and graphical methods), collision theory, transition state theory, Arrhenius equation and rate equations of complex reactions.

**V. Surface Chemistry and Catalysis**

Properties of liquids, physical and chemical properties of surface, determination of surface area. Adsorption and absorption; physical adsorption and chemisorption, adsorption isotherms, Langmuir adsorption isotherm and Freundlich isotherm. Colloids; properties, classification and preparation of colloidal systems. Surfactants, Phase rule; Gibbs equation of phase rule, one component systems, two component systems and their examples, Catalysis; homogeneous and heterogeneous catalysis, acid-base and enzyme catalysis.

**VI. Fundamentals of Chemometrics**

Sampling, significant figures, stoichiometric calculations, measurement errors, analysis of variance (ANOVA), arithmetic mean, median, mode, standard

deviation/relative standard deviation, confidence limits, Gaussian distribution, least square method, Statistical tests.

## **VII. Separation Methods**

Solvent extraction; theory of solvent extraction; solvent extraction of metals, analytical separations, multiple batch extraction and counter current distribution.

Chromatography; theory of chromatography, classification and overview of chromatographic techniques (paper, thin layer, column and ion exchange chromatographies). Principle of electrophoresis and its application as separation and characterization of proteins.

## **VIII. Basic Inorganic Chemistry**

Types of chemical bonding, ionic and covalent bonding, localized bond approach, theories of chemical bonding, valence bond theory (VBT), hybridization and resonance, prediction of molecular shapes using valence shell electron pair repulsion (VSEPR) model, Molecular orbital theory (MOT) applied to diatomic molecules, delocalized approach to bonding, bonding in electron deficient compounds, hydrogen bonding, Physical and chemical properties of p-block elements with emphasis on oxygen, carbon, chlorine, silicon, nitrogen, phosphorus and some of their representative compounds.

## **IX. Acids and Bases**

Brief concepts of chemical equilibrium, acid–base theories including soft and hard acid and base (SHAB) concept, relative strength of acids and bases, significance of pH, pKa, pKb and buffer solutions. Theory of indicators, solubility, solubility product, common ion effect and their industrial applications.

## **X. Chemistry of d and f-block elements**

General characteristics of d-block elements, historical back ground of coordination chemistry, nomenclature and structure of coordination complexes with coordination number 2-10, Chelates and chelate effect. Theories of coordination complexes; Werner's theory, Valence bond theory (VBT), Crystal field theory (CFT) and Molecular orbital theory (MOT). Jahn-Teller theorem, magnetic properties, spectral properties, isomerism, stereochemistry and stability constants of coordination complexes.

General characteristics of Lanthanides, occurrence, extraction and general principles of separation, electronic structure and position in the periodic table, lanthanide contraction, oxidation states, spectral and magnetic properties and uses. General characteristics of actinides, electronic structure, oxidation state and position in the periodic table, half-life and decay law.

## **PART-II**

### **I. Basic Concepts of Organic Chemistry**

Bonding and orbital hybridization, Localized and delocalized bonding, Inductive effect, Dipole moment, Resonance, Hyperconjugation.

### **II. Saturated and Unsaturated Hydrocarbon**

Nomenclature, Physical properties, Preparation and reactions of alkanes, alkenes and alkynes.

### **III. Chemistry of Aromatic Compounds**

Benzene structure, Aromaticity, Mechanism of electrophilic substitution reaction, Activating and deactivating substituents, Effect of substituents on orientation and reactivity.

### **IV. Chemistry of Functional Groups**

Preparation and properties of alcohols, phenols, ethers, and amines with focus on reaction mechanism and applications. Preparation and reactions of alkyl halides. Synthetic applications of Grignard reagent. Carbonyl compounds, preparations and reaction mechanism of aldehydes and ketones and their applications. Carboxylic acids and their derivatives, acidity of carboxylic acids and effect of substituents on their acidity, preparation and reactions of carboxylic acids and their derivatives including acid halides, acid anhydrides, esters and amides.

### **V. Aliphatic nucleophilic substitution and elimination reactions**

Mechanism of nucleophilic substitution reactions. Elimination reactions, Zaitsev rule and Hofmann rule. Competition between Substitution and elimination reactions.

### **VI. Stereochemistry**

Molecular chirality, types of stereoisomers, R S Configuration and EZ designation, Optical activity, Stereoselectivity and stereospecificity and resolution of racemic mixtures.

### **VII. Organic Spectroscopy**

Theory, Principle, instrumentation and applications of UV/Visible, <sup>1</sup>H NMR, IR spectroscopy and Mass spectroscopic techniques.

### **VIII. Biomolecules**

Carbohydrates; Monosaccharides, oligosaccharides and polysaccharides, biological functions of starch, glycogen, cellulose, and cell wall polysaccharides.

Lipids; Classification and biological importance of lipids. Significance of lipids in biological membranes and transport mechanism.

Amino Acids; classification of amino acids, physical and chemical properties of Amino acids, Biological significance.

Proteins; Classification. Properties and biological significance. Primary, secondary tertiary and quaternary structures.

Nucleic Acids; Chemical composition of nucleic acids. Structure and biological significance of nucleic acids.

Enzymes; Enzyme-substrate interactions and nature of active site, mechanism of enzyme action, kinetics of single substrate reactions, enzyme inhibition, regulatory enzymes and allosteric enzymes.

### IX. Metabolism

Digestion; absorption and transport of proteins, carbohydrates, lipids and nucleic acids. Glycolysis; citric acid cycle, gluconeogenesis, glycogenesis, glycogenolysis and photosynthesis.

Biosynthesis of triglycerides, phosphides, steroids and bile acids and ketone bodies.

Biochemical reaction of amino acids: decarboxylation, deamination, transamination and transmethylation, etc., urea cycle, creatine and uric acid synthesis.

Catabolism of nucleosides, DNA polymerases and other enzymes involves in metabolism.

### X. Chemical Industries

Manufacturing and processing of sugar, cement, glass, paper, fertilizers, soap and detergents.

### SUGGESTED READINGS

| S.No. | Title  | Author  |
|-------|--|---|
| 1.    | Physical Chemistry, 4 <sup>th</sup> ed., 2005  | Silbey, R. J., Alberty, R. A., and Bawendi, M. G. |
| 2.    | Physical Chemistry – A Molecular Approach, 1 <sup>st</sup> ed. 1997                                  | McQuarrie, D. A. and Simon, J. D.                 |
| 3.    | Atkin's Physical Chemistry, 9 <sup>th</sup> ed. 2010   | Atkins, P. and Paula, J. D.                       |
| 4.    | Physical Chemistry, 4 <sup>th</sup> ed. 1972   | Moore. W. J.                                      |
| 5.    | Modern Analytical Chemistry, 2000  | Harvey, D.  |
| 6.    | Quantitative Chemical Analysis, 8 <sup>th</sup> ed. 2011   | Harris, D.C.,                                     |
| 7.    | Analytical Chemistry. 6 <sup>th</sup> ed., 2006  | Christian, G. D.                                  |
| 8.    | CHEMOMETRICS-Statistics and Computed applications in Analytical Chemistry, 2 <sup>nd</sup> ed., 2007 | Matthios, O.                                      |
| 9.    | Statistics and Chemometrics for Analytical Chemistry, 5 <sup>th</sup> ed. 2005                       | Miller, J. and Miller, J                          |
| 10.   | Separation Chemistry 2004  | Budhiraja, R.P                                    |
| 11.   | Advanced Inorganic Chemistry, 6 <sup>th</sup> ed. 2007   | Cotton, F.A. and Wilkinson, G.                    |
| 12.   | Inorganic Chemistry, 4 <sup>th</sup> ed. 2010  | Miessler, G. L. and Tarr, D.A.                    |
| 13.   | Inorganic Chemistry, 5 <sup>th</sup> ed. 2010  | Shriver, D. and Atkins, P.                        |

| S.No. | Title  | Author  |
|-------|--|---|
| 14.   | Textbook of Inorganic Chemistry 2013                           | Chaudhary, S. U.  |
| 15.   | Organic Chemistry, 10 <sup>th</sup> ed. 2011                   | Solomons, T. W. G., and Fryhle, C. B.                       |
| 16.   | Organic Chemistry, 6 <sup>th</sup> ed. 2012                    | Brown, W. H., Fotte, C. S., Iverson, B.L. and Anslyn, E. V. |
| 17.   | Organic Chemistry, 8 <sup>th</sup> ed. 2012                    | John, E. M.   |
| 18.   | Introduction to Spectroscopy, 4 <sup>th</sup> ed., 2009        | Pavia, D. L., Lampman, G. M., Kriz, G.S. and Vyvyan, J. R., |
| 19.   | Spectrometric Identification of Organic Compounds 2005         | Silverstein, R. M. Webster, F. X. and Kiemle, D.            |
| 20.   | Organic Spectroscopy 2006                                      | Younas, M.  |
| 21.   | Stereochemistry (Basic Concepts in Chemistry) 2002             | Morris, D. G.   |
| 22.   | Shreve's Chemical Process Industries, 5 <sup>th</sup> ed. 1984 | Shreve, R. N. and Austin, G. T.                             |
| 23.   | Riegel's Handbook of Industrial Chemistry 2003                 | Riegel, E. R., and Kent, J. A.                              |

**PAPER: COMPUTER SCIENCE (150 MARKS)**

**Section-A (40 Marks)**

**I. Introduction to Computing**

Introduction to Information Technology and Computers, History of Computing, Computer HW and SW Details, Computer System Components and Communication System, Input & Output devices and their types, Storage Media and their types, Types of Computer Hardware, Software, and Programming languages, Information Representation & Number Systems, User interfaces, Major Software Issues, Creation, formatting, and maintenance of Computer documents, Usage of Word processors, Spread sheets, Power-Point, Email, Search Engines, Browsers, Messengers, and Internet , Computers & Society, Information Security/Privacy, Computer Crimes and Ethical Challenges, Viruses, Plagiarism, Intellectual Property Rights, Difference between computer science, software engineering, information technology, information systems, computer engineering and bioinformatics; IEEE / ACM computing disciplines guidelines.

**II. Programming Fundamentals**

Basic programming elements and concepts, Problem Solving & Program Design, Components of a programming language, Program development and execution, Program structure, Data types and variable declarations, Standard I/O streams, and statements, Control structures, Standard library functions, User defined functions and parameter passing, Arrays, pointers, and strings, Structures, unions, and bit manipulation operators.

**III. Object Oriented Paradigm**

Object Oriented Programming Concepts ( Object-oriented paradigm, data abstraction, encapsulation, inheritance, Polymorphism), Introduction to Classes and Objects ( classes, objects, data members, member functions), Classes Advanced ( friends, static, composition, this, const), Operator overloading (stream insertion, stream extraction, binary operator, unary operator), Inheritance (single inheritance, multiple inheritances, protected members, method over-riding), Polymorphism (virtual function, pure-virtual functions, abstract class, abstract super class), Standard Template Library (STL), Files & streams (sequential access files, random access files), File processing, Exception Handling

**Section-B (40 Marks)**

**IV. Algorithms & Data Structures**

Fundamental concepts, Properties of algorithms, Criteria for an Algorithm, Parameters for selecting an algorithm, Algorithm Representations, Pseudo Code and Flow Charts, Designing Algorithms, Algorithm Analysis and Asymptotic Notations, Classification of Lists, Abstract Data Types, Implementation of Stacks and Queues using ADTs, Searching and Sorting Algorithms (Linear Search, Binary Search, Bubble Sort, Merge Sort, Quick Sort, Heap Sort), Stacks and Queues, Hash Tables (Linear Probing, Bucketing, Chaining), Recursion, Trees (Binary Trees, Binary Search trees, AVL Trees, Two-Three Trees), Graphs, Heuristic (Guided) Search, Genetic Algorithms, Encryption Algorithms (DES, RSA)

## **V. Software Engineering**

Software Processes, Software Process Models, Agile Software Development, Analysis Modeling, Requirements Engineering, Design Concepts, Architectural Design, Design & Implementation, Software Testing, System Delivery and Maintenance, Software Evolution Formal Specification, Software Quality Assurance, Introduction to Proofs of Correctness (LNO), Distributed Software Engineering, Aspect-Oriented Software Engineering, Project Management, Process Improvement

## **VI. Compiler Construction**

Difference among various type of Translators, Phases of Compilers, Classification of Compilers, Lexical Analysis (Input buffering, Specification & Recognition of tokens, Regular expressions, Finite automata, Syntax Analysis (Context-free grammars and their classification, LL(k) vs. LR(k) grammars, Top-down vs. Bottom-Up parsers, Parsing Techniques, FIRST and FOLLOW sets, Predictive Parsing using LL(1) grammars, Syntax error handling and recovery strategies), Syntax Directed Translation (Synthesized attributes, Inherited attributes, Construction of syntax trees, Top-down translation), Semantic analysis (Symbol tables, Type Expressions, Type Checking of statements), Intermediate Code Generation, Code Generation (Issues in the design of code generation, The target machine, Run-time storage management, Register allocation), Code optimization (Elimination of Redundant code, Folding of Constant, Loop optimization, Peephole optimization, Problems of optimization)

### **Section-C (40 Marks)**

## **VII. Computer Organization & Architecture**

Fundamental concepts, Overview of a Computer System, Evolution & Performance Languages, Architectural levels, Virtual machines, Processor types, Metrics, Machine instructions, Instruction execution cycle, CISC vs. RISC, Parallelism, Internal/External data representation, Computer Function and Interconnections, Cache Memory, Internal Memory, External Memory, Input /Output System, Computer Arithmetic Microprocessor and its Bus Structure, I/O Types, Types of Buses, Memory Organization and Structure, information flow and execution in Machine, Instruction Representation, Machine Instruction Characteristics, Instruction Processing, Processor Structure & Function, Control Unit Operation, Micro-programmed Control, Instruction-Level Parallelism And Superscalar Processors, Parallel Processing, Multi-Processor and Multi-core Systems

## **VIII. Computer Communications & Networks**

Basic Concepts and Classification of Networks, Circuit switching, Packet switching, Multiplexing (TDM, FDM), Layering: OSI and TCP/IP, Application Layer (Network application architectures, HTTP, FTP, Email, DNS, P2P applications), Transport Layer (Multiplexing in UDP and TCP, Connectionless Transport: UDP, Reliable data transfer and TCP, Congestion avoidance and control), Network Layer (The Internet Protocol, IPv4 Datagram, Internet Address Classes, Special IP Addresses ARP, IPv6, ICMP, Network Address Translation (NAT), Internet Routing Protocols and Algorithms, X.25, Frame relay and ATM, MPLS), Physical & Link Layer Functionalities (Error Detection & Control, ARQ, Link layer addressing, LAN Technologies, Bridges and Hubs, Multiple Access), Special topics (Security, Overlay networks, naming, Content distribution networks, Peer to peer systems, DHTs, Network Attacks)



## **IX. Operating Systems Concepts**

Roles of an Operating System, Operating-System Evolution, Structures, and Operations, Classification of Operating Systems, Computing Environments, Design and Components of OS, Process Management, Process Synchronization, Deadlocks, Memory Management, Virtual Memory Management, File Systems (UNIX and Windows Systems), I/O Management

### **Section-D (30 Marks)**

## **X. Database Systems**

Introduction to Database Systems, Relational Data Model & Relational Database Constraints, Relational Data Model, SQL, Relational Algebra & Calculus, ER Model, ER to Relational Mapping, PL/SQL Stored Procedures & Triggers, Functional Dependencies and Normalization, Storage & Indexing, Indexing Structure, XML documents & Web Services, Query Processing & Evaluation, Query Optimization, Transaction processing, Object-Oriented Databases, Distributed Databases, Database Security & Access Control

## **XI. Digital Image Processing**

The relation between Image Processing, Computer Graphics, Computer Vision and Artificial Intelligence; Image Sensing and Acquisition Techniques; Representing Digital Image; Image Sampling and Quantization; Image Storage and Operations; Image Transformations (Translation, Scaling, Rotation, Shear); Image Histogram; Image Enhancement (Contrast, Smoothing, Sharpening); Gray-scale and Color Images; Color Models (RGB, CMYK and HIS); Image Restoration; Noise Models; Morphological Operators (Erosion, Dilation, Opening, Closing, Skeletonization, Thinning); Image Segmentation; Point Detection, Line Detection, Edge Detection and Boundary Detection; Image Compression

## **XII. Web Engineering & Technologies**

Modeling techniques for web applications, Introduction to web engineering, requirement engineering, requirement, types of requirements, functional requirements, non functional requirements, Requirement engineering process (Elicitation and negotiation, Documentation, Validation and verification, Management), HTML(hypertext markup language), Software Architecture, Styles, Patterns, and frameworks, Components of Web Architecture, Classifications of web architecture , Web Application layered architecture ( client server, n-layered, JSP model, struts, OOHDM ), Integration Architecture, Data Aspect architectures, Cascading Style Sheet(CSS), CSS properties, JavaScript (Functionalities, Events, Variables, Operators), DOM(Document Object Model), XML, RSS, API, Client-side programming using (HTML, XHTML, XML, JavaScript, and CSS), Server-side programming using PHP, Web development process, Web Application Development Methodologies, Web site promotion and deployment, Web applications Issues (Accessibility, testing, performance, operation, maintenance, security)

**SUGGESTED READINGS**

| <b>S. No.</b> | <b>Title</b>   | <b>Author</b>   |
|---------------|--|---|
| 1.            | C++ How to Program   | Harvey M. Deitel and Paul J. Deitel.                        |
| 2.            | Compilers: Principles, Techniques, and Tools                       | Alfred V. Aho, Ravi Sethi, and Jeffrey D. Ullman            |
| 3.            | Operating System Concepts  | Silberschatz, Galvin, and Gagne. John                       |
| 4.            | Operating Systems  | William Stallings   |
| 5.            | Computer Organization & Architecture                               | William Stallings   |
| 6.            | Computer System Architecture                                       | M. Morris Mano  |
| 7.            | Computer Organization and Design: The Hardware/ Software Interface | David A. Patterson and John L. Hennessy                     |
| 8.            | Software Engineering   | Ian Sommerville   |
| 9.            | Software Engineering A Practitioner's Approach                     | Roger S. Pressman   |
| 10.           | Data Structures and Algorithm Analysis in C++                      | Mark Allen Weiss  |
| 11.           | Computer Networking: A Top Down approach featuring the Internet    | James F. Kurose and Keith W. Ross                           |
| 12.           | Data and Computer Communications                                   | William Stallings   |
| 13.           | Computer Networks  | Andrew Tanenbaum  |
| 14.           | Fundamentals of Database Systems                                   | Ramez Elmasri and S. B                                      |
| 15.           | Database Systems Concepts  | Silberchatz, Abraham & Korth, Sudarshan                     |
| 16.           | Web Services: Principles and Technology                            | Michael Papazoglu   |
| 17.           | Electronic Commerce: The Second Wave, Ninth Edition                | Gary P. Schneider   |
| 18.           | Electronic-Commerce –A Managerial Perspective                      | Turban, Lee, King, Chung                                    |
| 19.           | Web Engineering  | <i>Kappel, G., Proll, B. Reich, S. &amp; Retschitzegger</i> |
| 20.           | Styling Web Pages with CSS   | Tom Negrino and Dori Smith                                  |
| 21.           | PHP: The Good Parts  | Peter B. MacIntyre  |
| 22.           | Learn JavaScript   | Chuck Easttom   |
| 23.           | ADTs, Data Structures, and Problem Solving with C++                | Larry R. Nayhoff  |
| 24.           | Digital Image Processing   | Gonzalez and Woods  |

**PAPER: CONSTITUTIONAL LAW (150 MARKS)**

- I. **Definition and Scope** of constitutional Law, Basic Constitutional Concepts (Constitutional Conventions, Rule of Law, Due Process), Constitutional Structures (Parliamentary, Presidential, Separation of Powers), Judiciary (Independence of Judiciary, Judicial Review, Theories of Constitutional Interpretation) Fundamental Human and Political Rights and Civil Liberties (freedom of speech, association, assembly, movement and Right to Counsel, life, property, religion, privacy, self incrimination, double jeopardy).
- II. **Principles of Constitutional Law** with special reference to United Kingdom, United States of America, China, Pakistan, India and Turkey.
- III. **Constitutional History of Pakistan:** Principles of Constitutional Law of Pakistan, Salient feature of the Government of India Act, 1935, Indian Independence Act 1947, Objectives Resolution 1949, Constitutions of 1956, 1962 and 1973 Constitution, Abrogation of the Constitutions and the Martial Laws, Legal Framework Order, 1970, The PCO of 1981, The RCO of 1985, The LFO-2002, Amendments in the 1973 Constitution.
- IV. **Legal Development:**
  - Maulvi Tamizuddin Khan v. Federation of Pakistan PLD 1955 Sindh 96.
  - Federation of Pakistan vs. Maulvi Tamizuddin Khan.
  - Reference by the Governor-General PLD 1955 FC 435
  - State v. Dosso PLD 1958 SC 533.
  - Usif Patel v. Crown PLD 1955 FC 387
  - Begum Nusrat Bhutto v. Chief of the Army Staff PLD 1977 SC 657
  - Hakim Khan v. Government of Pakistan PLD 1992 SC 585
  - Nawaz Sharif v. President of Pakistan PLD 1993 SC 473
  - Benazir Bhutto v. the President of Pakistan PLD 1992 SC 492
  - Khawaja Muhammad Sharif, PLD 1988 Lah. 725
  - Federation of Pakistan v. Haji Saifullah Khan PLD 1989 SC 166
  - Khawaja Ahmad Tariq Rahim PLD 1992 SC 646
  - Benazir Bhutto v. President of Pakistan, PLD 1998 SC 388
  - Asma Jilani v. Government of the Punjab PLD 1972 SC 139
  - State v. Zia ur Rehman PLD 1973 SC 49
  - Mahmood Khan Achakzai v. Fed. of Pakistan PLD 1997 SC
  - Zafar Ali Shah case, 2000

### SUGGESTED READINGS

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>          |
|--------------|--|------------------------|
| 1.           | Comparative Constitutional Law                           | Hamid Khan & M.W. Rana |
| 2.           | Constitution of Pakistan 1973                            | Shabbar Raza Rizvi     |
| 3.           | Introduction to the Study of the Law of the Constitution | Dicey                  |
| 4.           | Elgar Encyclopedia of Comparative Law                    | J.M. Smits             |
| 5.           | Constitutional & Political History of Pakistan           | Hamid Khan, Advocate   |
| 6.           | Human Rights in Constitutional Law                       | SR. Bansali            |
| 7.           | Constitutional Documents of Pakistan                     | Safdar Mahmood         |
| 8.           | The Leading Cases in Constitutional Law                  | A.G.Chaudhry           |

**PAPER: CRIMINOLOGY (150 MARKS)**

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**Section-I(40 Marks)**

**I. Introduction**

Basic concepts used in understanding crime, criminality and criminal.

