

BOTANY, PAPER-I

**FEDERAL PUBLIC SERVICE COMMISSION
COMPETITIVE EXAMINATION FOR
RECRUITMENT TO POSTS IN BPS-17 UNDER
THE FEDERAL GOVERNMENT, 2009**

BOTANY, PAPER-I

S.No.	
R.No.	

TIME ALLOWED:	(PART-I) 30 MINUTES	MAXIMUM MARKS:20
	(PART-II) 2 HOURS & 30 MINUTES	MAXIMUM MARKS:80

- NOTE:** (i) First attempt **PART-I (MCQ)** on separate **Answer Sheet** which shall be taken back after **30 minutes**.
(ii) **Overwriting/cutting of the options/answers will not be given credit.**

PART – I (MCQ)
(COMPULSORY)

- Q.1. Select the best option/answer and fill in the appropriate box on the Answer Sheet. (20)**
- (i) The spores in bryophytic plant represent the first cell of the:
(a) Gametophytic generation (b) Sporophytic generation (c) Asexual generation
(d) All of these (e) None of these
- (ii) Algal members of classes Euglenophyceae and chlorophyceae are similar in the:
(a) Cell wall structure (b) Reserve food (c) Pigment composition
(d) Structure of flagella (e) None of these
- (iii) Crystocarp is a structure developed after fertilization in:
(a) Blue green algae (b) Actinomycetes (c) Bryophytes
(d) Red algae (e) None of these
- (iv) