FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION FOR
RECRUITMENT TO POSTS IN BS-17
UNDER THE FEDERAL GOVERNMENT, 2014

Roll Number

Botany Paper I

TIME ALLOWED:	(PART-I MCQs)	30 MINUTES	MAXIMUM MARKS: 20
THREE HOURS	(PART-II)	2 HOURS & 30 MINUTES	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) Candidate must write **Q. No.** in the **Answer Book** in accordance with **Q. No.** in the **Q. Paper.**
(iv) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(v) Extra attempt of any question or any part of the attempted question will not be considered.

Part II

Q2. Describe salient features of group Chlorophyta with particular emphasis on morphology and structural organization.

Q3. Give an illustrated account of life cycle of a smut fungus.

Q4. Define Stele. Describe its various types along with their evolutionary significance.

Q5. Write down a comparative account of stem anatomy of gymnosperms and angiosperms.

Q6. Write down the important characteristics of musci and discuss evolutionary trends of the group.

Q7. Describe artificial and natural systems of classification of plants by giving merits and demerits of each system.

Q8. Write down comprehensive notes on any 2 of the following:

(a) Anomalus Secondary Growth

(b) Economic Importance of Red Algae

(c) Distinct characters and important genera of family Malvaceae.

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Botany Paper II

TIME ALLOWED:	(PART-I MCQs)	30 MINUTES	MAXIMUM MARKS: 20
THREE HOURS	(PART-II)	2 HOURS & 30 MINUTES	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) Candidate must write **Q. No.** in the **Answer Book** in accordance with **Q. No.** in the **Q. Paper.**
(iv) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(v) Extra attempt of any question or any part of the attempted question will not be considered.

Part II

Q2. Describe the structure, biosynthesis, mode of action and physiological functions of gibberellins.

Q3. Differentiate between Respiration and Photorespiration. Elaborate the mechanism of photorespiration along with structural formulae. Which types of cellular organelles are involved in this process?

Q4. Environmental factors are crucial for plant growth. How do various climatic, edaphic and biotic factors affect plant growth?

Q5. Soil Erosion is major problem in Pakistan. What are the causes of soil erosion? Hoe is soil erosion reclaimed? Justify your answer with respect to this problem in Pakistan.

Q6. Differentiate between mitosis and meiosis. In which types of cells mitosis or meiosis occur? How id meiosis significant for living organisms?

Q7. What are codon and genetic code? Elucidate the structure of gene. Succinctly describe the process of gene regulation in eukaryotes.

Q8. List and describe various theories about the process of evolution. Elaborate this process with reference to theory of Neo-Lamarckism. What were the objections on this theory?

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