

## FEDERAL PUBLIC SERVICE COMMISSION **COMPETITIVE EXAMINATION-2023** FOR RECRUITMENT TO POSTS IN BS-17 **UNDER THE FEDERAL GOVERNMENT**

## BOTANY

	OWED: THREE HOURS CQS): MAXIMUM 30 MINUTES	PART-I (MCQS) PART-II	MAXIMUM MARKS = 20 MAXIMUM MARKS = 80
NOTE: (i)	Part-II is to be attempted on the separate Answer Book.		
(ii)	Attempt ONLY FOUR questions from PART-II. ALL questions carry EQUAL marks.		
(iii)	All the parts (if any) of each Question must be attempted at one place instead of at different		
	places.	-	-
(iv)	Write $\Omega$ No, in the Answer Book in accordance with $\Omega$ No, in the $\Omega$ Paper		

- Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.
- No Page/Space be left blank between the answers. All the blank pages of Answer Book **(v)** must be crossed.
- Extra attempt of any question or any part of the question will not be considered. (**vi**)

## **PART-II**

- Write comprehensive notes on the following: (10 each) O. No. 2.
  - (a) Morphology of thallus in Algae
  - **(b)** Alternation of generation in Bryophytes
- Q. No. 3. Describe significance of various types of abiotic environmental factors for soil (20)formation. Give soil characteristics formed by each agent.
- Q. No. 4. Describe ultra-stucture of nucleus with particular reference to nuclear membrane (20)and pore complexes.
- Describe various types of environmental pollutions. Give significance of **O.** No. 5. (20)biodiversity and conservation to save the living planet.
- Give a diagrammatic account of location of the different photosystems in granum Q. No. 6. (20)and briefly describe their functions in photosynthesis.
- What are different rules of botanical nomenclature? Compare natural and artificial Q. No. 7. (20)system of classification.
- (10 each) Write short notes on any **TWO** of the followings: (20)**Q. No. 8.** 
  - (a) Reproduction and economic importance of yeast
  - (b) Illustrative account of protein synthesis in eukaryotes
  - (c) Endosperm development in Angiosperms

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