



**FEDERAL PUBLIC SERVICE COMMISSION**  
**COMPETITIVE EXAMINATION-2019**  
**FOR RECRUITMENT TO POSTS IN BS-17**  
**UNDER THE FEDERAL GOVERNMENT**

Roll Number

**BOTANY**

<b>TIME ALLOWED: THREE HOURS</b>	<b>PART-I (MCQS)</b>	<b>MAXIMUM MARKS = 20</b>
<b>PART-I(MCQS): MAXIMUM 30 MINUTES</b>	<b>PART-II</b>	<b>MAXIMUM MARKS = 80</b>
<p><b>NOTE: (i) Part-II is to be attempted on the separate Answer Book.</b></p> <p><b>(ii) Attempt ONLY FOUR questions from PART-II. ALL questions carry EQUAL marks.</b></p> <p><b>(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.</b></p> <p><b>(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.</b></p> <p><b>(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.</b></p> <p><b>(vi) Extra attempt of any question or any part of the question will not be considered.</b></p>		

**PART – II**

- Q. No. 2.** Discuss evolution of vascular bundles in tracheophytes. (20)
- Q. No. 3.** Describe process of fertilization for an angiospermic plant with significance of double fertilization. (20)
- Q. No. 4.** Write a comprehensive account of Plant Growth Hormones. (20)
- Q. No. 5.** Give an account of structure of epidermis and describe various functions of its different cell types. (20)
- Q. No. 6.** Write a comprehensive account of light and dark reactions in plants. (20)
- Q. No. 7.** Describe various structural modification of roots, stems and leaves tissues in xerophytic plants. (20)
- Q. No. 8.** Write short notes on any FOUR of the followings:- (5 each) (20)
- (a) Theory of Natural Selection
  - (b) Economic importance of Rust and Smut
  - (c) Causes and significance of Polyploidy
  - (d) Types of stele
  - (e) Evolution of sporophyte in Bryophytes

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