**II. Understanding Criminology**

Definition, meaning and scope of criminology, Criminology and criminal law, Crime as social problem, Deviance, Sin Vice, Evil, Norms, Values, Security (Physical, Social , Economic)

**III. Crime and Criminals**

Occasional criminals, Habitual criminals, Professional criminals, White-collar crime, Organized crime, corporate crimes.

**IV. Crime and Criminality: Theoretical Perspectives**

Early explanation of criminal behavior

Biological Theories; Psychological Theories; Sociological Theories

Social Disorganization theory

Strain theory

Social Control theory

Learning theory

Labeling Theory

Islamic perspective on deviance and crime

**Section-II (40 Marks)**

**V. Juvenile Delinquency**

Meaning, definitions (Behavioral Vs Legal), Juvenile delinquent Vs status offender, Official statistics of juvenile delinquency

**VI. Juvenile Justice System**

Role of Police

Juvenile court process:

pretrial, trial and sentencing

Role of prosecutor, defense counsel, juvenile judge, juvenile probation officer

Juvenile correctional institutions, probation and non-punitive alternatives

**VII. The Criminal Justice System:**

Police and its role

Trial and Conviction of Offenders

Agencies: formal and informal

Criminal courts: procedures and problems

Role of prosecutors

Prisons, Probation and Parole

**VIII. Punitive and Reformative Treatment of Criminals**

Corporal punishment, Imprisonment, Rehabilitation of criminals.

**Section-III (40 Marks)**

**IX. Criminal Investigation**

Principles of criminal investigation, Manual of preliminary investigation, Intelligence operations, Data base investigation, Electronic investigation, Forensic Investigation

**X. Techniques of Investigations**

Gathering information from persons, Interviewing and interrogation techniques, Criminal investigation analysis,

**XI. Legal and Ethical Guidelines for Investigators**

Stop and frisk operations, Arrest procedures, Search and seizure.

**XII. International Policing Criminal Justice Monitoring Organizations**

UNAFEI, INTERPOL, EUROPOL, UNODC, UNICEF, IPA, etc.

**Section-IV (30 Marks)**

**XIII. Modern Concepts in Contemporary Criminology**

Terrorism, Radicalism and War on Terror

Media's representation of Crime and the Criminal Justice System

Modern Law Enforcement and Crime Prevention

Intelligence-led Policing

Community Policing

Private Public Partnership

Gender and Crime in Urban and Rural Pakistan

Crime and Urbanization, Organized Crime and White-Collar Crime

Human Rights Abuses and Protection, especially Children, Women and Minorities and the role of civil society and NGOs

Money-laundering

Cyber Crime

Role of NAB, FIA, ANF

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>  |
|--------------|---|--|
| 1.           | New Perspectives in Criminology                               | Conklin, J.E   |
| 2.           | Criminal Interrogation and Confessions.                       | Fred, E.I., John, E.R., Joseph, P.B. and Brian, C.J. |
| 3.           | Theoretical Criminology                                       | George B. Vold, Thomas J. Bernard, Jeffrey B. Snipes |
| 4.           | Modern Criminology: Crime, Criminal Behavior and its Control. | Hagan, J.  |
| 5.           | Juvenile Delinquency: An Integrated Approach                  | James, B.  |
| 6.           | Security Studies: An Introduction                             | Paul, D.W.   |
| 7.           | Crime, Justice and Society: An Introduction to Criminology    | Ronald, J.B., Marvin, D.F. and Patricia, S.          |
| 8.           | Juvenile Delinquency: Theory, Practice, and Law               | Seigel, L.J.   |
| 9.           | Crime Prevention: Theory and Practice                         | Stephen, S.  |

| <b><u>Suggested Websites</u></b> |  |
|----------------------------------|--|
| 10.                              | International Society of Criminology (ICS): <a href="http://www.isc-sic.org">http://www.isc-sic.org</a>  |
| 11.                              | American Society of Criminology (ASC): <a href="http://www.asc41.com/">http://www.asc41.com/</a>   |
| 12.                              | British Society of Criminology (BSC): <a href="http://www.britsoccrim.org/">http://www.britsoccrim.org/</a>  |
| 13.                              | European Society of Criminology (ESC): <a href="http://www.esc-eurocrim.org/">http://www.esc-eurocrim.org/</a>                                     |
| 14.                              | International Police Executive Symposium (IPES); <a href="http://www.ipes.info/">http://www.ipes.info/</a>   |
| 15.                              | Asian Criminological Society (ACS):<br><a href="http://www.ntpu.edu.tw/college/e4/acs/home.php">http://www.ntpu.edu.tw/college/e4/acs/home.php</a> |
| 16.                              | Asian Association of Police Studies (AAPS): <a href="http://www.aaps.or.kr/">http://www.aaps.or.kr/</a>  |
| 17.                              | Campbell Library: <a href="http://www.campbellcollaboration.org/library.php">http://www.campbellcollaboration.org/library.php</a>                  |
| 18.                              | UNAFEI (Japan): <a href="http://www.unafei.or.jp/english/">http://www.unafei.or.jp/english/</a>  |
| 19.                              | Pakistan Society of Criminology (PSC): <a href="http://www.pakistansocietyofcriminology.com">www.pakistansocietyofcriminology.com</a>              |
| 20.                              | South Asian Society of Criminology and Victimology (SASCV):<br><a href="http://www.sascv.org/">http://www.sascv.org/</a>                           |

**PAPER: ECONOMICS (150 MARKS)**

**Section-I (75 Marks)**

**I. Micro Economics**

Consumer behaviour, Determination of market demand and supply i.e. concept of elasticity of Demand & Supply, Static, Comparative Static Analysis, Distinction between partial and general equilibrium analysis (basic level) theory of the Firm, Producer's equilibrium, Pricing of the factors of production

**II. Macro Economics**

Basic Economic Concepts, National Income Accounting, Consumption Function, Multiplier, Accelerator, Component of Aggregate Demand, Labour Demand and Supply, Un-Employment, Determination of equilibrium level of income and output (at least with reference to two or three school of thought), Inflation.

**III. Money and Banking**

Functions of Money, Quantity Theory of Money, The Fisher and Cambridge Formulations, Systems of note issue, Credit Creation, Functions of Central Banks, Instruments of Credit Control, Distinction between Goals, Operational & Intermediate Target of Central Banks Policy, Concept of Reserves, Liquidity Premium, Term Structure of Interest Rate, Fisher Equation etc; Transmission Mechanisms of Monetary Policy, Theory of Liquidity Preference. TVM, Capital Structure, Capital Restructuring, IS-LM Analysis and The role of Central Bank, Money Demand and Supply.

**IV. Public Financing**

Government expenditure, Sources of Government Revenue, Privatization, Taxes and non-taxes, Incidence of different taxes, Public Debt, Objectives, methods of repayment, Deficit financing, General Equilibrium Analysis, Welfare Economics, Fiscal Policy.

**V. International Trade**

Theories of comparative advantage and Factor Endowments, Trade & Growth, Colonialism, Imperialism and International Trade, Trade Restrictions, Economic Integration, Trade Policy, Balance of Payments, Foreign Exchange, International Monetary system, Custom Unions.



## **VI. Economic Development**

Concepts of development, Human development, Historical growth process and Development, Theories of development, structural issues of development, Income distribution and poverty, sectoral (agricultural, Industry, trade and fiancé) issues and development, environment and development.

### **Section-II (75 Marks) (Economics of Pakistan)**

- VII. Definition and Measurement of Development:** Characteristics of under development, rethinking on the concept of development: Growth vs. Redistributive justice, Absolute and Relative Poverty, Basic Needs Approach, Sustainable Development, Environmental Degradation & other Issues.
- VIII. Planning Experience of Pakistan:** A critical evaluation of the strategy of economic planning, governance & Institutions.
- IX. Agricultural Development in Pakistan:** Changes in Agricultural Policies over plan periods, Major Monetary and Fiscal measures to promote Agricultural development, Green Revolution Strategy and its implications for growth and redistribution, Land Reforms and changes in the Tenure System 1950—1980, Cooperative Farming, Rural Development.
- X. Industrial Development in Pakistan:** Early industrialization strategy, Creation of Financial and Development Institutions, Major monetary and fiscal measures to promote industrial development, changing role of public sector over the plan periods, Evaluation of Nationalization Policy, Concentration of industrial income and wealth, Evaluation of Import Substitution Policy and Export led Growth Strategy in Pakistan.
- XI. Role of Foreign Trade and Aid in Economic Development :** Trends in Pakistan's Balance of Payments, Terms of Trade, Changes in direction of trade, Trends in Pakistan's major exports and imports, Causes of significant changes in the trends, the role of migration and remittances in Pakistan's economy, costs and benefits of Foreign Aid, Role of Foreign Investment.
- XII. Privatization, Denationalization, Deregulation:** conceptual and operational aspects. International comparisons. Pakistan Experience of Privatization.
- XIII. Interest Free Banking in Pakistan**

**XIV. Energy Policy of Pakistan****XV. Social Sector Development in Pakistan**

**XVI. Major Issues in Pakistan Economy:** Energy crisis, Corruption, Bad governance, External debt accumulation and dependency, Unemployment, Income inequality, Inflation, Fiscal and trade deficits, Balance of payment issues, Shortage of irrigation water.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>                                   |
|--------------|--|---|
| 1.           | A Text-book of Economics Theory                                    | Stonier & Hague                                 |
| 2.           | Economic Development   | Todaro, M.P.                                    |
| 3.           | Under Development and Agrarian Structure in Pakistan               | Khan, Mahmood Hassan                            |
| 4.           | Economic of Islam  | Ahmed, S.M.                                     |
| 5.           | Economics  | Paul A. Samuleson                               |
| 6.           | Factors in Economic Development                                    | Cairncross, A.K                                 |
| 7.           | Foreign Aid Theory and Practice in Southern Asia                   | Wolf, Jr. DC                                    |
| 8.           | Government Finance—An Economic Analysis                            | Due John, F.                                    |
| 9.           | Introduction to International Economics                            | Snider, D.A, Paul Krugman, Donimich Salvatore   |
| 10.          | Microeconomic  | Ferguson, C.E. & Gould, J.P., Nicholson, Mankiw |
| 11.          | Macroeconomics   | Rudigar Dorubush and Stanley Fisher Blanchard   |
| 12.          | Population Problems  | Theompson & Lewis                               |
| 13.          | Studies in Economic Development with Special Reference to Pakistan | Ghouse, A.                                      |
| 14.          | History of International Trade                                     | Findlay, R and O' Rourke, K                     |
| 15.          | Colonialism and Modernization                                      | Karl Marx Anchor books                          |
| 16.          | On Colonialism   | Karl Marx and Frederick Engels,                 |
| 17.          | Economic Survey of Pakistan  | Government Publication                          |

**PAPER: ENGLISH LITERATURE (150 MARKS)**

The paper is divided into six components along with the marks allocation for each component.

**I. Essays: (15 Marks)**

Bertrand Russell (The Conquest of Happiness)  
George Orwell (Politics and the English Language; The Prevention of Literature)  
Ralph Waldo Emerson (The Transcendentalist; Self-reliance)

**II. Short Stories: (15 Marks)**

Somerset Maugham (The Lotus-eater)  
G.K.Chesterton (A Somewhat Improbable Story)  
O'Henry (The Gift of the Magi)

**III. Poetry: (30 marks)**

William Wordsworth (Resolution Independence; Tintern Abbey)  
John Keats (Ode to a Nightingale; Ode to Autumn)  
Lord Alfred Tennyson (Ulysses; The Lady of Shalott)  
Yeats (A Dialogue of Self and Soul; The Second Coming)  
Eliot (The Wasteland; Love Song of J. Alfred Prufrock)  
Philip Larkin (Maturity; Continuing to Live; The Trees)  
Wallace Stevens (A postcard from the volcano; Continual conversation with a silent man; Dry loaf) **OR** Walt Whitman (As I Ponder'd in Silence; Are You the New Person Drawn Toward Me?; This Moment Yearning and Thoughtful)

**IV. Drama: (30 marks)**

Shakespeare (*Hamlet; King Lear, As you like it and Twelfth Night*)  
William Congreve (*The Way of the World*)  
Shaw (*Pygmalion; Heartbreak House*)  
Harold Pinter (*The Caretaker*)  
Samuel Beckett (*Waiting for Godot*)  
Eugene O'Neill (*Long Day's Journey into Night*)

**V. Novels: (30 marks)**

Thomas Hardy (*Far from the Madding Crowd*)  
D.H. Lawrence (*Sons and Lovers*)  
George Orwell (*Nineteen Eighty-four*)  
James Joyce (*A Portrait of the Artist as a Young Man*)  
Iris Murdoch (*Under the Net*)  
Nathaniel Hawthorne (*The Scarlet Letter*) or William Faulkner (*The Sound and the Fury*)

**VI. Literacy Theory & Criticism (30 Marks)**

Structuralism

Marxism

Deconstructionism

Psychoanalytic criticism

Feminist criticism

Postcolonial Criticism

**Note:** The texts are mentioned in brackets in front of each author's name. However, for the component on "Literary Theory and Criticism" and for understanding poetry and drama, particularly 20<sup>th</sup> century poetry and Drama, following readings are suggested:

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>   |
|--------------|--|---|
| 1.           | The basics Literary Theory. (Second edition). Routledge.             | Bertens, H. (2008).   |
| 2.           | Literary Theory: An Introduction. (Anniversary Edition).             | Eagleton, E. (2008).  |
| 3.           | A New Handbook of Literary Terms.                                    | Mikics, W. (2007).  |
| 4.           | A Companion to Twentieth Century Poetry.                             | Roberts, N. (2003).   |
| 5.           | A Reader's Guide to Contemporary Literary Theory. (Fifth edition).   | Selden, R., Widdowson, P., & Brooker, P. (2005)                               |
| 6.           | Twentieth Century British Drama.                                     | Smart, J. (2001).   |
| 7.           | Modern Critical Views & Interpretations, ed: 80's and 90's editions. | Harold Bloom (these include all range of authors and their works given above) |
| 8.           | A Companion to 20 <sup>th</sup> Century Drama Oxford: Blackwell.     | Krasner David. 2005.  |

**PAPER: ENVIRONMENTAL SCIENCE (150 MARKS)**

**I. History of Environmental Thought**

Environment and Sustainable Development, History of Environmental Movements, Industrial and Agriculture Revolution, United Nations Conference on Human Environment 1972, Our Common Future 1987, Rio Summit 1992, Agenda 21, World Summit on Sustainable Development 2002, Millennium Development Goals.

**II. Sustainable Development Issues**

Population growth, Poverty, Biodiversity loss and its Conservation, Energy security (energy conservation and alternative energy resources), Urbanization and sustainable cities, Carrying capacity and ecological footprint. Food security and sustainable agriculture. Ecological restoration.

**III. Interdisciplinary nature of Environmental Science**

Orientation on convergence of various social and natural sciences to evolve a new discipline of environmental science: Environmental Biology, Environmental Chemistry, Environmental Physics, Environmental Microbiology, Environmental Toxicology, Environmental Economics, Environmental Geology, Environmental Geography, Environmental Biotechnology, Environmental Sociology.

**IV. Environmental Pollution**

Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Solid Waste, Water Logging & Salinity, Deforestation, Desertification, Eutrophication, Global and regional air pollution problems (Greenhouse effect, Global Warming/Climate Change, Ozone Depletion, Acid Rain).

**V. Climate Change**

Climate Pattern at local, regional and global scale. Different types of climate including tropical and mid latitude climate, polar climates. Climate change processes, Drivers and Indicators of Climate Change, Effects of Climate Change on natural and societal systems. Carbon foot print. Climate change adaptation and mitigation, Clean Development Mechanism (CDM), REDD+. Global environmental politics on climate change: role of India, China and USA (Copenhagen Accord 2009).

## **VI. Environmental Governance**

Policy, legal and institutional frameworks for governance of environment in Pakistan: National Conservation Strategy of 1992, National Environmental Policy Act of Pakistan 2005, Environmental Protection Act of 1997, Pak-EPA (Review of IEE/EIA) Regulations 2000, Hospital Waste Management Rules 2005, Pollution Charge Rules, Sample Rules, Solid Waste Management Plan 2005, Hazardous Substances Rules 2005, National Drinking Water Policy 2009, Sanitation Policy, National Climate Change Policy 2012.

## **VII. Global initiatives**

Brief on some of the Multilateral Environmental Agreements ratified by Pakistan, Convention on Biological Diversity (CBD), Cartagena Protocol on Bio-safety, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), Convention on the Conservation of Migratory Species (CMS), United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol to UNFCCC, Montreal Protocol on Substances that deplete the Ozone Layer, United Nations Convention to Combat Desertification (UNCCD).

## **VIII. Environmental Assessment and Management**

Environmental Impact Assessment, Strategic Environmental Assessment, Environmental Management Systems (ISO 14000), Occupational Health & Safety management systems (OHSAS 18000), Participatory Approaches to Environmental Management, Technological Approaches to Environmental Management, Approaches to Solid Waste Management, Disaster Risk Management, Pollution Control Technologies, Geographic Information System & Remote Sensing, Natural Resources Management.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>  |
|--------------|--|--|
| 1.           | Environmental Economics in Theory and Practice.                      | Hanley, N.<br>Shorgen,J,White,B                                    |
| 2.           | Industrial Safety Health and Environmental Management                | Jain R.K. Rao S.S  |
| 3.           | Environmental Science: Earth as a living Planet, 9 <sup>th</sup> ed. | Botkin, D. Keller, E. 2014   |
| 4.           | Environmental Geology Facing the Challenges of Our Changing Earth    | Erickson, J  |
| 5.           | Environmental Geology.   | Keller A.Edward  |
| 6.           | Earth Science.   | Tarbuck. J. Edward<br>Lutgens K. Friederick                        |
| 7.           | Environmental Science: A Study of Interrelationship                  | Enger ED, Smith, B.F   |
| 8.           | Basics of Forestry and Applied Sciences, Concepts and Theory         | Masood A.A Qureshi   |
| 9.           | Environmental Science: Working with Earth                            | Miller. T.G  |
| 10           | Disaster Management: A Disaster Manager's Handbook                   | Carter N.W   |
| 11           | Disasters and Development  | Cuny, F.C.   |
| 12           | Disaster Management: Warning Response and Community Relocation       | Perry R.W. Mushkatel,<br>A.H.                                      |
| 13           | Energy: Crisis or Opportunity, An Introduction to Energy Studies     | Diana Schumacher   |
| 14           | Environmental Geology  | Carla W. Montgomery  |
| 15           | Environmental Health; Ecological Perspective                         | Kathryn Hilgenkamp   |
| 16           | Official Website of Govt. of Pakistan                                | <a href="http://www.environment.gov.pk">www.environment.gov.pk</a> |
| 17           | Official Website of UN Environment Programme.                        | <a href="http://www.unep.org">www.unep.org</a>                     |

**PAPER: EUROPEAN HISTORY (150 MARKS)**

**Part –I (Marks 75)**

- I. The French Revolution and Napoleonic Era (1789-1815)**
  - The causes of French Revolution
  - The consequences of Revolution
  - Napoleon rise to power
  - Creation of Empire
  - The Continental system
  - The fall of Napoleon
- II. The Concert of Europe (1815-1830)**
  - The Congress of Vienna
  - Metternich's Era
  - The Concert of Europe and Congress System
  - Balance of Power
- III. Forces of Continuity and Change in Europe (1815-1848)**
  - Nationalism
  - Liberalism
  - Romanticism
  - Socialism
  - Industrial Revolution
  - Colonialism
  - Cosequences
- IV. The Eastern Question (1804-1856)**
  - The nature of the Eastern question
  - The Crimean War
  - Russo Turkish War 1877
  - Consequences
- V. Unification of Italy**
  - The effects of the revolution of 1848
  - The obstacles to unification
  - Cavour and the unification of Italy
  - The Process of Italian unification (1859-1871)



**VI. Unification of Germany**

The rise of Bismarck

Diplomatic events

The Austro-Prussian War (1866)

The Franco- Prussian War (1870-1871)

The triumph of Bismarck and process of unification

**VII. The Origins of First World War (1890-1914)**

Formation of Alliances and Counter Alliances

The Balkans War (1912-1913)

The outbreak of the World War 1

**Part –II (Marks 75)**

**VIII. The First World War and its aftermath**

The War (1914-1918) and peace treaties

The League of Nations

**IX. Dictatorships in Europe**

Fascism in Italy under Mussolini

Hitler, Nazism and Germany

Russia , Marxism Revolution and its working under Stalin

Great Depression and its effects on Europe

Appeasement

The Arm race

The Sudetenland Crisis (1938)

The distraction of Czechoslovakia (1939)

**X. The Second World War and its effects on Europe**

The main events of the War

Impact of War

**XI. Post- War Europe**

The post war settlements

The United Nations

Economic Recovery of Europe, Marshal Plan

German Question

NATO

Decolonization

**XII. Cold War Europe (1955-1991)**

Effects of cold war

Warsaw Pact (1955)

The European Economic Community (EEC)

Nuclear Non-Proliferation Agreement

Charles De Gaulle and France

Spread of communist regimes in Europe

**XIII. Europe (1991-2012)**

The Gorbachev and Disintegration of USSR

The reunification of Germany

The Balkan crisis of 1990s

The European Union

Role of Europe in War against terrorism

Global Economic Crisis and Europe

**SUGGESTED READINGS**

| S. No. | Title   | Author              |
|--------|---|---------------------|
| 1.     | A History of Modern Europe (1789-1991)                                      | H.L. Peacock,       |
| 2.     | The Struggle for Mastery in Europe: 1848-1918                               | A.J.P Taylor,       |
| 3.     | The Cold War: Ideological Conflict or Power Struggle                        | Normali A. Grabener |
| 4.     | The USSR: A Share History   | Vladimir Polrtayen, |
| 5.     | Development in Russian Politics   | Stephen White,      |
| 6.     | Mastering Modern European History   | Stuart Miller,      |
| 7.     | A Text Book of European History   | by Southgate, G.W.  |
| 8.     | Aspects of European History 1789-1980.                                      | Stephen J. Lee      |
| 9.     | Europe Since Napoleon   | Thompson, D.        |
| 10.    | European Union: European politics.  | Tim Bale.           |
| 11.    | Modern Europe in the Making from the French Revolution to the Common Market | Fasal, G.           |
| 12.    | The Norton History of Modern Europe   | Gilbert, F.         |
| 13.    | The Origins of the Second World War   | Taylor, A.J.P.      |
| 14.    | The Rise and Fall of Great Powers.  | Paul Kennedy.       |

**PAPER: GENDER STUDIES (150 MARKS)**

- I. Introduction to Gender Studies**
  - Introduction to Gender Studies
  - Difference between Gender and Women Studies
  - Multi-disciplinary nature of Gender Studies
  - Autonomy vs. Integration Debate in Gender Studies
  - Status of Gender Studies in Pakistan
  
- II. Social Construction of Gender**
  - Historicizing Constructionism
  - Problematizing the category of "Sex": Queer Theory
  - Is "Sex" socially determined, too?
  - Masculinities and Feminism
  - Nature versus Culture: A Debate in Gender Development
  
- III. Feminist Theories and Practice**
  - What is Feminism
  - Liberal Feminism
  - Radical Feminism
  - Marxist/Socialist Feminism
  - Psychoanalytical Feminism
  - Men's Feminism
  - Postmodern Feminism
  
- IV. Feminist Movements**
  - Feminist Movements in the West, First Wave, Second Wave and Third Wave
  - Feminism, United Nation Conferences on Women, Feminist Movements in Pakistan.
  
