FEDERAL PUBLIC SERVICE COMMISSION

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

Roll Number

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

Q. No. 2. Describe the structure, biosynthesis, mode of action and physiological functions of gibberellins. **(20)**

Q. No. 3. Differentiate between Respiration and Photorespiration. Elaborate the mechanism of photorespiration along with structural formulae. Which types of cellular organelles are involved in this process? **(20)**

Q. No. 4. Environmental factors are crucial for plant growth. How do various climatic, edaphic and biotic factors affect plant growth? **(20)**

Q. No. 5. Soil erosion is a major problem in Pakistan. What are the causes of soil erosion? How is soil erosion reclaimed? Justify your answer with respect to this problem in Pakistan. **(20)**

Q. No. 6. Differentiate between mitosis and meiosis. In which types of cells mitosis or meiosis occur? How is meiosis significant for living organisms? **(20)**

Q. No. 7. What are codon and genetic code? Elucidate the structure of gene. Succinctly describe the process of gene regulation in eukaryotes. **(20)**

Q. No. 8. List and describe various theories about the process of evolution. Elaborate this process with reference to the theory of Neo-Lamarckism. What were the objections on this theory? **(20)**

****

Result.PK