

# FEDERAL PUBLIC SERVICE COMMISSION



## COMPETITIVE EXAMINATION FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT, 2011

### BOTANY, PAPER-I

<b>TIME ALLOWED:</b>	<b>(PART-I MCQs) 30 MINUTES</b>	<b>MAXIMUM MARKS: 20</b>
<b>THREE HOURS</b>	<b>(PART-II) 2 HOURS &amp; 30 MINUTES</b>	<b>MAXIMUM MARKS: 80</b>
<b>NOTE: (i) First attempt PART-I (MCQs) on separate Answer Sheet which shall be taken back after 30 minutes.</b>		
<b>(ii) Overwriting/cutting of the options/answers will not be given credit.</b>		

### (PART-I MCQs) (COMPULSORY)

**Q.1. Select the best option/answer and fill in the appropriate box on the Answer Sheet. (1 x 20=20)**

- (i) Tiny plants with silicon cells are:  
(a) Diatoms (b) Zooplanktons (c) Fungi (d) None of these
- (ii) Withania somnifera belongs to the family:  
(a) Solanaceae (b) Brassicaceae (c) Poaceae (d) None of these
- (iii) The 1<sup>st</sup> root of the seed plant develops from the radical is called:  
(a) Tap root (b) Aerial root (c) Adventitious root (d) None of these
- (iv) Mycorrhiza is the symbiotic association between:  
(a) Algae and Fungi (b) Angiosperms and Fungi  
(c) Lichens and Fungi (d) None of these
- (v) New Ulva plant after undergoing meiosis produces \_\_\_\_\_ Zoospores:  
(a) Monoflagellated (b) Biflagellated (c) 4-flagellated (d) None of these
- (vi) Alternation of generation in Moss is:  
(a) Isomorphic (b) Heteromorphic (c) Absent (d) None of these
- (vii) Most primitive family is:  
(a) Magnoliaceae (b) Poaceae (c) Malvaceae (d) None of these
- (viii) Laminaria is the example of:  
(a) Red Algae (b) Brown Algae (c) Green Algae (d) None of these
- (ix) The chief component of the cell wall of fungi is the:  
(a) Pectin (b) Chitin (c) Lignin (d) None of these
- (x) Formation of fruit without fertilization:  
(a) Apomixis (b) Polyembryony (c) Parthenocarpy (d) None of these
- (xi) National flower of Pakistan is:  
(a) Jasminum (b) Cestrum nocturnum (c) Pisum sativum (d) None of these
- (xii) Zygomycetes have their common name as:  
(a) Imperfect Fungi (b) Conjugating Fungi (c) Sac Fungi (d) None of these
- (xiii) Filaments of Algae are composed either of distinct cells:  
(a) Gametocytes (b) Coenocytes (c) Heterocysts (d) None of these
- (xiv) The bryophytes are also called:  
(a) Sporogonium (b) Amphibians (c) Arthropytes (d) None of these

**BOTANY, PAPER-I**

- (xv) The first plant which developed true leaves and roots are:
  - (a) Pteropsids                      (b) Lycopside                      (c) Psilopsids                      (d) None of these
- (xvi) An ovule is:
  - (a) Fertilized seed                      (b) Integumented Indehiscent megasporangium
  - (c) Dehiscent megasporangium                      (d) None of these
- (xvii) An angiosperms the female gametophytes contain:
  - (a) 1 – several cells                      (b) 7 cells only                      (c) 3 cells                      (d) None of these
- (xviii) Sporophyte of Bryophytes is also called as:
  - (a) Sporangium                      (b) Sporogonium                      (c) Prothallus                      (d) None of these
- (xix) One of the examples of crustose lichen is:
  - (a) Basidia                      (b) Dermatocarpus                      (c) All of these                      (d) None of these
- (xx) The scientific name of Brinjal is:
  - (a) Solanum tuberosum                      (b) Solanum melongena
  - (c) Nicotiana tabaccum                      (d) None of these

**PART-II**

**NOTE:**(i) **PART-II** is to be attempted on separate Answer Book.  
 (ii) **Attempt ONLY FOUR questions from PART-II. All questions carry EQUAL marks.**  
 (iii) **Extra attempt of any question or any part of the attempted question will not be considered.**

- Q.2.** Briefly describe the life cycle of Bryophytes. **(20)**
- Q.3.** Write detailed notes on the different stages of mitosis. Draw diagrams. **(20)**
- Q.4.** Write down the salient features of family Rosaceae and its economic importance. **(20)**
- Q.5.** Give detailed note on the life cycle of Angiosperm up to the development of seed. **(20)**
- Q.6.** Define tissue. What are meristematic tissues and also classify them on different basis? **(20)**
- Q.7.** What are lichens? How lichens are beneficial for the universe? **(20)**
- Q.8.** Write the characteristic features of Gymnosperms. How they differ from Angiosperms and Pteridophytes. **(20)**

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