- V. Gender and Development**
  - Colonial and Capitalistic Perspectives of Gender
  - Gender Analysis of Development Theories; Modernization Theory, World System Theory, Dependency Theory, Structural Functionalism.
  - Gender Approaches to Development: Women in Development (WID), Women and Development (WAD), Gender and Development (GAD); Gender Critique of Structural Adjustment Policies (SAPs).
  - Globalization and Gender
  
- VI. Status of Women in Pakistan**
  - Status of Women's health in Pakistan
  - Status of Women in Education
  - Women and Employment
  - Women and Law

- VII. **Gender and Governance**  
 Defining Governance  
 Suffragist Movement  
 Gender Issues in Women as Voters  
 Gender Issues in Women as Candidates  
 Gender Issues in Women as Representatives  
 Impact of Political Quota in Pakistan
- VIII. **Gender Based Violence**  
 Defining Gender Based Violence  
 Theories of Violence against Women  
 Structural and Direct Forms of Violence  
 Strategies to Eliminate Violence against Women
- IX. **Case Studies of:**  
 Mukhtaran Mai  
 Mallala Yousaf Zai  
 Shermin Ubaid Chinoy

### SUGGESTED READINGS

| S.No. | Title  | Author                                   |
|-------|--|--|
| 1.    | Theories of Women Studies  | Eds., Bowles. Gloria and Renate D. Klein |
| 2.    | Introduction: Theories of Women Studies and the Autonomy/ Integration Debate in Theories of Women Studies. | Bowles G and Renate, K.                  |
| 3.    | The State of the Discipline of Women Studies in Pakistan in Social Sciences in Pakistan                    | Saigol, Rubina                           |
| 4.    | The State of Women Studies in Pakistan in Journal of Asian Women Studies                                   | Bari, Farzana                            |
| 5.    | Women's Law in Legal Education and Practice in Pakistan.   | Shaheed, F. and Mehdi, R. (ed.) (1997)   |
| 6.    | Locating the self: Perspectives on Women and Multiple Identities.  | Khan, N.S. et al.(ed.) (1998)            |
| 7.    | The Social Construction of Gender  | Lorber, Judith                           |
| 8.    | Queer Theory   | Lorber, Judith                           |
| 9.    | Gender,USA,  | Harriet Bradley(2013)                    |
| 10.   | Women of Pakistan: Two Steps Forward, One Step Back.   | Mumtaz,Khawar& Shaheed, Farida(1987)     |

| <b>S.No.</b> | <b>Title</b>   | <b>Author</b>                             |
|--------------|--|---|
| 11.          | Feminism and its Relevance in South Asia                             | Saeed K, Nighat & Bahsin, Kamla           |
| 12.          | Feminist Thoughts  | Tong, Rosemarie                           |
| 13.          | Reversed Realities   | Kabeer, Naila                             |
| 14.          | Gender Planning and Development                                      | Moser, Caroline                           |
| 15.          | Electoral Politics: Making Quotas Work For Women.                    | Hoodfar, Homa & Tajali, Mona (2011)       |
| 16.          | The Gender face of Asian Politics                                    | Ayaz, Aazar & Fleschenberg, Andrea (2009) |
| 17.          | Performance Assessment of Women Parliamentarians in Pakistan         | Bari, Farzan (2002)                       |
| 18.          | Base line Report: Women's Participation in Political and Public Life | Zia, Shahla & Bari, Farzana. (1999)       |
| 19.          | Freedom from Violence  | Schuler, Margarte (1992)                  |
| 20.          | Human Rights Commission of Pakistan Report                           |   |

**PAPER: GEOGRAPHY (150 MARKS)**

**Part –I (Marks 75)  
Physical Geography**

- I. Factors controlling landform development; endogenetic and exogenetic forces; origin and evolution of the earth's crust; physical conditions of the earth's interior; geosynclines; continental drift; isostasy; sea-floor spreading; plate tectonics; mountain building; volcanicity; earthquakes; concepts of geomorphic cycles; landforms associated with fluvial, arid, glacial, coastal and Karst cycle; groundwater.
- II. Elements and Factors of climate, structure and composition of atmosphere, insulation, temperature, Pressure belts of the world; Heat budget of the earth; Atmospheric circulation: planetary, monsoon and local winds; Air masses and Fronts; Hydrological cycle; Types of condensation and precipitation; Factors of global distribution of precipitation.
- III. Origin of oceans and seas, Characteristic features of the ocean basins, temperature, salinity distribution cause and effects, Ocean floor deposits, their characteristics and classification, Ocean circulation, Waves, currents and tides, their nature, causes and effects.
- IV. Factors of climate and Environmental change. Transformation of nature by man; environmental degradation and conservation; Nature and Types of pollution. Problems caused by pollution, Global Warming, Global Environment Patterns, Environmental Hazards and Risk Management.

**Part –II (Marks 75)  
Human Geography**

- V. Origin and Diffusion of Culture, Geographic patterns of culture, Classification of Languages, World Distribution of Languages, Indo-European Languages, Origins of Religions, Diffusion of Religions, Global Distribution, Regional conflicts, Ethnicities and Nationalities, Ethnic Conflicts, Ethnic Diversity in the World, Factors of Ethnic Cleansing, Ethnic Cleansing in the World, Development Indicators, Economic Indicators, Social Indicators, Health Indicators, Development through Trade, Impacts of development Indicators.
- VI. Factors effecting Agriculture, Subsistence Agriculture and population growth, Commercial Agriculture and Market Forces, Sustainable Agriculture, Types and Distribution of Agriculture, Factors of Industrial locations, The Industrial Revolution, Industrial Theories, Distribution of Industries and Industrial Estates, Renewable Resources, Recycling Resources, Sustainable resources.
- VII. Factors of Population Growth, Components of Change, Population Structure, The Demographic Transition, World distribution of Population, Over and under Population threats and their consequences, Models of Internal Structure of Cities, World Urban Patterns, Settlement Theories, Patterns and Problems within urban areas.

VIII. Politics, Geography and Political Geography, State as a Politico-Territorial Phenomenon, State, Nation and the Nation-State, World Politics and International Relations, Geopolitics of uneven Development and Globalization of Capital, Geography of Tourism and Recreation, The demand for tourism and recreation, The supply for tourism and recreation, The impact of tourism and recreation: (Socio-economic impacts, Physical-environmental impacts), Global patterns in health and diseases, Models in medical geography, Recent issues and developments.

### SUGGESTED READINGS

| S.No. | Title   | Author                                      |
|-------|---|---|
| 1.    | Discovering Physical Geography 2nd ed. Hoboken:John Wiley & Sons, Inc.                                  | Alan F. Arbogast (2011).                    |
| 2.    | Introducing Physical Geography. Hoboken: John Wiley & Sons  | Alan Strahler, (2011).                      |
| 3.    | Atmosphere, Weather and Climate (7th ed.). London: Clays St. Davis.                                     | Barry, R. (1998).                           |
| 4.    | Meknight's Physical Geography A Landscape application 10 <sup>th</sup> ed PHI Learning, New Delhi.      | Darrel Hess (2012).                         |
| 5.    | Text Book of Population Geography, Random Publications, New Delhi.                                      | Dr. Martin Ardagh (2013).                   |
| 6.    | Atmosphere, Climate and Change. New York: Scientific American Library                                   | Graedel, T. (1995).                         |
| 7.    | An Introduction to Oceanography.  | Johnson H. (1996).                          |
| 8.    | Economic Geography, Random Publications, New Delhi.   | Philip Emeral (2013).                       |
| 9.    | Essentials of Physical Geography 8th ed Australia.  | Robert E. Gabler & James F. Petersen (2007) |
| 10.   | Geosystems: An Introduction to Physical Geography 7 <sup>th</sup> ed. New Jersey: Pearson Prentice Hall | Robert W. Christopherson (2009),            |
| 11.   | Tourism Geography: Random Publications, New Delhi.  | Shweta Singh (2013).                        |
| 12.   | Elements of physical geography. New York. John Wiley.   | Strahler, A. N. (1998).                     |
| 13.   | Natural Disaster Management: New technologies and opportunities, The Icfai Uni. Press, Agartala.        | Subir Ghosh (2012).                         |
| 14.   | Economic Geography 3 <sup>rd</sup> ed. PHI Learning, New Delhi.   | Truman A. Hartshorn (2010).                 |
| 15.   | Environmental Geography: Science Landuse and Earth System 3rd ed. Hoboken: John Wiley & Sons            | William M. Marsh (2005).                    |

| S.No. | Title   | Author                                       |
|-------|---|--|
| 16.   | Geography, Regions and Concepts. U.S.A: John Wiley and Sons, Inc.   | Blif, H. J. (1971).                          |
| 17.   | Human Geography. Canada: John Wiley & Sons, Inc.  | Blij, H. J. (2000).                          |
| 18.   | Population Geography Oxford: Pergamon Press.  | Clarke, J. I. (1965).                        |
| 19.   | Human Geography Cultural Society and Space. (5 <sup>th</sup> ed.). New York: John Wiley & Sons.                                 | De Blij. H. J. (2003).                       |
| 20.   | Political Geography: The Spatiality of Politics. (3 <sup>rd</sup> ed.). New Delhi: Tata McGraw-Hill Publishing Company Limited. | Dikshit, R. D. (2001).                       |
| 21.   | Agricultural Geography: Issues and Applications. New Delhi: Gian Publishing House.  | Dube, R. S. (1987).                          |
| 22.   | Human Geography Landscape of Human Activities. (8 <sup>th</sup> ed.). New York: Mc.Graw Hill Higher Education.                  | Getis, Fellman. (2005).                      |
| 23.   | An Introduction to Agricultural Geography. London: Hutchinson.  | Grigg, D. (1984).                            |
| 24.   | The Geography of Tourism and Recreation (1 <sup>st</sup> ed.). London: Routledge.   | Hall, C. M; & Page, S. J. (1999).            |
| 25.   | Economic Geography. New York: Prentice Hall, Inc. Englewood Cliffs.   | Hartshorne, T. A. & Alexander, J. W. (1988). |
| 26.   | Geography & Health: A study in medical Geography. New Delhi: A.P.H. Publishing corporation.                                     | Izhar, F. (2004).                            |
| 27.   | Geographies of Global Change. Blackwell Publishers Inc.   | Johnston, R. J. (1996).                      |
| 28.   | Urban Geography, New York: McGraw Hill.   | Kaplan, Wheeler (2009).                      |
| 29.   | Human Geography Place and Region in Global context. (2 <sup>nd</sup> ed.) .New Jersey: Prentice Hall.                           | Knox Paul L. (2001).                         |
| 30.   | Agricultural Geography. London: Longman.  | Newbury, P. A. R. (1999).                    |
| 31.   | Contemporary Human Geography. New Delhi: PHI Learning Private Limited.  | Rubenstein James M. (2010).                  |
| 32.   | Tourism Geography (1 <sup>st</sup> ed) London: Routledge.   | Williams, S. (1998).                         |



**PAPER: GEOLOGY (150 MARKS)**

**Part- I (75-marks)**

**I. Introduction to Physical Geology**

Introduction and scope of geology, its importance and relationship with other sciences, Earth as a member of the solar system; its origin, age, composition and internal structure, Introduction to rocks and mineral, Weathering and erosion, Isostasy, Geological Time Scale.

**II. Stratigraphy and Paleontology**

Principles of stratigraphy; laws of superposition and faunal succession. Geological time scale with divisions. Classification and nomenclature of stratigraphic units: lithostratigraphic units, biostratigraphic units and chronostratigraphic units.

Introduction to fossils and their significance; modes of fossilization, Study of morphology, range and broad classification of major invertebrate phyla; Introduction to micro fossils; Introduction to Paleobotany; Introduction and classification of major vertebrates; Introduction to micropaleontology

**III. Mineralogy**

Classification of minerals; Study of internal structure; polymorphism and isomorphism; paragenesis; Physical and optical properties of the common silicate and non-silicate mineral groups; Introduction to crystallography; elements of symmetry, study; normal classes of crystallographic systems.

**IV. Structural Geology and Tectonics**

Stress-strain concepts; factors which control the mechanical behavior of materials; Folds, Faults, Joints, Foliation: terminology, classification and relationship with bedding; Lineation, Unconformity.

Plate tectonics theory; Geological evidences for continental drift; Sea-floor spreading; Oceanic ridges; Continental rifts; Intra-oceanic islands; Hot spot and Mantle plumes; Wilson Cycle; Tectonic framework of Pakistan.

**V. Petrology and Petrography**

Introduction, classification and description of sedimentary rocks; origin; transportation and deposition of sediments; Texture of sedimentary rocks; Sedimentary structures, their classification, morphology and significance; Composition, origin, differentiation and evolution of magma; Classification of igneous rocks; Mode of occurrences and types of extrusive rocks; Texture and structure of igneous rocks; Introduction to metamorphism; Types of metamorphism; Grades, zones and facies of metamorphism; Metamorphic diffusion and differentiation; Metamorphism in relation to plate tectonics; Differentiation between metamorphism and metasomatism;

Introduction to polarizing microscope; Optical properties of opaque and non-opaque minerals in plane polarized light and under crossed nicol including metallic under reflected light; Description of optical properties of common rock forming minerals.

**Part- II**      **(75-marks)**

**I. Introduction to Geophysics**

Definition and relation of geophysics with other sciences; Classification and brief description of various branches of geophysics such as seismology, geomagnetism, geoelectricity, tectonophysics, gravimetry, geo-thermy and geodesy; Introduction to various geophysical techniques for exploration of mineral deposits, oil and gas and subsurface water and engineering works;

**II. Sequence Stratigraphy**

Introduction, history, concept and significance of sequence stratigraphy; Data sources: seismic reflections, outcrops, well logs, core and seismic facies; Sea level changes, their causes and effects; Accommodation, eustatic and relative sea curve; Hierarchy of sequence stratigraphic elements; Types of sequences and systems tracts.

**III. Petroleum Geology**

The nature and classification of petroleum hydrocarbons, their origin, migration and accumulation; Source sediments, reservoir rocks, and trapping mechanism for oil and gas; Prospecting and exploration of oil and gas; Reservoir characteristics, drive mechanism, energy and pressure maintenance; Secondary and enhanced recovery; Introduction to Sedimentary Basins of Pakistan

**IV. Engineering and Environmental Geology**

Rock and soil mechanics and its application in civil engineering; Rock mass characteristics; Geotechnical studies of rocks and soils; Geological factors and strength of rocks; Study of geological factors in relation to the construction of buildings and foundations, roads, highways, tunnels, dams and bridges; Application of geophysical methods for site investigation; Construction materials; Mass movement, their causes and prevention.

Introduction to environmental geology; Management of natural resources; Global climatic changes; Environmental controls for erosion, desertification and coastal degradation; Geological hazards such as floods, landslides, earthquakes, Tsunamis, volcanoes, glaciers and shoreline processes, their remedial measures; Clean sources of energy; Industrial pollution, solid and liquid waste disposal, Introduction to environmental impact assessment and initial environmental examination.

**V. Mineral and Energy Resources**

Introduction of geological exploration/prospecting. Brief description of hydrocarbons, coal, gemstones, copper, lead, zinc, iron, gold, chromite, manganese, salt, gypsum, bauxite, sulphur, barite, fluorite, clays, phosphorite, building and dimension stones, industrial rocks and minerals, radioactive minerals and rocks with special reference to economic mineral deposits in Pakistan.

Origin, occurrence, and depositional environments of coal; coal Constitution and kinds of coals. Coal rank, grade and calorific value. Coal deposits of Pakistan with reference to Thar Coal. Geothermal energy resources of Pakistan.

**VI. Economic and Applied Geology**

Metallic and Non-metallic mineral resources of Pakistan. Mineral-based industries. Overview of Recodec Copper. Radioactive minerals and their occurrences in Pakistan. Gemstones of Pakistan

Geology of Reservoirs, Dams .Highways and Tunnels. Major natural hazards and their Impact on the environment with special reference to Pakistan.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>                                    | <b>Author</b>  |
|--------------|---|--|
| 1.           | Physical Geology                                | Charles Plummer, David McGeary, Diane Carlson,         |
| 2.           | Physical Geology                                | Charles (Carlos) Plummer, Diane Carlson                |
| 3.           | Principles of Physical Geology                  | Holmes, A  |
| 4.           | Principles of Paleontology                      | Raup, D.M. & Stanley, S.M                              |
| 5.           | Vertebrate Paleontology                         | Romer, A.S   |
| 6.           | Invertebrate Paleontology and evolution         | Clakson, E.N.K   |
| 7.           | Stratigraphy of Pakistan                        | Shah, S.M.I.   |
| 8.           | Principles of Sedimentology and Stratigraphy    | Boggs, S   |
| 9.           | Stratigraphy and historical geology of Pakistan | Kazmi, A.H and Abbasi, I.A                             |
| 10.          | Igneous and Metamorphic Petrology               | Best, M.G.,  |
| 11.          | Introduction to Optical Mineralogy              | Nesse, W.D   |
| 12.          | An Atlas of Minerals in Thin Section            | Schulze, D.J.,   |
| 13.          | Minerals and Rocks                              | Klein, C.,   |
| 14.          | Mineral Characterisation and Processing         | Mohapatra, B.K., Misra, V                              |
| 15.          | Principles of Mineralogy                        | William. H.B.,   |
| 16.          | Mineralogy                                      | Perkins, D   |
| 17.          | Plate Tectonics – Geodynamics                   | Moores, E.M. & Twiss, R.J                              |
| 18.          | Structural Geology of Rocks and Regions         | George H. Davis, Stephen J. Reynolds, Charles F. Kluth |
| 19.          | Structural Geology                              | Twiss, R.J. & Moores, E.M.,                            |
| 20.          | Carbonate Sedimentology                         | Tucker, M.E. & Wright, V.P                             |
| 21.          | Applied Sedimentology                           | Selly, R.C.,   |
| 22.          | Petrology of Sedimentary Rocks                  | Boggs Jr. S  |
| 23.          | Sedimentary Rocks                               | Pettijohn, F.J   |
| 24.          | Introduction to Applied Geophysics              | Burger R.H., Sheehan, A. & Jones, C                    |
| 25.          | Geophysical Methods in Geology                  | Sharma, P.V  |

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>  |
|--------------|---|--|
| 26.          | The Solid Earth: An Introduction to Global Geophysics | Fowler, CMR  |
| 27.          | Igneous and Metamorphic Petrology                     | Best, M.G  |
| 28.          | Petrology: Igneous, Sedimentary, & Metamorphic        | Blatt, H., Tracy, R.& Owens, D   |
| 29.          | Igneous and Metamorphic Petrology                     | Best, M.G.,  |
| 30.          | Petrology: Igneous, Sedimentary, & Metamorphic        | Blatt, H., Tracy, R. & Owens, D  |
| 31.          | Metamorphic Petrology                                 | Turner, F.J.,  |
| 32.          | Sequence Stratigraphy                                 | Emery, D. & Myers, K.J.,   |
| 33.          | Elements of Petroleum Geology                         | Richard C. Selley,   |
| 34.          | Petroleum Geology                                     | North, F.K.,   |
| 35.          | Geology of Pakistan                                   | Bender, F.K. & Raza, H.A.,   |
| 36.          | Engineering Geology: Principles and Practice          | David George Price, Michael de Freitas   |
| 37.          | Engineering Geology                                   | F G Bell   |
| 38.          | Fundamentals of Engineering Geology                   | Bell, F.A.G.,  |
| 39.          | Environmental Geology                                 | Montgomery, C.W.,  |
| 40.          | Geology of Himalaya, Karakoram, Hindukush in Pakistan | Tahirkheli, R.A.K.,  |
| 41.          | Geology of Pakistan                                   | Bender, F.K. & Raza,   |
| 42.          | Stratigraphy and Historical Geology of Pakistan       | Kazmi, A.H and Abbasi, I.A   |
| 43.          | Economic Geology: Principles and Practice             | Walter L. Pohl   |
| 44.          | Directory of Mineral Deposits of Pakistan             | Zaki, A.,  |
| 45.          | An Introduction to Ore Geology                        | Evans, A.M.,   |
| 46.          | Metallogeny and Mineral Deposits of Pakistan          | Kazmi, A.H. & Abbas, S.G.,   |
| 47.          | Introduction to Mineral Exploration                   | Moon, C.J., Whateley, M.K.G. and Evans, A.M.   |
| 48.          | Energy Resources                                      | Brown and Skipsy   |
| 49.          | Pakistan Energy Yearbook 2012                         | Ministry of Petroleum and Natural Resources<br>Hydrocarbon Development Institute of Pakistan.<br>Islamabad |

**PAPER: GOVERNANCE & PUBLIC POLICIES (150 MARKS)**

**I. Basic Concepts of Governance:**

Origin of the term Governance

Definition of Governance

Definition of Good Governance

Characteristics of Good Governance: Participation, Rule of law, Transparency, Responsiveness, Equity, Effectiveness and Efficiency, Accountability, Strategic Vision

Collapse/Failure of Governance: its indicators diagnostic tools & Effects

**II. Governance Theories:**

Communitarianism

Decentered Theory

Libertarian Socialism

Institutionalism

Marxism

Neoliberalism

Rational Choice Theory

Regulation Theory

**III. Governance Indicators laid by World Bank/IMF/UNESCO/UNDP/ADB, their Explanation & Application Level in Pakistan:**

Voice and Accountability

Political Stability and Absence of Violence

Government Effectiveness

Regulatory Authorities & their Quality

Rule of Law

Control of Corruption

**IV. Public Policy and Planning Institutions and their role in Planning**

Institutional Framework for Policy Coordination and Planning (ECNEC, Economic Coordination Committees of the Cabinet, The Federal Cabinet, The Secretaries Committee, The Prime Minister's Secretariat, The Planning Commission, The Finance Division, The Cabinet Division, and all Federal Ministries for their respective subjects)

Role of Planning Commission in Policy and Planning

Strategic Planning in Federal

Provincial Government and Local Government

Role of International Donors in Policy Formulation (IMF Document "Memorandum on Economic and Financial Policies 2013/14–2015/16," that underpins almost all public policies.)

Public Policy and Implementation in Key Sectors (i.e., Health, Education).

**V. Accountability:**

General Introduction to Accountability and its concepts (Standards, Symbolism, regional and country-wide comparisons, a Review of Contemporary Studies)

Types of Accountability- Political Accountability, Legal/ Judicial Accountability, Administrative Accountability, Professional Accountability, Private vs. Public Accountability

National Strategies against Corruption and remedial measures.

**VI. Bureaucracy:**

Introduction to the Concept of Bureaucracy (History, Neutrality, Steel Frame of the State, Negative Connotations Associated with the term)

Theories of Bureaucracy (Max Weber, Marx, John Stewart Mill, Woodrow Wilson)

Role of Bureaucracy in Pakistan (British legacy, civil-military relations, neutrality, dilution of neutrality, political allegiance, power, corrupting the incumbent, institutional degradation, constitutional guarantees, indexing of salaries with the CPI or lack thereof.)

Public Administration and Code of Ethics (Effectiveness of the Estacode and the Code of Ethics, Comparison with other countries)

**VII. Public Policy Formulation and Implementation**

The Policy Making Process: How Policies are Made (Six including diagnosis and six stages with cautions to be exercise at each stage)

Policy Implementation & Role of Bureaucracy (Training, Pervasive Inertia and how to break it, Lack of Decision Making, Culture of postponement and delays, Lack of resources, Political interference, Ability to say "No.")

Policy Analysis, The Quest for Solutions (Lack of research in policy analysis, Lack of coordination among departments, secrecy, openness)

Policy Evaluation: Assessing The Impact of Public Policy, Program Evaluation- Success and failure of Govt.

**VIII. Multi-level Governance in Pakistan:**

Legislature: National Assembly, Senate, Provisional Assemblies

Judiciary: Supreme Court, High Courts, Lower Courts

Functioning of the offices:

President of Pakistan,

Prime Minister of Pakistan

Office of Governor,

Office of Chief Minister, Federal Cabinet, Cabinet Committees, Federal Secretariat, Provincial Secretariat

Local Government system: District Government, Zila Government, Tehsil Government, Union Administration, Its Efficacy, Performance & Causes of Success or Failure

**IX. Federalism, Devolution and Decentralization**

Constituents participation in Federal Structure  
 Principle of Subsidiarity in Public Service Delivery  
 Decentralization Model of Kerala

**X. Role of Citizens in Governance****XI. Good Governance in Islam**

Quranic Guidance on Good Governance  
 Concept of Governance and its application in light of Quran; Sunnah and Fiqh.

**SUGGESTED READINGS**

| <b>S. No.</b> | <b>Titles</b>  | <b>Author</b>                                   |
|---------------|--|---|
| 1.            | Governance   | Anne Mette Kjær                                 |
| 2.            | Encyclopedia of Governance, Volume 2   | Mark Bevir                                      |
| 3.            | Implementing Public Policy: Governance in Theory and in Practice.                              | Hill M. and Hupe P.                             |
| 4.            | Accountability: Managing for Maximum Results   | Sam R Llyod                                     |
| 5.            | Guidance for Good Governance: Explorations in Qur'anic, Scientific & Cross-Cultural Approaches | Abdullah Ahsan& Stephen Bonsal Young            |
| 6.            | How Governments Work   | Muzaffar A. Ghaffaar                            |
| 7.            | Government and Administration in Pakistan  | Dr Jamil-ur Rehman                              |
| 8.            | Public Administration With Special Reference To Pakistan                                       | Dr Sultan Khan                                  |
| 9.            | Constitution of Islamic Republic of Pakistan,  | National Assembly of Pakistan                   |
| 10.           | Pakistan: Beyond the Crisis State  | Maleeha Lodhi                                   |
| 11.           | Power Dynamics, Institutional Instability and Economics Growth: The Case of Pakistan           | Akmal Hussain                                   |
| 12.           | Federalism and Rights  | Ellis Katz and G Allan Tarr                     |
| 13.           | Local Government Reforms in Pakistan: Context, Content and Causes                              | Ali Chmeema, Asim Ijaz Khawaja and Adnan Qadir  |
| 14.           | Economics Democracy Through Pro Poor Growth  | PonnaWignaraja, Akmal Hussain Susil Sirivardana |
| 15.           | Governance: South Asian Perspective  | Hasnat Abdul Hye                                |
| 16.           | Governance, Economic Policy and Reform in Pakistan   | AbdusSamad                                      |

| <b>S. No.</b> | <b>Titles</b>  | <b>Author</b>  |
|---------------|--|--|
| 17.           | “Pakistan—Problems of Governance,” 1993.   | Hussain, M., Hussain. A.                             |
| 18.           | “Pakistan’s Predicament: The Diagnostic and the Debates within,” <i>Journal of Pakistan Vision</i> , 13/1 (2012).                        | Racine, Jean-Luc.                                    |
| 19.           | <i>The Culture of Power and Governance of Pakistan—1947-2008</i> , Oxford, 2010.   | Niaz, I.   |
| 20.           | “Legitimacy and the Administrative State: Ontology, History, and Democracy,” <i>Public Administration Quarterly</i> , UC Berkeley, 2013. | Bevir, M.,   |
| 21.           | Handbook of Public Policy Analysis   | Frank Fischer, Gerald J. Miller, and Mara S. Sidney, |
| 22.           | Public Policy: Politics, Analysis, and Alternatives, 4th Ed., CQ Press, 2012   | Kraft, Michael E., Scott R. Furlong                  |
| 23.           | Public Policy in An Uncertain World,: Analysis and Decisions, Harvard, 2013  | Manski, Charles F.                                   |



**PAPER: HISTORY OF PAKISTAN & INDIA (150 MARKS)**

- I. **Muslim Rule and Heritage in India (712-1857):** Political History Arrival, foundation and consolidation of Muslim rule in India, important rulers of the Slave Dynasty and the Mughals. The Spirit and legacy of Muslim civilization, Art, Architecture and literature, Public Administration under Muslim Rules. Sultans, Kings, Economic, Social, Judicial, Civil and Military system during the Muslim rule, Industry, trade and commerce under the Muslim patronage, Financial Administration.
- II. **British Rule in India: 1857-1947:** British Imperialism, origin and growth of the East India Company, Causes and effects of downfall of the Mughal Empire in India, War of Independence in 1857: Causes and effects.
- III. **Constitutional and Political Reforms of the British Government (1858-1947)** and growth of the Political Parties –Indian Congress
- IV. **Muslim Struggle for Independence:** Role of Shah Wali Ullah, Syed Ahmad Shaheed and Sir Syed Ahmed Khan towards regeneration of the Muslim of South Asia, All India Muslim League, Partition of Bengal, Simla Deputation, Lucknow pact; Khilafat movement. Nahru Report Quaid-i- Azam's Fourteen Points.
- V. **Pakistan Movement:** Allama Iqal's Allahabad Address 1930, and Round Table Conference. The Congress Rule in the provinces-1937-1939, Lahore Resolution 1940, various Missions and Plans for the partition of the South Asia. Founders of Pakistan: Quaid-i-Azam, Mohsin-ul-Mulk, Syed Amir Ali, Ali Brothes. Sir Agha Khan, Chaudhry Rahmat Ali, etc.
- VI. **History of Pakistan (1947- Todate):** Pakistan's early Challenges—Quaid-i-Azam as Governor-General, various attempts at constitution making.
- VII. **Military in Politics:** Ayub Khan, Yahya, Zia-ul-Haq and Pervaiz Musharaf regimes, Civil Military Relationship in Pakistan,
- VIII. **Separation of East Pakistan:** Causes and Effects,
- IX. **Working of Democracy in Pakistan:** Liaquat Ali Khan to Firoz Khan Noon (1947-1958), Zulfikar Ali Bhutto's Period,(1971-1977), Benazir, Nawaz Sharif ,Revival of Democracy: 1988-1999, Restoration of Democracy (2008 to date), Role of Major Political Parties and Pressure Groups in the history of Pakistan.
- X. **Foreign Policy of Pakistan (1947-1999)**

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>TITLE</b>  | <b>AUTHOR</b>                 |
|--------------|---|-------------------------------|
| 1.           | Political Parties in Pakistan: 1947-58                                  | Afzal, M Rafique, 1986        |
| 2.           | Government & Politics in Pakistan                                       | Ahmad, Mushtaq, 1970          |
| 3.           | Party Politics in Pakistan: 1947-58                                     | Aziz, K.K. 1976               |
| 4.           | India's Struggle for Independence                                       | Chandre Bipin, 1989           |
| 5.           | Constitutional Development in Pakistan                                  | Chaudhary, G.W. 1959          |
| 6.           | Wavell and the Days of the Raj: Britain's Penultimate Viceroy in India, | Chawla, Muhammad Iqbal, 2011  |
| 7.           | Nationalism and Communal Politics in India.                             | Hassan Mushirul 1991          |
| 8.           | The Charismatic Leader: Jinnah and the Creation of Pakistan             | Hayat, Sikandar, 2007         |
| 9.           | The Culture of Power and Governance of Pakistan 1947-2008               | IHAN Niaz, 2011               |
| 10.          | Muslim Civilization of Indo-Pakistan.                                   | Ikram, Shaikh Muhammad, 1966  |
| 11.          | Pakistan's Failure in National Integration                              | Jahan, Rounaq, 1972           |
| 12.          | Constitutional and Political History of Pakistan                        | Khan, Hamid, 2005             |
| 13.          | The Muslim Politics in Punjab   | Qalb-i-Abid ,S, 1992          |
| 14.          | The Muslim Community of the Indo-Pak                                    | Qureshi Ishtiaq Husain, 1962  |
| 15.          | The Struggle for Pakistan   | Qureshi, Ishtiaq Husain, 1965 |
| 16.          | Pakistan: The Formative Phase   | Sayeed, Khalid Bin, 1968      |
| 17.          | The Military and Politics in Pakistan 1947-86                           | Rizvi Hassan Askari           |
| 18.          | Pakistan A Modern History   | Talbot, Lan, 1999             |
| 19.          | Politics and the State in Pakistan                                      | Waseem, Mohammad, 1989        |
| 20.          | Jinnah of Pakistan  | Wolpert, Stanley, 1984        |

**PAPER: HISTORY OF USA (150 MARKS)**

- I. Introduction:-
  - From ancient times to 1492
  - Advent of the Europeans to British supremacy (1492-1606)
- II. USA as a British Colony (1606-1783).
- III. USA as an Independent Country (1783 - 1819)
- IV. Expansion of USA: From 13 to 50 States (1820 – 1949)
- V. Constitution of the USA: Salient Features
- VI. Civil War between the North and the East (1850 - 1869)
- VII. Industrialization and its emergence as one of the world powers (1870 -1916)
- VIII. USA's role in the Two World Wars (i. 1914 – 1918, ii. 1939 - 1945)
- IX. Post 1945 world scenario and emergence of USA and USSR as the Two World Powers.  
American Role in patronizing UNO and International Organizations 1945 – 2012
- XI. American Role in Cold War and its emergence as the Sole super Power (1945 - 1990).
- XII. International Concerns of USA: An Overview.
- XIII. The War on Terror and the Role of Pakistan and USA (2001 - 2012)
- XIV. Global perceptions of the USA.
- XV. Progressive Era: Reforms of Theodore Roosevelt and Woodrow Wilson,
- XVI. The Great Depression and the New Deal
- XVII. Civil Rights Movement
- XVIII. United States Role in International Conflicts
- XIX. US Presidential Election
- XX. The US Congress : Role and Functions
- XXI. Separation of Powers and Check & Balances

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>                        |
|--------------|---|--------------------------------------|
| 1.           | The Ideological Origins of the American Revolution,               | Bailyn. Bernard, 1992                |
| 2.           | A Pocket History of the United States                             | Commager, H. and Nevins, Allan, 1967 |
| 3.           | Painless American History,  | Curt Lader, 2009                     |
| 4.           | The Politically Incorrect Guide to American History               | E.Woods, Thomas Jr., 2004            |
| 5.           | The Civil War: A Narrative  | Foote, Shelby, 1986                  |
| 6.           | The American Political Tradition and the Men Who Made it.         | Hofstadter. Richard , 1948           |
| 7.           | US-South Asian Relations 1784 – 1940: A History Perspective,      | Iftikhar H. Malik, ed., 2006         |
| 8.           | The Tragedy of Great Power Politics                               | Mearsheimer, John, 2001              |
| 9.           | Enlightenment Revolution and the Birth of Modern Nation           | Nelson, Craig, Thomas Paine, 2006    |
| 10.          | The USA: 1917 – 1980  | Smith, Nigel, 2006                   |
| 11.          | American Colonies: The Selling of North America                   | Taylor, Alan, 2002                   |
| 12.          | White Over Black: American Attitudes Toward the Negro 1550 – 1812 | Winthrop D. Jordan,                  |
| 13.          | The Complete Book of U.S. Presidents.                             | William. A. De Gregorio, 2005        |
| 14.          | A people's History of the United States: 1492 to Present.         | Zinn, Howard, 1980                   |

**PAPER: INTERNATIONAL LAW (150 MARKS)**

**I. Nature, Origin and Basis of International Law.**

The Emergence of International Law, Early European Authors, The Nation-State System, The Enforcement of International Law, The Effectiveness of International Law, The Weakness of International Law, The Juridical Basis of International Law, The Future of International Law and Material Sources of International Law.

**II. Relation between International Law and State Law.**

Article 38 of the Statute of International Court of Justice, Primary Sources of International Law, Subsidiary Sources of International Law, International Soft Law

**III. State in General and Recognition**

Personality and Statehood in International Law, The Subjects of International Law, Recognition of State and Government in International Law, Recognition of State and Government in National Law.

**IV. The Law and Practice as to Treaties**

The Vienna Convention on the Law of Treaties

**V. The Settlement of International Disputes.**

Negotiation, Mediation and Good Offices, Inquiry, Settlement by the United Nations, Conciliation, Arbitration, The International Court of Justice.

**VI. International Humanitarian Law.**

International and Non-International Armed Conflicts, Non-International Armed Conflict, 'Combatant' and 'Protected Persons', Protection of Wounded, Sick and Ship-Wrecked Persons, POWs, Civilians, Limitations on the Conduct of War, Limits on the Choice of Methods and Means of Warfare.

**VII. The Use of Force**

The Law before the UN Charter, The Law after the Charter, The Collective Use of Force, The Right of Self-Defence.

**VIII. International Institutions**

**IX. State Territorial Sovereignty.**

**X. State Responsibility.**

**XI. State Jurisdiction.**

**XII. Succession to Rights and Obligations.**

**XIII. The State and the Individual.**

**XIV. The State and the Economic Interest.**

**XV. Diplomatic Envoys, Counsels and other Representatives.**

**XVI. War, Armed Conflicts and other Hostilities.**

**XVII. Neutrality.**

### SUGGESTED READINGS

| <b>S.No.</b> | <b>Title</b>                                     | <b>Author</b>   |
|--------------|--|-----------------|
| 1.           | International Law                                | Malcolm N. Shaw |
| 2.           | Principles of Public International Law           | Lan Brownlie    |
| 3.           | International Law                                | Dr. S.K. Kapoor |
| 4.           | Introduction to International Law                | J.G. Starke, QC |
| 5.           | International Humanitarian Law                   | ICRC Pakistan   |
| 6.           | Extradition Act, 1972                            | Nil             |
| 7.           | The Diplomatic and Consular Privileges Act, 1972 | Nil             |
| 8.           | Territorial Waters and Maritime Zone Act, 1976   | Nil             |
| 9.           | U.N. Convention on Law of the Sea, 1984          | Nil             |
| 10.          | Cases and Materials on International Law         | D.J. Harris     |

**PAPER: INTERNATIONAL RELATIONS (150 MARKS)**

**Paper—1 (Marks-75)**

**I. Introduction**

The Definition and Scope of International Relations.  
The Nation-State System  
Evolution of International Society

**II. Theories and Approaches**

The Classical Approaches-Realism and idealism  
The Scientific Revolution-Behavioral Approach, System Approach,  
Neo-realism, Neo-liberalism.  
Post-modernism, Critical Theory, Feminism, Constructivism

**III. International Political Security.**

Conceptualization of security in the twenty-first century  
Power. Elements of National Power  
Balance of Power  
Foreign Policy: Determinants, Decision making and analysis  
Sovereignty  
National Interest

**IV. Strategic Approach to International Relation.**

War: Causation of War, Total War, Limited War, Asymmetric Warfare, civil war,  
Guerilla war  
Strategic Culture: Determinants of Pakistani Strategic Culture.  
Deterrence: Theory and practice with special reference to Nuclear India and  
Pakistan

**V. International Political Economy.**

Theories in IPE: Mercantilism, Economic Liberalism, and neo- Marxism  
Theories of Imperialism, Dependence and Interdependence discourse

**VI. International political community.**

Nationalism  
Internationalism  
Globalization

**VII. Approaches to Peace**

Diplomacy  
International Law  
Arms Control /Disarmament and Nuclear Non proliferation Regime

**VIII. International Political Institution**

United Nations  
International Monetary Fund (IMF)  
World Bank  
International Court of Justice

**Paper- II (Marks-75)**

**I. International Relation between two Wars**

Russian Revolution, Fascism, League of Nations, Second World War

**II. Cold War**

Decolonization in Asia and Africa.  
Rise of United States and Soviet Union,  
Era of Tight Bipolarity, Détente and Loose Bipolarity, Revival of Cold War

**III. Post Cold War**

End of History, Clash of Civilization, Terrorism, Globalization, unipolarity New world Order

**IV. International and Regional Organizations**

League of Nation, United Nations, Regional Organizations, EU, ASEAN, NAFTA, SAARC, SCO, OIC, ECO, WTO.  
Reforms in the United Nations, World Bank and the IMF

**V. Foreign Policy of Selected Countries**

USA, Russia, China, UK, India, Pakistan and EU

**VI. South Asia**

Peace-making and Peace-Building in South Asia: Analytical overview of peace processes between/among the states of South Asia especially between India and Pakistan.

India and Pakistan: Overview of agreements and accords, Indus Water Treaty; Composite Dialogue; Sir Creek & Siachen border, Visa and People to people contact; Trade; and Role of civil society

Afghanistan: Cold war theatre; Soviet Invasion Mujahedeen; Geneva Accord; Post Cold War situation---Rise of Taliban, AL-Qeada & 9/11; Operation Enduring Freedom; The Bonn Process- Withdrawal



**VII. Weapons of Mass Destruction**

Proliferation of Nuclear Weapons

Nuclear Weapon States- Programs and Postures: Indian-Pakistan Nuclear Doctrines

Nuclear Non –Proliferation Regime: International Atomic Energy Agency, Nuclear Non- proliferation Treaty; Nuclear Supplier Group; Partial Test Ban Treaty; Comprehensive Test Ban Treaty; Fissile Material Cut-off Treaty

Challenges of Non-Proliferation, Nuclear Civil Deal Regime

The Missile Defence Systems and their impact on global strategic environment

Militarization and Weaponization of Space.

**VIII. Contemporary Issues**

Euro-Atlantic Vs Asia Pacific; Great Power Policies

Kashmir Issue

Palestine Issue

**SUGGESTED READINGS**

| S.No. | Title   | Author                                      |
|-------|---|---|
| 1.    | World Politics: Trend and Transformation, Ninth Edition                         | Charles W. Kegley JR. and Eugene R Wittkopf |
| 2.    | Understanding International Relations, Second Edition                           | Chris Brown                                 |
| 3.    | Politics Among Nations  | Hans j. Morgenthau                          |
| 4.    | International Politics: A Framework for Analysis                                | Holsti, K.J.                                |
| 5.    | Contemporary Security and Strategy  | Craig A. Snyder (ed.),                      |
| 6.    | The Globalization of World Politics: An Introduction to International Relations | John Baylis and Stev Smith, eds             |
| 7.    | Games Nations Play, Seventh Edition   | John Spanier                                |
| 8.    | Essentials readnigs in World Politics   | Karen Mingst                                |
| 9.    | World in Collision: Terror and the Future of Global Order                       | Ken Booth and Tim Dunne, ed                 |
| 10.   | Theory of International Politics  | Kenneth N. Waltz                            |
| 11.   | Theories of International Relations   | Scott Burchill and Andrew Linklater         |
| 12.   | The Cause of Wars   | Michael Howard                              |
| 13.   | Politics of Nuclear Weapons in south Asia                                       | Bhumitra Chakma, ed                         |

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>                                      |
|--------------|---|--|
| 14.          | The Twenty Year's Crisis ; 1919-1939:An Introduction to the Study of International Relation | E.H. Carr  |
| 15.          | Bomb Scare: The History and Future of Nuclear Weapons                                       | Joseph Cirincione                                  |
| 16.          | Arms Control: The New Guide to Negotiations and Agreements                                  | Jozef Goldblat                                     |
| 17.          | Explaining Foreign Policy   | Llyod Jenson                                       |
| 18.          | The International Politics of Space   | Michael Sheehan                                    |
| 19.          | Foreign Policy Making Process: A Case Study of Pakistan                                     | Moonis Ahmar, ed                                   |
| 20.          | Planning the Unthinkable How New Powers Will Use Nuclear Biological And Chemical Weapons    | Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz |
| 21.          | Pakistan's Foreign Policy : An Historical Analysis  | S.M. Burke   |
| 22.          | International Relations: Politics and Economy in the 21st Century                           | William Nester                                     |
| 23.          | Foreign Policy and Political process  | William Wallace                                    |
| 24.          | Nuclear Risk Reduction Measures and Restraint Regime in South Asia                          | Zafar Nawaz Jaspal                                 |
| 25.          | The India- Pakistan Military Standoff; Crisis and Escalation in South Asia (United States)  | Zachary S. Davis, ed                               |
| 26.          | Nuclear Pakistan: Strategic Dimensions  | Zulfiqar Khan, ed                                  |

**PAPER: ISLAMIC HISTORY & CULTURE (150 MARKS)**

**Part –I (Marks 70)**

**I. Pre-Islamic Near East: An Overview**

Political, Social, Cultural, Religious and Economic Conditions in the Near East including Arabia before the dawn of Islam

**II. The Dawn of Islam: The Prophetic Age (570-632)**

Biography of the Prophet Muhammad (PBUH): A Chronology of the Major Events in his Life

Prophet Muhammad (PBUH) as a Motivator (Daa'i), Major points of his mission

Prophet Muhammad (PBUH) as a Military Leader/Strategist

Prophet Muhammad (PBUH) as a Political Leader/Head of the State

**The Pious Caliphate (632-660)**

Caliph Abu Bakr (632-34): Apostasy Wars and Consolidation of Islam

Caliph Umar bin Khattab (634-44): Establishment of Administrative System and Expansion of Muslim Empire

Caliph Uthman bin Affan (644-56): Problems and Issues in the Muslim Community

Caliph Ali bin AbuTalib (656-660): Rise of Factionalism

Abdication of Imam Hasan and Establishment of Umayyad Dynasty (660)

**IV. Political System of Islam under the Prophet (PBUH) and the Pious Caliphate**

Nature of Islamic State

Form of the Government

Functions of the Islamic State

Sovereignty of God

Caliphate or Vicegerency of Man

Appointment of Caliph

Shura or the Consultative Body and its Role

**V. Institutional Development of the Muslim Civilization: The Early Phase (622-660)**

Development of Law and Judiciary in Early Islam

Administration and State Conduct

Defense in Early Islam

Educational System

Propagation of Islam

Financial Administration

Heritage and Culture

**VI. The Umayyad in Power (660-749)**

- Political History of the Umayyad Dynasty
- Statecraft and Administration under the Umayyads
- Society and the Development of Arabic Literature.
- Cultural achievements

**Part –II (Marks 75)**

**I. The Abbasids of Baghdad (749-1258)**

- The Abbasid Revolution and the Establishment of the Abbasid Dynasty
- Administrative Structure under the Abbasids
- Development of Scientific Knowledge under the Abbasids
- Muslim Philosophy under the Abbasids
- Cultural achievements

**II. Spain under the Muslim Rule**

- Spain under the rule of the Arabs and Moors (711-1492)
- Political Fragmentation and the Fall of Granada (1492)
- Muslim Contribution in the Realm of Culture, Arts and Architecture

**III. The Crusades against Islam**

- Major Encounters and Actors (1092-1228)
- Impact of the Crusades on Muslim-Christian Relations

**IV. The Ottoman Empire**

- Rise and Fall of the Ottoman Turks (1299-1923)
- State, Society and Economy under the Ottomans
- Treatment with the Religious Minorities
- Contribution towards Culture, Arts and Architecture

**V. Sufism as an Institution of the Muslim Society**

- Origin and Development of Sufism
- Contribution of the Sufis to the Muslim Civilization
- Relationship of the Sufis with the State and Political Authorities.
- A critical Look at Sufism

**VI. Islam and Modernity in Contemporary World**

- The Emergence of Islamic Modernism
- Intellectual, Political, Economic, Social and Educational Aspects of Islamic Modernism
- Dissemination of Muslim Learning in the West

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Titles</b>   | <b>Author</b>                         |
|--------------|---|---------------------------------------|
| 1.           | Discovering Islam—Making Sense of Muslim History and Society                      | Ahmad, Akbar                          |
| 2.           | Islam: Ideology and Leading Issues  | Ali, Anwar.                           |
| 3.           | The Spirit of Islam   | Ali, S. Ameer                         |
| 4.           | Aspects of Islamic Civilization: The Muslim World Depicted Through Its Literature | Arberry, A. J.                        |
| 5.           | The Preaching of Islam—A History of the Muslim Faith                              | Arnold, T.W.                          |
| 6.           | The History of Philosophy in Islam  | Boer, T. J. De.                       |
| 7.           | The History of Islamic Peoples  | Brockelmann, Carl (ed)                |
| 8.           | Spanish Islam   | Dozy, R.                              |
| 9.           | Studies on the Civilization of Islam  | Gibb, Ham                             |
| 10.          | The Religion of Islam, Vol. I & II  | Gaqwash, Ahmad A.                     |
| 11.          | Classical Islam: A History 600—1258   | Grunebaum, G. E. V. Oni               |
| 12.          | Cambridge History of India  | Holts, P. M. and Lewis, Bernard.      |
| 13.          | Islam Resurgent: The Islamic World Today  | Irving, T.B.                          |
| 14.          | Islam: From Prophet Mohammad to the Capture of Constantinople.                    | Lewis, Bernard                        |
| 15.          | Islamic History.  | Munir, Muhammad                       |
| 16.          | Islam and The Modern World  | Nadvi, Abu Hasan Ali.                 |
| 17.          | The Making of the Past: the Spread of Islam                                       | Rogers, Michael                       |
| 18.          | A History of Medieval Islam   | Saunders, J.J.                        |
| 19.          | Introduction to Islamic Civilization  | Savory, R.M. (ed)                     |
| 20.          | The Legacy of Islam   | Schacht, Joseph & Bosworth, C.E (eds) |
| 21.          | Islamic History—A New Interpretation AD 750—1055                                  | Shaban, M.A.                          |
| 22.          | The Abbasid Revolution  | Shaban, M.A.                          |
| 23.          | A History of Muslim Philosophy  | Sharif, M.M.                          |
| 24.          | Muslim Thought :Its Origin and Achievements                                       | Nadvi Muhammad Hanif                  |
| 25.          | Studies in Islamic History  | Siddiqi, Amir Hassan.                 |
| 26.          | The Revolution which Toppled the Umayyads Neither Arab nor Abbasid                | Agha, Saleh Said                      |
| 27.          | Sirat un Nabi Vol. I & II   | Noumani, Shibli                       |
| 28.          | Rasol-e-Akram ki Siasi Zindagi  | Hamidullah, Dr. Muhammad              |

| <b>S.No.</b> | <b>Titles</b>                               | <b>Author</b>                                 |
|--------------|---|---|
| 29.          | Khilafat-o-Malokiat                         | Syed Abul Aala Maudoodi                       |
| 30.          | Ahd-e-Nabawi main Riyasatka Nash o Irtaqa   | Ahmad, Dr. Nisar                              |
| 31.          | Siddiq-e-Akbar                              | Akbarabadi, Saeed Ahmad                       |
| 32.          | Al-Farooq                                   | Noumani, Shibli                               |
| 33.          | History of Islam                            | Najeebabadi, Akbar sha`                       |
| 34.          | Painting in Islam                           | Thomas, Sir A.                                |
| 35.          | Early Islamic Pottery                       | Lane, A.                                      |
| 36.          | Muslim Calligraphy                          | Ziauddin, M.                                  |
| 37.          | Islamic Art & Architecture                  | Kuhnel, E.                                    |
| 38.          | Daira Ma'arif e Islamia (relevant articles) | University of Punjab                          |
| 39.          | The Cultural Atlas of Islam                 | Isma'il Raji al-Faruqi & Lois Lamy' al-Faruqi |

**PAPER: JOURNALISM & MASS COMMUNICATION (150 MARKS)**

**I. Introduction to Mass Communication**

Concept – Definitions, Need/Importance/Purposes, Types of Communication, Process of Communication, Basic Models.

Functions of a model, Evaluation of a model

Basic models in Mass Communication: -

Lasswell's Model (1948)

Shannon-Weaver model (1948)

Osgood,s model (1954)

Schramm's model (1954)

Newcmb's symmetry theory (1953)

Westley-McLean's model (1976)

Gerbner model (1956)

**II. Mass Communication Theories**

Normative theories of the press: Schramm's four theories and criticism on these theories

Media as agents of power

The Spiral of silence

Media Usage and gratifications

Media hegemony

Diffusion of innovations

Powerful effects model: hypodermic needle, silver bullet

Moderate effects model: two-step and multi-step flow of communication.

Powerful media revisited: Marshal McLuhan's media determinism

**III. Global / International Communication**

The Historical Context of International Communication

Globalization, technology, and the mass media

Communication and Cultural imperialism

Communication Flow in Global Media: Imbalance in the flow of information between North and South

McBride commission and its recommendations.

International Communication in the Internet Age: the new social media and its effects on developing world

#### **IV. Media and Society**

Mass media and social change

Media as a social system: The balance between interrelation and interdependence

Media freedom and its role for democracy,

The functional approach to mass media: four social functions of the media

Media as an awareness agent

Mass media and social representation

#### **V. Mass Media in Pakistan:**

Media system in Pakistan: historical, chronological, and analytical review

The system of journalism and the media system

Employer-employee relations in Pakistani media

Government-press relations

Press in Pakistan: The newspaper industry, from mission to the market

Electronic media: from total dependence to enormous power

The new 24/7 television: uses and abuses

The new radio: potential for change and the present performance.

The question of freedom and responsibility

#### **VI. Development Support Communication**

Theories of development support communication with specific focus on the developing world

The dominant paradigm of development: historical, analytical perspective

The Alternative paradigm of development

Small is beautiful: community development as a snowball effect.

Globalization vs Localization

Glocalization

Social Marketing: how to infuse new ideas into a developing population

#### **VII. Public Relations:**

Concept of Public Relations

Historical development of public relations: from press agency to PR

Public relation in Pakistan

Ministry of information

Press Information Department (PID)

Public relations and publicity

PR as a tool for governance

Private PR agencies and their structure



Basic methods of PR: press release, press note, press conference

PR Ethics

### VIII. Media Laws and Ethics:

History of Media Laws in Pakistan

Development of media regulations from British colonial era to independent Pakistan

Libel, Defamation and relevant portions of PPC

PPO, RPPPO

PEMRA: establishment, development, and operational mechanisms

Press Council of Pakistan (PCP)

Citizens Media Commission: need, present status, and reasons for inactivity

Press Code of Ethics

Inability of the media to develop a code of ethics as an institution

The media's quest for freedom and its inability to self regulate.

### SUGGESTED READINGS

| S No. | Title  | Author   |
|-------|--|--|
| 1.    | Broadcast Regulations: the German Example  | Metzger, Herbert. FES 1993.                            |
| 2.    | Communication Models for The Study of Mass Communication, 2 <sup>nd</sup> Ed           | McQuail, Dennis & Windhal, Swen, Longman, 1982.        |
| 3.    | Convergence Culture: Where old and new Media   | Blackwell publishing Ltd, USA.                         |
| 4.    | Communication Theories: Origins, Methods and Uses in the Mass Media 5 <sup>th</sup> Ed | Werner J. Severin, James W. Tankard Jr. Longman, 1997. |
| 5.    | Diffusion of Innovations 5 <sup>th</sup> Ed  | Rogers, Everett M. Free Press 2003                     |
| 6.    | Ethics in Journalism: A Reader on Their Perception in the Third World                  | Kunczik, Michael (Ed.). FES 1999.                      |
| 7.    | Handbok of International and Intercultural Communication 2 <sup>nd</sup> Ed            | Gudykunst & Mody, Sage, 2001.                          |
| 8.    | McQuail's Mass Communication Theory, 4 <sup>th</sup> Ed                                | Denis McQuail. Sage, 2000.                             |
| 9.    | Media And Society into the 21 <sup>st</sup> Century: A Historical Introduction         | Blackwell publishing Ltd, USA.                         |
| 10.   | "Media / Impact"   | Wads Worth/ Thompson Learning, Belmont, CA             |
| 11.   | "Media Now: Communication Media in the Information Age"                                | Wads Worth/Thompson Learning, Belmont, CA              |

| S No. | Title   | Author   |
|-------|---|--|
| 12.   | News Media and Journalism in Pakistan   | Khan, Altaf. LAP Lambert Academic Publishing. June 2011. |
| 13.   | News Media and Journalism in Pakistan and Germany (Ed.)   | Khan, Altaf. Peshawar, 2003.                             |
| 14.   | Participatory Development   | Hasan, Arif, Oxford, 2010.                               |
| 15.   | Political Communication in Britain: The Leader Debates, the Campaign and the Media in the 2010 General Election, (Ed) | Palgrave McMillan, UK                                    |
| 16.   | Political Communication in Asia,  | Routage, NY.   |
| 17.   | "Precision Journalism: A Reporter's Introduction to Social and Science Methods", 4 <sup>th</sup> Ed                   | Rowman and Littlefield, Lanham, MD.                      |
| 18.   | Report and Recommendations of the Media Commission, appointed by the Supreme Court of Pakistan, 2013                  | FES, Islamabad, 2013.                                    |
| 19.   | Reporting the Frontier: Media Capacity Building for Peace in Pakistan's Tribal Areas                                  | Khan, Altaf VDM Verlag Dr. Müllere.K. June 2011.         |
| 20.   | "Writing, Directing, and Producing Documentary Films and Vidoes", 3rd edition   | Carbondale: Southern Illinois Press, 2002.               |
| 21.   | "Directing the Documentary", 4th edition  | Focal Press, 2004.                                       |
| 22.   | "Documentary Storytelling: Making Stronger and More Dramatic Nonfiction Films", 2 <sup>nd</sup> edition               | Focal Press, 2007.                                       |
| 23.   | Principles of Editing   | McGraw-Hill 1996   |
| 24.   | Journalism–Principles and Practices   | Vistaar Publications 2006                                |
| 25.   | The Hand Book of New Media  | London: Sage   |
| 26.   | Applying Communication Theory for Professional Life: An Introduction (2 <sup>nd</sup> Edition)                        | London: Sage   |
| 27.   | Controversies in Contemporary Advertising   | Newbury Park: Sage Publications                          |
| 28.   | "Public Relations-Writing & Media Techniques"   | Harper Collins College Publishers, NY                    |
| 29.   | Telecommunications Policy in Pakistan"  | Telematics and Informatics                               |
| 30.   | "Guaranteeing Copyright- Media Manager's Guide to Pakistani Broadcast Law"  | Media Manager Companion Series Internews Pakistan        |
| 31.   | "Model Freedom of Information Act", 2001  | Consumer rights Protection Commission of Pakistan        |

**PAPER: LAW (150 MARKS)****I. Definitions of Crime****II. All Provisions of:**

Concept of arbitration, arbitration with or without intervention of court and in civil suits.

Establishment of Civil Courts with their Original & Appellate Jurisdiction.

The Code of Civil Procedure, 1908

Pakistan Panel Code, 1860

Qanun-e-Shahdat Order, 1984

Criminal Procedure Code, 1898

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>                      | <b>Author</b>   |
|--------------|-----------------------------------|---|
| 1.           | Pakistan Panel Code, 1860         | M. Mahmood  |
| 2.           | Criminal Procedure Code, 1898     | Shaukat Mahmood   |
| 3.           | Law of Evidence                   | Justice (R) Khalid ur Rahman Khan<br>as adapted form Principles and<br>Digest of the Law of Evidence by M.<br>Monir |
| 4.           | Qanun-e-Shahdat Order, 1984       |   |
| 5.           | The Code of Civil Procedure, 1908 | Aamir Raza A. Khan  |
| 6.           | The Arbitration Laws in Pakistan  | M. Mahmood  |
| 7.           | Civil Courts Ordinance, 1962      | Nisar Ahmad Nisar   |

**PAPER: MERCANTILE LAW (150 MARKS)**

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**I. Law of Contract, 1872**

Definitions

Essentials of a valid contract (Proposal, Acceptance, Consideration, Free consent, Capacity of Parties, Not hereby declared to be Void)

Kinds of Contracts (Valid, Void, Voidable, Not Voidable)

Variety of Contracts (Contingent, Quasi, Bailment, Pledge, Indemnity, Agency)

Performance of Contract, contracts need not to be performed.

Breach of contract, consequences of breach, damages for breach of contract.

**II. Sales of Goods Act, 1930**

Definitions

Differences: Sale & agreement to sell, conditions and warranties, express & implied conditions.

Doctrines: Caveat emptor, Nemo dat

Right and duties of seller & buyer, rights of unpaid seller.

**III. Partnership Act, 1932**

Definitions

Essentials of partnership

Kinds of partnership (partnership at will, particular partnership, limited partnership)

Rights and duties of Partners

Relation of partners to third persons (implied authority of partner, doctrine of holding out)

Incoming and outgoing partners (minor)

Dissolution of firms (compulsory, by agreement, by court, by notice on happening of contingencies)

**IV. Negotiable Instrument Act, 1881**

Definitions

Types of negotiable instruments (Cheque, bill of exchange, promissory note)

Parties to instruments, holder & holder in due course

Rules (as to negotiation, presentment, payment & interest, discharge, noting and protest, compensation, acceptance, payment for honour)

Special rules of evidence

Special provisions relating to cheques & bills of exchange (dishonor, duties of banker)

Provisions as to foreign instruments

**V. Competition Act, 2010**

Definitions

Prohibition and abuse of (dominant position, certain agreements, discipline, marketing practices)

Approval of mergers

Competition commission of Pakistan (established, composition, term)

Functions and powers of commission

Provisions as to penalty and appeals.

**VI. Electronic Transaction Ordinance, 2002**

Definitions

Recognition and presumption of electronic transactions (writing, signature, stamp duty, attestation etc.)

Electronic documents (attribution, acknowledgement, time and place of dispatch)

Certification of service providers

Application to acts done outside Pakistan

Offences & Nature (false information, false certificates, damage to information system etc)

**VII. The Arbitration Law in Pakistan**

Definitions

Appointment, number and removal of arbitrator

Award by arbitrator

Powers of court upon award (remittance, modification and setting aside of award)

Types of arbitration (with or without intervention of court)

Stay of legal proceedings in presence of arbitration agreement

**VIII. Consumer's Protection Act, 2006**

Definitions

Consumer Commission (establishment, powers and functions, complaints before commission and disposal)

Provisions as to compulsory recall of goods

Duties and liabilities of provider of goods (return and refund of goods)

Offences and penalties

Contract between consumer and provider

**IX. Companies Ordinance, 1984**

Definitions

Types of Companies

Fundamental papers of company (Memorandum of association, articles of association, prospectus)

Transfer of shares and debentures

Management and administration (promoters, share holders, directors, chief executive, auditors)

Meeting's and proceedings (statutory, general, annual general meeting)

Winding up (voluntary, by court)

**X. Electronic Fund Transfer Act, 2007**

Definitions

Payment system and their operation (designation of payment system &amp; revocation, real time gross settlement system, governance &amp; operation arrangement)

Payment instruments (designation, issuing and prohibition of instruments)

Clearing and other obligations

Supervisory Control of state bank

Documentation of transfers

Notification of error and liabilities of parties

Law relating to action before court.

**SUGGESTED READINGS**

| <b>S. No.</b> | <b>Title</b>                            | <b>Author</b>          |
|---------------|---|------------------------|
| 1.            | Law of Contract                         | Agarwala, M. Mehmood   |
| 2.            | Sales of Goods Act                      | Pollock & Mulla        |
| 3.            | Bare Acts:                              | Government of Pakistan |
| i)            | Contract Act, 1872                      |                        |
| ii)           | Negotiable Instrument Act, 1881         |                        |
| iii)          | Sale of Goods Act, 1930                 |                        |
| iv)           | Companies Ordinance, 1984               |                        |
| v)            | Arbitration Act, 1947                   |                        |
| vi)           | Competition Act, 2010                   |                        |
| vii)          | Electronic Transactions Ordinance, 2002 |                        |
| viii)         | Consumer's Protection Act, 2006         |                        |
| ix)           | Electronic Fund Transfer Act, 2007      |                        |

| S. No. | Title   | Author |
|--------|---|--------|
| 4.     | <b>Case Law Reading</b>   |        |
| i)     | Carlil vs. Carbolic Smoke Ball Co. (1893) 1 QB 256                                    |        |
| ii)    | Pharmaceutical Society of Great Britain vs. Boots Cash Chemicals Ltd. (1952) 2 QB 795 |        |
| iii)   | Curie vs. Misa (1875) LR 10 Ex 153  |        |
| iv)    | Byrne & Co. vs. Van Tienhaven & Co. (1880) 5 CPD 344                                  |        |
| v)     | Mohri Bibi vs. Dharmodas Ghose (1903) 30 IA 114                                       |        |
| vi)    | Derry vs. Peeks (1889) 14 App. Cas 337  |        |
| vii)   | Mannu Singh vs. Umadat Panday (1890) 12 ALL 523                                       |        |
| viii)  | Coggs vs. Bernard (1703) 2Ld Raym 909   |        |
| ix)    | Lumley vs. Wanger (1852) EW HC (Ch)J 96   |        |
| x)     | Manni Devi vs. Ramayan Singh AIR 1985 Pat. 35   |        |
| xi)    | Lachhman Joharimal vs. Bapu Khandu (1869) 6 Bombay High Court Reports 241             |        |
| xii)   | Mischeff vs. Springett (1942) 2 KB 331  |        |
| xiii)  | Watson vs. Coupland (1945) 1 all er 217   |        |
| xiv)   | Ashbury Railway Carriage & Iron Co. Ltd. Vs. Riche (1875) LR 7HL 653                  |        |
| xv)    | Lee vs. Lee's Air Farming (1960) 3 All ER420  |        |
| xvi)   | Salomon vs. A. Salomon & Co. Ltd. (1897) AC 22  |        |
| xvii)  | Royal British Bank vs. Turqnand (1856) 6 E&B 327                                      |        |
| xviii) | Ram Raja Ram vs. Dhirba Charan Jen AIR 1982 Ori 264                                   |        |
| xix)   | Badridas Kothari vs. Megraj Kothari AIR 1967 Cal 25                                   |        |
| xx)    | Hitachi Ltd. & others vs. Rupali Polyester & others (1998 SCMR 1618)                  |        |
| xxi)   | Marflower Theatre Trust Ltd. Vs. HMRC (2007) STC 880                                  |        |
| xxii)  | Pickering vs. Bux (1812) 15 East 38   |        |
| xxiii) | Liaqat Islam vs. State (2011 YLR 2280)  |        |
| xiv)   | Alamgir Khalid Chughtai vs. State (PLD 2009 Lahore 259)                               |        |
| xv)    | United States vs. Forty Barrels and Twenty Kegs of Coca Cola, 241 U.S. 265 (1916)     |        |
| xvi)   | Hedley Byrne & Co. Ltd. Vs. Hella & Partners Ltd. (1964) AC 465                       |        |

**PAPER: MUSLIM LAW & JURISPRUDENCE (150 MARKS)**

**I. The Sources of Islamic Law**

The Quran  
The Sunnah  
Ijma  
Qiyas  
Ijtehad

**II. Principles of Islamic Jurisprudence**

**III. Islamic Criminal Law**

Hadd  
Taz'ir  
Qisas and Diyat

**IV. Islamic Family Law**

Marriage  
Dower  
Divorce  
Separation by Repudiation (Talaq)  
Separation by Mutual Agreement (Khula)  
Judicial Separation (Faskh)  
Post-Divorce Maintenance  
Child Custody  
Succession

**V. Islamic Law of Contract**

**VI. Islamic Law and Human Rights**

**VII. Dissolution of Muslim Marriage Act, 1993**

**VIII. Muslim Family Ordinance 1961**



### SUGGESTED READINGS

| <b>S.No.</b> | <b>Title</b>                                       | <b>Author</b>              |
|--------------|--|----------------------------|
| 1.           | An Introduction to the Study of Islamic Law        | Dr. Hussain Hamid Hassan   |
| 2.           | Principles of Islamic Jurisprudence                | Mohammad Hashim Kamali     |
| 3.           | Theories of Islamic Law                            | Prof. Imran Ahsan Nyazee   |
| 4.           | Islamic Law of Contracts and Business Transactions | Tahir Mansuri              |
| 5.           | Family Law in Islam                                | Dr. Mohammad Tahir Mansuri |
| 6.           | Outlines of Islamic Jurisprudence                  | Prof. Imran Ahsan Nyazee   |
| 7.           | General Principles of Criminal Law                 | Prof. Imran Ahsan Nyazee   |
| 8.           | State and Legislation in Islam                     | Dr. Mahmood Ahmad Gazi     |
| 9.           | Mahomedan Jurisprudence                            | Abdur Rahim                |
| 10.          | Islamic Law of Inheritance                         | Hamid Khan, Advocate       |
| 11.          | Munir” Principles of Muhammadan Law                | Munir Ahmad Siddiqui       |

| PAPER: |   | PERSIAN            | (150 MARKS) |
|--------|---|--------------------|-------------|
|        |   | PART—I (Marks-75)  |             |
| I.     | Elementary Information about the Pre Islamic Persian Languages: Avesta, Old Persian and Pahlavi.  |                    |             |
| II.    | Origin and development of the new Persian Language (In this part revivalist movement, pursist movement and the adaptation of foreign loan words need to be studied.   |                    |             |
| III.   | The advent and history of Classical Persian Literature from SAMANID's period of Mushrootah Movement with special emphasis on the outstanding Persian prose writers and poets. The earlier Persian prose writers and poets upto 4th century H/10th century A.C |                    |             |
| IV.    | The contemporary Persian Literature with special emphasis on the New Poetry (شعر نو) and Fiction writing and their outstanding representatives.   |                    |             |
| V.     | A Short introduction to Persian Language and Literature, besides Iran, in Afghanistan, Tajikistan and Indo-Pakistan Subcontinent.   |                    |             |
| VI.    | Significant features of the grammar of the language as under:<br>اسم ، فعل ، ضمیر ، صفت ، قید ، حرف ، شبیه جملہ / صوت<br>In classical background, the four styles known as Khurasani, Iraqi, Hindi and Revivalist may be studied.                             |                    |             |
| VII.   | A Short essay writing in Persian on literary and cultural themes.   |                    |             |
| VIII.  | Translation of simple English passage into Persian.   |                    |             |
|        |   | PART—II (Marks-75) |             |

This part will require first hand reading of the texts prescribed and questions will be designed to test the candidate's critical abilities.

### TEXT SELECTION

#### 1. PROSE:

| شمار | نام مصنف            | نام کتاب  |
|------|---------------------|---|
| 1    | امام محمدغزالی      | - کیمیای سعادت : در رعیت داشتن و ولایت راندن  |
| 2    | علی بن عثمان بجویری | کشف المحجوب : باب التصوف  |
| 3    | نظام الملک طوسی     | سیاست نامه فصل ششم: اندر قاضیان و خطیبان و محتسب .....  |
| 4    | سعدی شیرازی         | گلستان :<br>باب اول ، حکایت اول، ششم ، هفتم، چهاردهم ، نوزدهم ، بیست و دوم ،<br>چهل و یکم<br>باب دوم – حکایت هفتم ، بیستم |

| شمار | نام مصنف     | نام کتاب  |
|------|--------------|---|
|      |              | باب سوم - حکایت شانزدهم ، نوزدهم ، بیست و دوم<br>باب چهارم - حکایت دوم<br>باب ششم - حکایت چهارم<br>باب هفتم - حکایت سوم ، حکایت ششم |
| 5    | حسن سجزی     | فوائد الفوائد : جلد دوم، مجلس ہشتم  |
| 6    | جلال آل احمد | سہ تار (افسانہ)   |

## 2-POETRY

| شمار | نام شاعر    | نام کتاب   |
|------|-------------|--|
| 1    | فردوسی      | شاهنامہ :<br>• در ستایش خرد<br>• در ستایش دادگستری   |
| 2    | مولانا رومی | مثنوی معنوی :<br>• نی نامہ<br>• داستان پیر چنگی با عمر رضی اللہ (دفتر اول)<br>• خریدن روستایی به تاریکی شیر را (دفتر دوم)<br>• انکار کردن موسی بر مناجات چوپان (دفتر سوم)<br>• اختلاف کردن در چگونگی و شکل پیل (دفتر سوم)<br>دیوان شمس :<br>• بروید ای حریفان بکشید یار ما را<br>• بنمای رخ کہ باغ و گلستانم آرزوست<br>• بہ روز مرگ چو تا بوت من روان باشد<br>• بیا تا قدر یکدیگر بدانیم<br>• خنک آن دم کہ نشینیم در ایوان من و تو |
| 3    | امیر خسرو   | دیوان غزلیات (غزلیات با مطلع های زیر)<br>• دلم زو شب حدیث ناز می گفت<br>• خیرم شدہ ست کا مشب سر یار خواہی آمد<br>• بیا نظارہ کن ، ای دل کہ یار می آید<br>• نمی دانم چہ منزل بود شب جانی کہ من بودم<br>• ای چہرہ زیبای تو رشک بتان آزی  |
| 4    | حافظ        | دیوان حافظ (غزلیات با مطلع های زیر)<br>• بیا کہ قصر امل سخت سست بنیاد است<br>• رسید مژدہ کہ ایام غم نخواہد ماند<br>• فاش می گویم و از گفتہ خود دلشادم<br>• سالہا دل طلب جام جم از ما می کرد<br>• ای بی خبر بکوش کہ صاحب خبر شوی  |
| 5    | غالب        | دیوان غالب دہلوی (غزلیات با مطلع های زیر):<br>• بہ وادی کہ در آن خضر را عصا خفتہ است<br>• آنان کہ وصل یار ہمی آرزو کنند<br>• جلوہ معنی بہ جیب و ہم پنهان کردہ ایم<br>• بیا کہ قاعدہ آسمان بگردانیم   |

| شمار | نام شاعر     | نام کتاب   |
|------|--------------|--|
| 6    | علامه اقبال  | <p>مثنوی اسرار خودی :</p> <ul style="list-style-type: none"> <li>• اسرار خودی تا مرحله سوم نیابت الهی به استثنای حکایت : در معنی اینکه افلاطون یونانی....</li> <li>• حکایت : در حقیقت شعر و اصلاح ادبیات اسلامیہ .</li> </ul> <p>زبور عجم :</p> <ul style="list-style-type: none"> <li>• من بنده آزادم عشق است امام من</li> <li>• چون چراغ لاله سوزم در خیابان شما</li> <li>• ای غنچه خوابیده چو نرگس نگران خیز</li> </ul> <p>ارمغان حجاز :</p> <ul style="list-style-type: none"> <li>• غلامم جز رضای تو نجویم</li> <li>• در آن دریا که او را ساحلی نیست</li> <li>• اناالحق جز مقام کبریا نیست</li> <li>• مسلمانی که داند رمز دین را</li> <li>• قلندر میل تقریری ندارد</li> </ul> |
| 7    | نیما یوشیج   | ای آدمها (نظم)   |
| 8    | احمد شاملو   | تا شکوفه سرخ یک پیراهن (نظم)   |
| 9    | فروغ فرخ زاد | دلبر برای باغچه می سوزد (نظم)  |
| 10   | شفیعی کدکنی  | هزاره دوم آهوی کوهی (نظم)  |

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## فارسی نمره 100

## بخش اول (نمره 75)

- 1-اطلاعات بنیادی درباره زبانهای پیش از اسلام: اوستایی، فارسی باستان و پهلوی
- 2- منشاء و تکامل فارسی معاصر (در این قسمت جنبش بازگشت ادبی، نهضت سره نویسی و اقتباس و اتخاذ وام واژه های خارجی باید مطالعه شود)
- 3- ظهور و تاریخ ادبیات کلاسیک فارسی از دوره سامانیان تا انقلاب مشروطه با تأکید ویژه بر نویسندگان و شاعران برجسته فارسی. (نویسندگان و شاعران از قرن چهارم هجری تا قرن دهم هجری)
- 4- ادبیات معاصر فارسی با تأکید بر شعر نو و داستان نویسی و نمایندگان برجسته آنها.
- 5- معرفی کوتاه زبان و ادبیات فارسی، به علاوه ایران، در افغانستان، تاجیکستان و شبه قاره پاکستان و هند.
- 6- انواع مهم دستور زبان فارسی مانند: اسم، فعل، ضمیر، صفت، قید، حرف، شبه جمله/صوت.
- 7- سبک های ادبی چهارگانه و زمینه های ایجاد آنها: خراسانی، عراقی، هندی و نهضت بازگشت باید مطالعه شود.
- 8- نگارش انشای کوتاه به زبان فارسی درباره ادبیات فارسی و موضوعات فرهنگی.
- 9- ترجمه پیراگراف انگلیسی ساده به زبان فارسی.

## بخش دوم (نمره 75)

در این بخش از داو طلبان درخواست می شود تا متون مشخص شده را به دقت خوانده و به سوالات مطرح جهت تعیین توانایی هایشان پاسخ دهند.

## 1.نثر: متون انتخاب

| شمار | نام مصنف            | نام کتاب   |
|------|---------------------|--|
| 1    | امام محمدغزالی      | - کیمیای سعادت : در رعیت داشتن و ولایت راندن   |
| 2    | علی بن عثمان بجویری | کشف المحجوب : باب التصوف   |
| 3    | نظام الملک طوسی     | سیاست نامه فصل ششم: اندر قاضیان و خطیبان و محتسب .....   |
| 4    | سعدی شیرازی         | گلستان :<br>باب اول ، حکایت اول، ششم ، هفتم، چهاردهم ، نوزدهم ، بیست و دوم ،<br>چهل و یکم<br>باب دوم – حکایت هفتم ، بیستم<br>باب سوم – حکایت شانزدهم ، نوزدهم ، بیست و دوم<br>چهارم – حکایت دوم<br>باب ششم – حکایت چهارم<br>باب هفتم – حکایت سوم ، حکایت ششم |



| شمار | نام مصنف     | نام کتاب                          |
|------|--------------|-----------------------------------|
| 5    | حسن سجزی     | فوائد الفواد : جلد دوم، مجلس ہشتم |
| 6    | جلال آل احمد | سہ تار (افسانہ)                   |

## 2-POETRY

| شمار | نام شاعر    | نام کتاب  |
|------|-------------|---|
| 1    | فردوسی      | شاهنامہ :<br>• در ستایش خرد<br>• در ستایش دادگستری  |
| 2    | مولانا رومی | مثنوی معنوی :<br>• نی نامہ<br>• داستان پیر چنگی با عمر رضی اللہ (دفتر اول)<br>• خریدن روستایی بہ تاریکی شیر را (دفتر دوم)<br>• انکار کردن موسی بر مناجات چوپان (دفتر دوم)<br>• اختلاف کردن در چگونگی و شکل پیل (دفتر سوم)<br>دیوان شمس :<br>• بروید ای حریفان بکشید یار ما را<br>• بنمای رخ کہ باغ و گلستانم آرزو ست<br>• بہ روز مرگ چو تا بوت من روان باشد<br>• بیا تا قدر یکدیگر بدانیم<br>• خنک آن دم کہ نشینیم در ایوان من و تو |
| 3    | امیر خسرو   | دیوان غزلیات (غزلیات با مطلع های زیر)<br>• دلم زو شب حدیث ناز می گفت<br>• خیرم شدہ ست کا مشب سر یار خواہی آمد<br>• بیا نظارہ کن ؛ ای دل کہ یار می آید<br>• نمی دانم چہ منزل بود شب جانی کہ من بودم<br>• ای چہرہ زیبای تو رشک بتان آزی   |
| 4    | حافظ        | دیوان حافظ (غزلیات با مطلع های زیر)<br>• بیا کہ قصر امل سخت سست بنیاد است<br>• رسید مژدہ کہ ایام غم نخواہد ماند<br>• فاش می گویم و از گفتہ خود دلشادم<br>• سالہا دل طلب جام جم از ما می کرد<br>• ای بی خبر بکوش کہ صاحب خبر شوی   |
| 5    | غالب        | دیوان غالب دہلوی (غزلیات با مطلع های زیر):<br>• بہ وادی کہ در آن خضر را عصا خفته است<br>• آنان کہ وصل یار ہمی آرزو کنند<br>• جلوہ معنی بہ جیب و ہم پنهان کردہ ایم<br>• بیا کہ قاعدہ آسمان بگردانیم  |

| شمار | نام شاعر     | نام کتاب  |
|------|--------------|---|
| 6    | علامه اقبال  | مثنوی اسرار خودی :<br>• اسرار خودی تا مرحله سوم نیابت الہی بہ استثنای حکایت : در معنی اینکه افلاطون یونانی....<br>• حکایت : در حقیقت شعر و اصلاح ادبیات اسلامیہ .<br>زبور عجم :<br>• من بندہ ازادم عشق است امام من<br>• چون چراغ لاله سوزم در خیابان شما<br>• ای غنچہ خوابیدہ چو نرگس نگران خیز<br>ارمغان حجاز :<br>• غلام جز رضای تو نجویم<br>• در آن دریا کہ او را ساحلی نیست<br>• اناالحق جز مقام کبریا نیست<br>• مسلمانی کہ داند رمز دین را<br>• قلندر میل تقریری ندارد |
| 7    | نیما یوشیج   | ای آدمها (نظم)  |
| 8    | احمد شاملو   | تا شکوفہ سرخ یک پیراھن ( نظم)   |
| 9    | فروغ فرخ زاد | دلہ برای باغچہ می سوزد (نظم)  |
| 10   | شفیعی کدکنی  | ہزارہ دوم آھوی کوی (نظم)  |

## SUGGESTED READINGS

| S. No. | Title  | Author  |
|--------|--|---|
| 1.     | ادب نامہ ایران (اردو)  | مرزا مقبول بیگ بدخشانی                                  |
| 2.     | تاریخ ایران جلد اول و دوم (اردو)   | مرزا مقبول بیگ بدخشانی                                  |
| 3.     | اقبال کامل (اردو)  | مولانا عبدالسلام ندوی                                   |
| 4.     | فکر اقبال (اردو)   | خلیفہ عبدالحکیم   |
| 5.     | نیا ایرانی ادب (اردو)  | دکتر ظہور الدین احمد                                    |
| 6.     | ایرانی ادب (اردو)  | دکتر ظہور الدین احمد                                    |
| 7.     | فارسی ادب کی مختصر ترین تاریخ (اردو)   | دکتر محمدریاض - دکتر محمد صدیق شبلی                     |
| 8.     | کلیات تاریخ ادبیات فارسی (فارسی)   | دکتر محمد جعفر یاحقی                                    |
| 9.     | مقالات احسن  | مرتبہ آفتاب اصغر ، معین نظامی                           |
| 10.    | شعری کہ زندگی است  | محمد ناصر   |
| 11.    | منتخبات متون فارسی   | دکتر علی پدram میرزائی و دکتر مہر نور محمد خان و دیگران |
| 12.    | خود آموز فارسی ( ۲ جلدیں)  | ایف ڈی رازی   |
| 13.    | History of Iranian Literature  | Jam Rypka   |
| 14.    | Anthology of Persian Texts(CSS competitive Examination)<br>Compiled by Dr. Ali Pedram Mirzaei , Dr. Mahr Noor Muhammad Khan and others |   |
| 15.    | Website: <a href="http://president.ir/en">Http://president.ir/en</a>   |   |

**PAPER: PHILOSOPHY (150 MARKS)****I. Introduction:**

Definition, Nature and Scope of Philosophy

**II. Philosophical Methods:**

Socratic Method (Socrates); Inductive Method (Bacon, Mill); Deductive Method (Aristotle, Descartes); Dialectical Method (Hegel); Fallibilistic Method (Popper)

**III. Epistemology:** Rationalism (Plato, Descartes, Spinoza); Empiricism (Locke, Berkeley, Hume); Transcendentalism (Kant); Intuitionism (Bergson)**IV. Ontology:** Idealism (Plato, Berkeley); Representative Realism (Locke); Historical and Dialectical Materialism (Marx)**V. Ethics:** What is morality? The challenge of cultural relativism: Does morality depend on religion? Psychological and ethical egoism: Virtue Ethics (Aristotle); Moral Absolutism (Kant), Utilitarianism (J.S. Mill), Social Contract Theory (Hobbes, Rawls)**VI. Muslim Thinkers:** Allama Muhammad Iqbal., Imam Ghazali, Al-Farabi, Ibn-e- Sina, Ibn-e- Khaldun, Ibn-e-Rushid, Shah Wali Ullah**VII. Contemporary Philosophical Movements:**

Existentialism (Heidegger, Sartre); Pragmatism (Peirce, James, Dewey); Neo-pragmatism (Rorty); Postmodernism (Lyotard, Foucault, Derrida)

**SUGGESTED READINGS**

| S.No. | Title  | Author                             |
|-------|--|------------------------------------|
| 1.    | History of Western Philosophy                                | Bertrand Russell                   |
| 2.    | Philosophy: The Power of Ideas                               | Brooke Noel Moore & Kenneth Bruder |
| 3.    | Elements of Moral Philosophy                                 | James Rachels                      |
| 4.    | Existentialism & Human Emotions. Philosophical Library       | Jean Paul Sartre                   |
| 5.    | The Postmodern Condition: A Report on Knowledge              | Jean-Francois Lyotard              |
| 6.    | Descartes to Derrida: An Introduction to European Philosophy | Peter Sedgwick                     |
| 7.    | Continental Philosophy in the 20 <sup>th</sup> Century       | Richard Kearney                    |
| 8.    | A Short History of Modern Philosophy                         | Roger Scruton                      |
| 9.    | A History of Muslim Philosophy. Volume I & II                | M.M. Sharif                        |
| 10.   | A History of Islamic Philosophy                              | Majid Fakhry                       |
| 11.   | The Reconstruction of Religious Thoughts in Islam            | Muhammad Iqbal                     |
| 12.   | Iqbal  | Mustansir Mir                      |
| 13.   | Stanford Encyclopedia of Philosophy (plato.stanford.edu).    | Internet Resources                 |
| 14.   | Internet Encyclopedia of Philosophy (www.iep.utm.edu).       | Internet Resources                 |



**PAPER: PHYSICS (150 MARKS)**

**PART—I (Marks-75)**

**I. Mechanics**

Vectors—Dots, Cross and triple products, Gradient, divergence, curl and applications. Newtonian laws of motion; calculus based approach to kinematics, forces and dynamics, conservation law of energy; conservation of linear and angular momentum; Dynamics of rigid body; spin and precession; gyroscope; Gravitation; planetary motion and satellites; Kepler's laws; centripetal forces  
Special theory of relativity. Michelson—Morley experiment and Einstein's postulates; Lorentz transformation; time dilation and length contraction; equivalence of mass and energy.

**II. Fluid Mechanics**

Surface tension; Viscosity; Elasticity; fluid motion and Bernoulli's theorem.

**III. Waves and Oscillation**

Free oscillation with one and two degrees of freedom; forced and damped oscillations and phenomenon of resonance. Simple harmonic motion. Traveling waves and transmission of energy; Phase and Group velocity; standing waves. Basics of sound waves.  
Reflection, Refraction, Interference, Diffraction and Polarization of waves; interferometer and Newton's rings; Diffraction Gratings and their resolving power; spectro-meters. Electromagnetic wave equation; normal and anomalous dispersion; coherence, lasers and applications.

**IV. Heat and Thermodynamics**

Perfect gas, real gas and Van der Waals equation; Three Laws of Thermodynamics; internal energy, temperature, entropy; Thermal properties of Simple system; Kinetic Theory of Gases; Maxwellian distribution of molecular velocities; Brownian motion; Transport phenomena. Classical Maxwell-Boltzmann Statistics and its application; Bose-Einstein and Fermi-Dirac Statistics.

**Part—II (Marks-75)**

**I. Electricity and Magnetism**

Electric field due to point charges, Gauss' law Electric potential and Poisson and Laplace's equation Dielectric medium and Polarization; Capacitance; Moving charges and resulting magnetic field; Ampere's law; Magnetic properties of matter; Faraday's law of electromagnetic induction; Alternating current and RLC circuit; Poynting theorem and Poynting Vector. Maxwell's equations in integral and differential form; Scalar and Vector Potential.

**II. Modern and Quantum Physics**

Waves and particles and De Broglie's Hypothesis; Operators and quantum states, observables, time dependent and independent Schrodinger equation, angular momentum, spin-1/2 particle in a magnetic field, wave mechanics, particle in a box, tunneling, one-dimensional harmonic oscillator, Heisenber's uncertainty relationship and indeterminacy based on commutation properties of operators, Bohr theory and quantum numbers including electron spin; Pauli's exclusion principle; Spectra of simple systems with one or two valence electrons. Photo electric effect Compton scattering; pair production; Lande's g factor and Zeeman effect. Raman effect.

**III. Solid State Physics**

Crystal lattice and structure, Bravais lattice, free electron model, Band theory and electron in a periodic potential, Fermi energy and density of states, n and p type semiconductors, physics of the transistor and MOSFET, dielectric properties, magnetic properties and origin of magnetism.

**IV. Nuclear Physics**

Structure of Nuclei; Radioactivity,  $\alpha$ ,  $\beta$ , and decay. Methods of detection of nuclear radiation, Mass Spectrometer. Accelerators. Phenomenon of fission; reactor and nuclear power, nuclear fusion and its application, Elementary particles and their properties.

**SUGGESTED READINGS**

| <b>S. No.</b> | <b>Title</b>                                      | <b>Author</b>           |
|---------------|---|-------------------------|
| 1             | Perspectives of Modern Physics.                   | A. Beiser.              |
| 2             | Fundamentals of Physics.                          | Halliday & Resnick      |
| 3             | Introduction to Electromagnetic Fields and Waves. | D. Corson & P. Lorrain. |
| 4             | Heat and Thermodynamics.                          | D. Zemansky             |
| 5             | Introduction to Quantum Mechanics                 | D. Griffiths            |
| 6             | Modern Physics                                    | Serway, Moses, Moyer.   |
| 7.            | Solid State Physics                               | C. Kittel               |

**PAPER: POLITICAL SCIENCE (150 MARKS)**

**Part-A (40 Marks)**

**I. State System:**

The nature and emergence of modern nation-state system, Islamic concept of state and Ummah

**II. Political Concept (Western and Islamic):**

Sovereignty, Justice, Law, Liberty, Freedom, Equality, Rights and Duties, Human Rights, Political authority and Power.

**III. Comparative Politics:**

Political Socialization, Political Culture, Political Development, Political Recruitment, Social Change, Civil Society, Violence and Terrorism in Politics, Gender and Politics, Women Empowerment.

**IV. Political Participation:**

Political Change and Revolution, Elections, Electoral System, Public Opinion, Propaganda, Political Parties, Pressure Groups and Lobbies.

**V. Political Institutions and Role of Government:**

Legislature, Executive, Judiciary, Political Elites, Civil-Military and Bureaucracy.

**VI. Forms of Government:**

Monarchy, Democratic, Dictatorship, Totalitarian/Authoritarian, Unitary, Federal, Confederation, Presidential and Parliamentary

**VII. Political Ideologies:**

Capitalism, Marxism, Communism, Socialism, Totalitarianism, Fascism, Nationalism, Islamic Political Ideology

**VIII. Local Self Government:**

Theory and practice of Local Self-Government with special reference to Pakistan, Comparative analyses of systems of local governance, Public Administration and Public Policy

**Part-B (40 Marks)**

**I. Comparative and Analytical Study of the Political Systems:**

Political System of U.S.A, U.K and India.

**II. Global and Regional Integration**

Globalization and Politics, Global Civil Society, Regional politico-economic integration and organizational structure of the European Union, SARRC, ECO, International Financial Regimes IMF and WTO

**Part-C (70 Marks)**

**I. Comparative and Analytical Study of the Political Systems:**

Political system of Turkey and China

**II. Political Movements in India (Colonial Period):**

Rise of Muslim Nationalism in South Asia and Pakistan Movement (with special reference to the role of Sir Syed Ahmed Khan, Iqbal and Quaid-i-Azam Mohammad Ali Jinnah)

**III. Government and Politics in Pakistan:**

Constitution making from 1947 -1956, A comparative and critical analysis of 1956, 1962, 1973 Constitutions of Pakistan, Constitutional Amendments up-to-date, Federal structure in Pakistan and Central-Provincial relations after 18<sup>th</sup> amendments,

Political Culture of Pakistan, political developments and the Role of civil and military Bureaucracy, Judiciary, feudalism, Dynastic Politics, Political Parties and Interest Groups, elections and Voting Behavior, Religion and Politics, Ethnicity and National Integration,

**IV. International Relations:**

History of International Relations: Post WWII Period

Foreign Policy of Pakistan: National Interests and Major Determinations i-e

- 1). Size/Geography
- 2). Economic Development
- 3). Security
- 4). Advancement in Technology
- 5). National Capacity
- 6). Political Parties/Leadership
- 7). Ideology
- 8). National Interest
- 9). Role of Press/Bureaucracy
- 10). Social Structure
- 11). Public Opinion
- 12). Diplomacy.

Also external factors like International Power Structure, International Organizations, World Public Opinion and reaction of other states.

Foreign Policy-making Process in Pakistan

**SUGGESTED READINGS**

| <b>S. No.</b> | <b>Title</b>  | <b>Author</b>                           |
|---------------|---|---|
| 1.            | Pakistan's Foreign Policy, 1947-2005                              | Abdul Sattar,                           |
| 2.            | Democracy and Authoritarianism in South Asia                      | Ayesha Jalal                            |
| 3.            | Military, Civil Society and Democratization in Pakistan           | Akbar Zaidi                             |
| 4.            | The Reconstruction of Religious Thought in Islam                  | Allama Iqbal                            |
| 5.            | A history of Pakistan and its origins                             | Christophe Jaffrelot,                   |
| 6.            | Greek Political Thought: Plato & Aristotle                        | Eearnest Barker,                        |
| 7.            | Political Thought From Plato to Present                           | Ebenstein                               |
| 8.            | Political Thought in Medieval Islam                               | Erwin I.J. Rosenthal                    |
| 9.            | Constitutional Developments in Pakistan                           | G.W.Choudhury,                          |
| 10.           | Comparative Politics Today: A Theoretical Framework               | Gabriel A. Almond,<br>G.Bingham Powell, |
| 11.           | Contemporary Political Analysis                                   | Garles Worth James,                     |
| 12.           | A History of Political Theory                                     | George Holland<br>Sabine                |
| 13.           | Studies in Muslim Political Thought and Administration            | H K Sherwani,                           |
| 14.           | Modern Islamic Political Thought                                  | Hamid Enayat,                           |
| 15.           | Constitutional and Political History of Pakistan                  | Hamid Khan,                             |
| 16.           | Politics Among Nations: The Struggle for Power and Peace          | Hans J. Morgenthau,                     |
| 17.           | Military and Politics in Pakistan                                 | Hasan Askari Rizvi,                     |
| 18.           | Pakistan Foreign Policy: An Overview 1947-2004 (PILDAT)           | Hasan Askari Rizvi                      |
| 19.           | Pakistan and Geostrategic Environment : A Study of Foreign Policy | Hasan Askari Rizvi                      |
| 20.           | International Politics: A Framework for Analysis                  | Holsti, K.J.                            |
| 21.           | Pakistan: A Modern History  | Lan Talbot,                             |
| 22.           | 21st Century Political Science: A Reference Handbook              | John T.Ishiyama,<br>Marijke Breuning,   |
| 23.           | Political Thought from Plato to Present                           | Judd Herman,                            |

| S. No. | Title   | Author                         |
|--------|---|--------------------------------|
| 24.    | The Political System of Pakistan,   | K.B.Sayeed,                    |
| 25.    | Pakistan: A Political Study   | Keith Callard,                 |
| 26.    | Pakistan: An Enigma of Political Development                                  | Lawrance Ziring,               |
| 27.    | Pakistan in the Twentieth Century   | Lawrance Ziring,               |
| 28.    | Pakistan: At the Crosscurrent of History                                      | Lawrance Ziring,               |
| 29.    | History of Muslim Philosophy  | M M.Sharif,                    |
| 30.    | History of Local Government in Pakistan                                       | Masudul Hasan                  |
| 31.    | Nationalism: The Nation-State and Nationalism                                 | Monserat Guibernau,            |
| 32.    | Politics and the State in Pakistan  | Muhammad Waseem,               |
| 33.    | Government and Politics in Pakistan   | Mushtaq Ahmad                  |
| 34.    | Making of Pakistan  | Noor ul Haq                    |
| 35.    | Pattern of Government   | Samuel H. Beer & Adam B. Ullam |
| 36.    | Political Thinkers: From Socrates to the Present                              | Paul Kelly (Ed)                |
| 37.    | Introduction to Political Science, Islamabad, National Book Foundation,       | Rodee Anderson etc.            |
| 38.    | Pakistan's Foreign Policy : An Historical Analysis                            | S.M. Burke                     |
| 39.    | State & Society in Pakistan   | Shahid Javed Burki             |
| 40.    | Islami Riyasat  | Syed Abul Aala Maudoodi        |
| 41.    | Khilafat O Malookeyat   | Syed Abul Aala Maudoodi        |
| 42.    | Ethno National Movements of Pakistan  | Tahir Amin                     |
| 43.    | Politics, Parties and Pressure Groups   | V.O. Key Jr.                   |
| 44.    | Democratization in Pakistan   | Waseem, M.                     |
| 45.    | Contemporary Political Philosophy: An Introduction                            | Will Kymlicka                  |
| 46.    | History of Political Theories (Three Volumes)                                 | Willaim A. Dunning,            |
| 47.    | International Relations: Politics and Economy in the 21 <sup>st</sup> Century | William Nester                 |

**PAPER: PSYCHOLOGY (150 MARKS)**

---

- I. **Nature and Scope of Psychology:** Definition and scope, Psychology as a Science, Schools, Perspectives, and Models of Psychology, Recent Trends
- II. **Biological Basis of Behaviour:** Nervous System, Neuron and its function, Central and Peripheral Nervous System, Endocrine System
- III. **Sensation and Perception:** Sensory process, Perception, Gestalt Principles, Binocular and Monocular cues, Illusions and Extra Sensory Perception, Determinants of Perception
- IV. **Learning and Memory:** Nature and Forms of Learning, Types of learning: Classical and Operant Conditioning, Reinforcement, Extinction, Discrimination, Punishment, Observational Learning, Theories of Learning, Types of Memory, Process of Memory, Forgetting, Theories of Memory
- V. **Motivation and Emotion:** Homeostasis, Factors affecting Motivation, Biogenic and Social Motives, Measurement of Human Motivation, Theories of Motivation, Emotions, Types of Emotions, Physiological changes and Emotion, Theories of Emotion.
- VI. **Psychological Assessment:** Attributes of Psychological Measures, Validity, Reliability, Item Analysis, Norms, Modern Test Theory, Selection and Training, Educational and Clinical Assessment, Ethical and Legal Issues in assessment.
- VII. **Personality:** Determinants of Personality, Factors in Development of Personality, Theoretical Perspectives, Personality Assessment and Techniques, Cross-Cultural Issues.
- VIII. **Intelligence:** Theories of Intelligence, Types of intelligence (IQ, EQ), Assessing Intelligence
- IX. **Social Influence and Group Dynamics:** Social Facilitation, Attribution, Conformity, Obedience, Altruism, Attitudes, Social Norms.
- X. **Developmental Psychology:** Physical, Cognitive, Social and Emotional development in Childhood, Adolescence, Adulthood and Old Age
- XI. **Abnormal and Clinical Psychology:** Concept and causes of Abnormality, Clinical Assessment and Intervention, Different disorders such as Schizophrenia, Mood disorder, Anxiety disorder, Personality disorder, etc. Psychological treatment including different Therapeutic instructions.
- XII. **Organizational/Industrial Psychology:** Leadership styles, Decision making, Work motivation, Organizational Culture, Stress and Conflict at Work and its Management, Organizational Socialization, Job related Attitude, Sexual Harassment, Glass Ceiling, Human Computer interaction.
- XIII. **Health Psychology:** Beliefs and Behaviour, Models of Health Psychology, Assessment and Intervention, Models of Stress, Chronic and Terminal Illness, Role of Social Support.

- XIV. Forensic Psychology:** Psychology and Law, Investigation, Confession, Eyewitness Testimony, Working with Offenders, Juvenile Delinquents, Drug Addicts, Sex Offenders etc.

### SUGGESTED READINGS

| S.No. | Title   | Author                               |
|-------|---|--------------------------------------|
| 1.    | Applied Industrial/Organizational Psychology              | Aamodt, M.                           |
| 2.    | Introduction to Psychology                                | Atkinson R. C., & Smith, E. E        |
| 3.    | Social Psychology   | Baron, R. A                          |
| 4.    | Introduction to Forensic Psychology                       | Bartol, C. R                         |
| 5.    | Foundation of Physiological Psychology                    | Carlson, N. R.                       |
| 6.    | Introduction to Psychology: Gateways to Mind and Behavior | Coon, D., & Mitterer, J.             |
| 7.    | Development Across the Life Span                          | Feldman, R.                          |
| 8.    | Introduction to Psychology                                | Fernald, L. D., & Fernald, P.S       |
| 9.    | Introduction to Psychology                                | Atkinson & Hilgard's, Fredrickson, B |
| 10.   | Forensic Psychology                                       | Fulero, S. M., & Wrightsman          |
| 11.   | Foundation of Psychology                                  | Hayes, N                             |
| 12.   | Introduction to Psychology                                | Kalat, J. W                          |
| 13.   | Abnormal Psychology                                       | Kring, A. M                          |
| 14.   | Psychology  | Myers, D. G.                         |
| 15.   | Psychology: Concepts and Connections                      | Rathus, S.                           |
| 16.   | Life Span Development                                     | Santrock, J. W.                      |
| 17.   | Organizational Psychology                                 | Singh, P.                            |



**PAPER: PUBLIC ADMINISTRATION (150 MARKS)**

**I. Public Administration: Concepts, Approaches and Context**

Definitions; Role and Scope of Public Administration in Society; Issues in Public Administration Theory and Practice – Democracy versus Bureaucracy, Politics versus Administration, Efficiency versus Equity; Core Values of Public Administration – Rule of Law, Efficiency, Equity and Fairness, Responsiveness; Traditional Public Administration; New Public Management; New Public Service; Governance Approach to Public Administration; Islamic Concept of Public Administration; Historical roots of Public administration in Pakistan.

**II. Public Organization: Classical and Contemporary Theories and Concepts**

Bureaucracy; Scientific Management; Human Relations Approach; Leadership, Motivation, Network; Governance; Strategic Management; Public Choice Theory; Types of Organizational Structure; Organization of Federal, Provincial, and Local Government in Pakistan; Administrative Culture of Pakistan; Inter-governmental Relations at Federal and Provincial level in Pakistan.

**III. Public Policy Planning, Implementation and Evaluation**

Strategic Planning and Management; Planning Process; Policy Analysis; Policy Implementation; Program Evaluation; Planning Machinery; Role of Donors and International Institutions in Public Policy and Management; Policy making and implementation in Pakistan.

**IV. Budgeting and Financial Management**

Budget as a Policy Tool; The Budget as a Managerial Tool; Principles of Budgeting, Audit and Accounting in Government; Line-Item Budgeting; Performance Budget; Program Budgeting; Zero-Base Budgeting; Outcome-Based Budgeting. Planning and Budgeting in Pakistan.

**V. Managing Human Resources**

Spoil System versus Merit System in Public Employment; Personnel versus Human Resources Management; Close versus Open System of Public Employment; Functions of Human Resources Management; Challenges of Adopting HRM in Public Sector. Key issues and Challenges.

**VI. Administrative Law**

Meaning, Scope and Significance; Nature and Contents of Administrative Law, Administrative Ethics, Delegation of authority and Legislation, Administrative Tribunals; Administrative Law in Pakistan.

**VII. Public Management Skills**

Planning; Decision Making, Conflict Management; Leading, Communication Administrative Buffering; Managing Change; Managing Diversity; Stress Management;

Delegation; Public Service Motivation; Creativity and Problem Solving; Issues of Public Management.

### **VIII. The Civil Service of Pakistan**

Historical Background of Civil Service, The Structure of civil Service; History of Civil Service Reform; Management of Civil Service; Institutional and Cultural Context of Civil Service; Role of Civil Service in Good Governance, Gender and Civil Service.

### **IX. Organization of Provincial and Local Government**

Governance Structure of Provincial Administration; Organization of Provincial Secretariat; Organization and Functions of Provincial Authorities and Agencies and their Relationship with Government Departments; Post-devolution Local Governance; Organization and Functions of District Government and Administration; Organization and Structure of City District Government; Issues and Challenges of Local Governance.

### **X. Governance and Administrative Reforms**

Theories of Administrative Reforms; Types of Administrative Reforms, Privatization, Regulation, De-regulation, Decentralization, Partnerships and Collaborations, Business Re-engineering, Quality Assurance; Administrative Reform in Pakistan.

### **XI. Public Administration: Accountability & Control**

Bureaucratic Responsiveness; Representative Bureaucracy; Citizens Engagement in Public Service; Accountability & Control, The Concept and Approaches to Public Accountability; Institutional Framework for Administrative Accountability; Legislative, Executive and Judicial Control over Administration, Administrative Corruption; Role of Civil Society in Good Governance, Media, Interest Groups, Civil Society Organizations; The Situation in Pakistan.

### **XII. Public Administration and Development**

Role of Public Administration in Development; Concept of Development Administration; Difference Between Development Administration and Development Management; Changing Role of Public Administration in Development, Issues and Challenges of Public Administration in Pakistan.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>                       |
|--------------|---|-------------------------------------|
| 1.           | Public Administration 7 <sup>th</sup> Edition   | Denhardt, Robert                    |
| 2.           | Public Administration – Understanding Management, Politics and Law 8 <sup>th</sup> Ed | David H. Rosenbloom                 |
| 3.           | Public Administration 2 <sup>nd</sup> Ed  | Caiden, Gerald. E,                  |
| 4.           | Public Administration for the Twenty-First Century                                    | Cooper et al,                       |
| 5.           | Organization Theory for Public Administration   | Harmon, Michael M. & Mayer. Richard |
| 6.           | Public Administration and Public Affairs 12 <sup>th</sup> Ed                          | Nicholas Henry,                     |
| 7.           | Classics of Public Administration 7 <sup>th</sup> Ed                                  | Shafritz Jay                        |
| 8.           | Reinventing Government  | Osbourne D                          |
| 9.           | Evolution of Pakistan's Administration System   | Braibanti, Ralph                    |
| 10.          | Human Development in South Asia   | Mahbub-ul-Haq                       |
| 11.          | Bureaucracy, Basic Books  | Wilson, James Q.,                   |
| 12.          | Bureaucracy in Pakistan   | Kennedy, Charles H.,                |
| 13.          | Public Administration and Law   | Julia Beckett                       |
| 14.          | Public Administration: A Comparative Perspective 6 <sup>th</sup> Ed                   | Ferrel Heady,                       |
| 15.          | Public Administration and Public Management: The Principle Agent Perspective          | Jan-Erik Lane                       |
| 16.          | Governance: South Asian Perspective   | Hasnat Abdul Hye                    |
| 17.          | Governance, Economic Policy and Reform in Pakistan: Essay in Political Economy        | Abdus Samad                         |
| 18.          | Government and Administration in Pakistan   | Jameelur Rehman Khan                |
| 19.          | Public Administration: with special reference to Pakistan                             | Sultan Khan                         |
| 20.          | Public Administration in Asia Vol. I & II   | Srinivasan Kalyanaraman             |
| 21.          | Organizational Theory and the Public Sector   | Tom Christensen Per Laegreid        |
| 22.          | Public Administration in South Asia: India, Bangladesh and Pakistan                   | Meghna Sabharwal, Evan M. Berman    |

**PAPER: PURE MATHEMATICS (150 MARKS)**

**Section-A (60- marks)**

**I. Modern Algebra**

Group, subgroups, Lagranges theorem, Cyclic groups, Normal subgroups, Quotient groups. Fundamental theorem of homomorphism. Isomorphism theorems of groups, Inner automorphisms. Conjugate elements, conjugate subgroups. Commutator subgroups.

Ring, Subrings, Integral domains, Quotient fields, Isomorphism theorems, Field extension and finite fields.

Vector spaces, Linear independence, Bases, Dimension of a finitely generated space. Linear transformations, Matrices and their algebra. Reduction of matrices to their echelon form. Rank and nullity of a linear transformation.

Solution of a system of homogeneous and non-homogeneous linear equations. Properties of determinants.

**Section-B (60- marks)**

**II. Calculus & Analytic Geometry**

Real Numbers. Limits. Continuity. Differentiability. Indefinite integration. Mean value theorems. Taylor's theorem, Indeterminate forms. Asymptotes. Curve tracing. Definite integrals. Functions of several variables. Partial derivatives. Maxima and minima. Jacobians, Double and triple integration (techniques only). Applications of Beta and Gamma functions. Areas and Volumes. Riemann-Stieltje's integral. Improper integrals and their conditions of existences. Implicit function theorem.

Conic sections in Cartesian coordinates, Plane polar coordinates and their use to represent the straight line and conic sections. Cartesian and spherical polar coordinates in three dimensions. The plane, the sphere, the ellipsoid, the paraboloid and the hyperboloid in Cartesian and spherical polar coordinates.

**Section-C (30-marks)**

**III. Complex Variables**

Function of a complex variable; Demoiver's theorem and its applications. Analytic functions, Cauchy's theorem. Cauchy's integral formula, Taylor's and Laurent's series. Singularities. Cauchy residue theorem and contour integration. Fourier series and Fourier transforms.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>                    | <b>Author</b>                   |
|--------------|---------------------------------|---------------------------------|
| 1.           | Advanced Calculus               | Kaplan, W.                      |
| 2.           | Analytic Function Theory Vol.1  | Hille, E.                       |
| 3.           | Calculus                        | Anton H., Biven I and Davis, S. |
| 4.           | Complex Analysis                | Goodstein G.R.G.                |
| 5.           | Complex Variables               | Murray R. Spiegel               |
| 6.           | Calculus with Analytic Geometry | Yusuf, S.M.                     |
| 7.           | Calculus and Analytic Geometry  | Zia ul Haq                      |
| 8.           | Elements of Complex Analysis    | Pennisi, L.L.                   |
| 9.           | Theory of Groups                | Majeed, A.                      |
| 10.          | Mathematical Methods            | Yusuf, S.M.                     |
| 11.          | Mathematical Techniques         | Karamat H.Dar                   |
| 12.          | Mathematical Analysis           | Apostal, T.M.                   |
| 13.          | The Theory of Groups            | Macdonald, I.N.                 |
| 14.          | Topics in Algebra               | Herstein, I.N.                  |

**PAPER: SOCIOLOGY (150 MARKS)**

**I. General Sociology**

1. **Individual:** Sociability or the sociality of man.
2. **Culture:** Meaning and Characteristics (Culture is variable, learnt, social, shared, Transmissive, dynamic and adaptive), types (Material, Non –material), functions (transfer of knowledge, define situation, provide Behaviour pattern, moulds personality) and elements of culture (norms, values, beliefs, sanctions, customs). Culture and Socialization; formal and non-formal socialization, transmission of culture, cultural relativism. Sub-cultures. Ethnocentrism and xenocentrism, Cultural lag, High culture and popular culture. Multiculturalism, assimilation, and acculturation.
3. **Society:** Meaning and characteristics. Community; meaning and characteristics. Individual and society. Relationship between individual and society. Two main theories regarding the relationship of man and society (i) the social contact theory and (ii) the organismic theory. Social and cultural evolution of society (Hunting and Gathering Society, Herding and Advance Herding Society, Horticultural Society, Agrarian Society, Industrial Society, Post modern Society).
4. **Social Interaction:** Caste and classes, Forms of social classes, Feudal system in Pakistan, Social Mobility-nature of social mobility and its determinants in Pakistani society, Culture of poverty.
5. **Social Control:** Mechanisms of social control-formal and informal means of social control, Anomie, Alienation and social Integration-Means of social integration in Pakistani Society.
6. **Social and Cultural Change and Social Policy:** Processes of Social and Cultural Change-discovery, inhibitions to social and cultural change in Pakistan Social planning and directed social and cultural change, effect of Industrialization, Urbanization, Modernization and Modern Means of Communication on Social Change.
7. **Public Opinion:** Formation of Public, Opinion, Concept of opinion leader, characteristics of opinion leadership.
8. **Community:** The rural community, Traditional Characteristics of rural life, The urban community, Rural – Urban convergence, Urbanism, Future of cities in Pakistan.
9. **Social Institutions:** The nature and genesis of institutions, the process of institutionalization, Functions of Social Institutions: Family, Religion, Education, Economy and Politics.
10. **Social Problems in Pakistan:** High population growth rate, Rural –urban migration. Issues of technical/vocational training, Deviance and street crime, Unemployment, illiteracy and School drop out, Smuggling, Prostitution, Poverty, Drug Addiction, Child Labour and Abuse Bonded Labour, Social Customs and Traditions effecting Women in Pakistan,

Violence Against Women's and Domestic Violence, Issues concerning the Elderly's in Pakistan.

## II. Sociological Theory:

Three sociological perspectives: Structural Functionalism, Symbolic interactions and Conflict. Theorists: Ibn-i-Khaldun, Spencer, August Comte, Emile Durkheim, Max Weber, Karl Marx, Parson.

## III. Methods of Sociological Research:

Scientific Method, Steps in research, Types of Questionnaire Research Design, Surveys, Observation and Case Studies.

### SUGGESTED READINGS

| S.No. | Title  | Author   |
|-------|--|--|
| 1.    | Sociology : A down to earth approach                 | James M. Henslin                                     |
| 2.    | Method of Social Research                            | Baily  |
| 3.    | Poverty Curtains                                     | Dr. Mehboob-ul-haq                                   |
| 4.    | Contemporary Sociological Theories                   | Pitrim Sorokin                                       |
| 5.    | Master of Sociological Thought                       | Lewis A. Coser                                       |
| 6.    | Sociology  | Ogburn & Nimkoff                                     |
| 7.    | Social Change and History                            | Robert Nisbet  |
| 8.    | Feudal System in Pakistan                            | Nawab Haider Naqvi                                   |
| 9.    | The Sociology of Rural Life                          | Lynn Smith, T.                                       |
| 10.   | Sociology-Social Structure and Social Conflict       | Kerbo, Harold R. (1989).                             |
| 11.   | Sociology: An Introduction to the Science of Society | Koening Samuel                                       |
| 12.   | Marriage and The Family                              | Lee, Alfred Mclung and Lee, Elizabeth Briant (1961). |
| 13.   | The Design of Social Research,                       | Ackoff, Russel, L. (Latest ed.)                      |
| 14.   | An Introduction to the History of Sociology          | Barnes, H.E. (Ed.) (1966)                            |
| 15.   | Pakistani Society                                    | Akbar Ahmad, S.                                      |
| 16.   | Contemporary Sociological Theories                   | Pitrim Sorokin                                       |
| 17.   | Sociology, 10th edition                              | John, J. Macionis. 2004.                             |
| 18.   | Research Methodology                                 | Neuman, Lawrence (Rvs. Ed.)                          |
| 19.   | Sociological Theory                                  | Ritzer, Georg, (1988).                               |

**PAPER: STATISTICS (150 MARKS)**

**Part – I (75 marks)**

**I. Descriptive Statistics**

Definition, Importance and scope of Statistics, Descriptive and Inferential Statistics, Presentation of the Data, Tables, Graphs and Charts: Stem-and leaf diagram, Box and Whisker Plots. Measures of Central Tendency/location, Measures of Dispersion/Variability: Measures of Skewness and Kurtosis.

**II. Basic Probability**

Basic Probability Concepts, Additive and Multiplicative laws of Probability, Joint and Marginal Probabilities, Conditional Probability and Statistical Independence, Bayes' rule. Concept of a Random Variable, Mathematical Expectations, Discrete and Continuous Random Variables, Probability Distribution, Mean and Variance of a discrete Probability Distribution.

**III. Probability Distributions**

Discrete and continuous Probability Distributions. Properties, applications of Binomial, Poisson, Hyper-geometric Distribution, Normal Distribution and its properties, Standard Normal Curve, Normal approximation to Binomial and Poisson distribution.

**IV. Regression Analysis & Correlation Analysis**

Concepts of Regression and Correlation and their application, Simple and Multiple Linear Regression (upto three variables), Estimation of the Parameters of simple regression model, Method of least square, Inference regarding regression parameters

Correlation, Correlation Coefficient, Properties of Correlation Coefficient, Inference regarding correlation coefficient, Partial Correlation and Multiple Correlation Coefficients (upto three variables).

**V. Non-Parametric Methods**

Parametric versus nonparametric tests, when to use non-parametric procedures, One-sample tests: Sign test, Wilcoxon signed ranks tests, Kolmogorov-Smirnov test, run test.

Tests for two related samples: sign test, run tests, chi-square test, Test for two independent samples: Mann-Whitney test, Kolmogorov-Smirnov test.

**Part – II (75 marks)**

**I. Sampling & Sampling Distributions**

Population and Sample, Advantages of Sampling, Sampling Design, Probability & Non-Probability Sampling techniques. Brief Concepts of Simple Random, Stratified, Systematic, Cluster, Multiple and Multistage Sampling, Non-Probability Sampling Purposive, Quota Sampling, Convenience & Accidental Sampling.



Sampling with and without replacement, Application of Central Limit Theorem in Sampling, Sampling Distribution of Mean, difference between two Means, Proportion, difference between two Proportion and Variance.

## **II. Statistical Inferences**

Estimation: Point Estimation, Properties of a good Estimator. Interval Estimation. Interval Estimation of single Population means and single proportions. Difference between two means and difference between two proportions.

Hypothesis Testing: Types of errors. Hypothesis Testing for Population Mean. Inferences for difference between Two Population Means. Inferences for the difference between Mean of Two Normal Populations using Independent Samples (variances are assumed Equal) for sample size. Inference for Two Populations Mean using Paired Samples. Hypothesis testing for Single Population Proportion and Difference between two Populations Proportions. Estimation of sample size

Analysis of categorized data. Goodness of fit tests. Contingency tables. Test of independence in contingency tables.

## **III. Design of Experiments**

One-way and Two-way Analysis of Variance, Design of Experiments, Concepts of Treatment, Replication, Blocking, Experimental Units and Experimental Error, Basic Principles of Design of Experiments, Description, Layout and Statistical Analysis of Completely Randomized Design (CRD), Randomized Complete Block Design (RCBD), Multiple Comparison tests (LSD test).

## **IV. Population Analysis & Vital Statistics**

Population and Demographic Methods, Sources of Demographic data, Basic Demographic Measures, Sex Ratio, Child Women Ratio, Vital Index, Crude and Specific Birth and Death Rates, Total Fertility and Net Reproduction Rates.

Official Statistics: Statistical Systems in Pakistan, Functions of Statistics Division and Bureaus of Statistics: The National Income, Gross Domestic Product, Saving and Wealth, Index Numbers.

**SUGGESTED READINGS**

| <b>Sr. No.</b> | <b>Title</b>  | <b>Author</b>                              |
|----------------|---|--|
| 1.             | Principles and Procedures of Statistics   | Steel, R and Torrie, J.H.                  |
| 2.             | Biostatistical Analysis   | Zar, J.H.                                  |
| 3.             | Probability and Statistics for Engineers and Scientist                                    | Walpole, R.E., Myers, R.H. and Myers, S.L. |
| 4.             | Introduction to Statistical Theory, Part-I & II   | Chaudhry, S.M. and Kamal, S.               |
| 5.             | Introduction to Probability Theory and Statistical Inference, 3 <sup>rd</sup> Edition.    | Larson, H.J.                               |
| 6.             | Design and Analysis of Experiments  | Montgomery, D.C.                           |
| 7.             | Fundamentals of Modern Statistical Methods  | Wilcox, R.                                 |
| 8.             | Latest Statistical Methods  | Vaidyanathan, M.                           |
| 9.             | Statistical Methods   | Aggarwal, Y.P.                             |
| 10.            | Mathematical Statistics   | Freund, John E.                            |
| 11.            | Demographic Methods   | Andrew Hinde                               |
| 12.            | Publications of Federal Board of Statistics and Provincial Board of Statistics, Pakistan. | Govt. of Pakistan                          |

**PAPER: TOWN PLANNING & URBAN MANAGEMENT (150 MARKS)**

- I. **Definition of Town Planning, Goals and objectives of Town Planning:** Town Planning as a multi-disciplinary approach and relationship of Town Planning with other professions.
- II. **Historical Perspective of Urban Planning:** Planning of historical towns in the world. Examples of planned towns in Europe, Nile Valley region, Euphrates and Tigris Valley region and Indus Valley region (Mohenjodaro, Harappa, Kot Diji and Mehr Garh) and Gandhara Civilization.
- III. **Urban Rural Differences and Hierarchy of Settlements:** Urbanization and its effects on the environment of urban areas.
- IV. **History of planning in Pakistan:** 5 year plans.
- V. **Managing Urbanization**
  - How to manage urbanization
  - Best Practices
  - Land use classification policy
  - Building and development control
  - Removal of encroachments
  - Introduction to Intelligent Transport Systems (ITS)
- VI. **Housing community and Economic Development:** To prepare professionals with the skills and knowledge of equitable development. Commitment to expanding opportunities and providing quality life for disadvantaged groups.
- VII. **Public Policy and Urban Design Management:** Solving social and environmental problems using:
  - Economics
  - Policy analysis
  - Political science
  - Urban Design
- VIII. **Sustainability, Environmental Policy and Planning:** How society conserves and manages its natural resources and works to promote development, while conserving and maintaining healthy environment.
- IX. **Urban Information Systems:** Use of planning related software and spatial analysis tools and systems i.e GIS, SPSS etc.

**SUGGESTED READINGS**

| <b>S.No.</b> | <b>Title</b>  | <b>Author</b>                       |
|--------------|---|-------------------------------------|
| 1.           | Introducing Town Planning                                   | Clara Greed                         |
| 2.           | Introduction to Town and Country Planning                   | John Ratcliff                       |
| 3.           | Town Planning for the Third World                           | A.K. Bhatti                         |
| 4.           | Contemporary Urban Planning                                 | J.M. Levy                           |
| 5.           | Land Use, Planning, and Zoning                              | Peter J. Loughlin,                  |
| 6.           | Town and Country Planning in the UK                         | J.B. Cullingworth,<br>Vincent Nadin |
| 7.           | Town Planning in Practice                                   | Raymond Unwin,                      |
| 8.           | World Cities and Urban                                      | Mike Janks                          |
| 9.           | Urban Land Use Planning                                     | Philip R. B                         |
| 10.          | Environmental Science: A Global Concern                     | William P                           |
| 11.          | Megacity Management in the Asian and Pacific Region (Vol-2) | Stubbs, Jeffery Giles<br>Clarke     |
| 12.          | Dying Cities: Surviving the Urban Jungle                    | Somaiya N                           |
| 13.          | Handbook on Urban Sustainability                            | Springer                            |
| 14.          | Emerald Cities – Urban sustainability and Economics         | Joan Fitzgerald                     |
| 15.          | Growing Greener Cities                                      | Eugene Birch, Susan<br>Wachter      |
| 16.          | The Earth scan Reader in Sustainability Cities              | David Sattethwaite                  |
| 17.          | The Poverty Curtain   | Dr. Mehboob –ul-Haq                 |
| 18.          | Reflections on Human Development                            | Dr. Mehboob –ul-Haq                 |
| 19.          | Smart Cities  | Anthony Townsend                    |

## PAPER: URDU LITERATURE

(150 MARKS)

|    |   |
|----|---|
| 35 | ۱۔ اُردو ادب کا مطالعہ  |
|    | i۔ اُردو زبان و ادب کی اسلامی شناخت   |
|    | ii۔ بیسویں صدی کی ادبی تحریکیں  |
|    | iii۔ پاکستانی ادب کی اصلاح: تشکیل و روایت اور ارتقاء                            |
| 30 | ۲۔ شعری ادب کا تنقیدی مطالعہ  |
|    | (الف)۔ دور قدیم   |
|    | i۔ میر (غزل - انتخاب میر مولوی عبدالحق)   |
|    | ii۔ غالب (دیوان غالب)   |
|    | iii۔ حالی (مسدس)  |
|    | iv۔ اقبال (طلوع اسلام، خضر راہ، مسجد قرطبہ)                                     |
| 15 | (ب)۔ دور جدید   |
|    | i۔ فیض (غزل - دست صبا)  |
|    | ii۔ راشد (نظم - ایران میں اجنبی)  |
|    | iii۔ مجید امجد (نظم - شب رفتہ)  |
|    | iv۔ ناصر کاظمی (غزل - برگ نے)   |
| 20 | ۳۔ نثری ادب کا تنقیدی مطالعہ  |
|    | (الف)۔ غیر افسانوی نثر  |
|    | i۔ شبلی (سیرت النبی ﷺ، جلد اول)   |
|    | ii۔ مولوی عبدالحق (خاکے، چند ہم عصر)  |
| 15 | (ب)۔ افسانوی نثر  |
|    | i۔ منٹو (افسانے، منٹو کے بیس افسانے: مرتب ڈاکٹر انوار احمد، ڈاکٹر اے۔ بی۔ اشرف) |
|    | ii۔ احمد ندیم قاسمی (افسانے، کپاس کا پھول)                                      |
|    | iii۔ مشتاق احمد یوسفی (طنز و مزاح، آب گم)                                       |
| 10 | ۴۔ مختصر  |
| 25 | ۵۔ مضمون  |

مجوزہ کتب برائے مطالعہ

- |                                  |  |
|----------------------------------|--|
| ڈاکٹر وزیر آغا                   | ۱۔ تنقید اور جدید اردو تنقید           |
| ڈاکٹر انور سعید                  | ۲۔ اردو ادب کی تحریکیں                 |
| شیخ محمد اکرام                   | ۳۔ آب کوڑ                              |
| شیخ محمد اکرام                   | ۴۔ رود کوڑ                             |
| شیخ محمد اکرام                   | ۵۔ موج کوڑ                             |
| ڈاکٹر روبینہ اشرف                | ۶۔ اردو تنقید میں پاکستانی تصور قومیت  |
| مرتبین: ڈاکٹر رفیع الدین ہاشمی،  | ۷۔ اقبالیات کے سو سال                  |
| ڈاکٹر سہیل عمر، ڈاکٹر وحید عشرت  |  |
| ترتیب نو: ڈاکٹر خواجہ محمد زکریا | ۸۔ تاریخ ادبیات مسلمانان پاکستان و ہند |
| مرتب: ڈاکٹر نواز ش علی           | ۹۔ اردو ادب کے پچاس سال                |

**PAPER: ZOOLOGY (150 MARKS)**

**I. Animal Diversity-Invertebrates**

Architectural pattern of an animal, Taxonomy and phylogeny, Major subdivisions of animal kingdom.

Animal-Like Protists: The Protozoa: evolutionary perspective, locomotion and reproduction, Protozoa of veterinary and medical importance.

Porifera: Body wall, skeleton and water currents system. Coelenterates: Reproduction plan and alteration of generation (Polymorphism), Coral reefs.

Platyhelminthes and Nematodes: Parasitic adaptations and medical importance. Annelids: Metamerism and ecological importance.

Molluscs: Modification of foot, Feeding and their role in the shell fishery.

Arthropods: Modification in their mouth parts, Role of arthropods as vectors in the transmission in microbial infection. Arthropods and their ecological importance.

Echinoderms: Characteristics, Evolutionary perspective, Relationships to other animals; echinoderm characteristics.

**II. Animal Diversity-Chordata**

Hemichordates and Invertebrate Chordates: Evolutionary Perspective: Phylogenetic Relationships and considerations.

Fishes: Structural and functional adaptations of fishes.

Amphibian: Movement onto land and early evolution of terrestrial vertebrates.

Reptiles: Characteristics of reptiles, adaptations in reptilians.

Birds: Migration and navigation, adaptations.

Mammal: Structural and functional adaptations of mammals.

**III. Principles of Animal Life**

The chemical basis of animal life: Brief introduction to bio-molecules; carbohydrates, lipids, proteins and nucleic acids.

Cell concept and cell theory, Organization of cellular organelle (their structure and functions), Central dogma of cell biology (Transcription and Translation), Meiosis and Mitosis

Protozoa: Reproduction pattern on in protozoan, Parasitism in protozoan

Mesozoa and Parazoa: Porifera: Cells types, body wall and skeleton and water currents system, Coelenterata: Reproduction plan and alteration of generation (Polymorphism)

Tissues Types: epithelial, connective, muscle and nervous tissue; organs and organ systems.

Enzymes function and factors affecting their activity, cofactors and coenzymes.

Energy Harvesting: Aerobic and anaerobic respiration the major source of ATP.

Mendel's law of inheritance, Chromosomal basis of inheritance, Multiple alleles, Eukaryotic chromosomes: Mutations and chromosomal aberrations.

Ecological Concepts: Interactions, Concepts and components of ecosystem, Food chain, Food web, Biogeochemical cycles, Forest, Biomes, Wildlife conservation and management, Environmental pollution, Green house effect, Acid rain, Global warming.

Evolution: Darwinian evolutionary theory based on natural selection and the evidence, Microevolution: Genetic variation and change within species, Macroevolution: Species and speciation (Allopatric, Parapatric and Sympatric speciation)

#### IV. Animal Form and Function

Protection, Support and Movement: Integumentary system of invertebrates and vertebrates; Animal muscles: the muscular system of invertebrates and vertebrates.

Digestion and Nutrition: Feeding mechanism, Digestion, Organization and regional function of alimentary canals, Regulation of food intake, Nutritional requirements

Internal Fluids and Respiration: Internal fluid environment, Composition of blood, Circulation and respiration mechanisms

Homeostasis: Excretion, Vertebrate kidney mechanisms, Temperature regulation

Nervous Coordination: Nervous system and Sense: Functional units of nervous systems, Synapses junctions between nerves.

Chemical Coordination: Endocrine System; Vertebrate endocrine glands and types of hormones, Mechanism of hormones action,

Animal behavior: Learning, Habituation, Insight learning, latent learning, classical learning: Control of Behavior; social behavior

#### SUGGESTED READINGS

| S.No. | Title   | Author   |
|-------|---|--|
| 1.    | Integrated Principles of Zoology.                                     | Hickman, Jr. C.P., Keen, S. L, Larson, and Eisenhour, D.J. |
| 2.    | Zoology   | Miller, S. A. and Harley, J. B.                            |
| 3.    | Biology   | Campbell, N.A.   |
| 4.    | Evolution. 2nd Edition  | Douglas Futuyma  |
| 5.    | Animal behavior: An Evolutionary Approach., (9 <sup>th</sup> Edition) | John Alcock  |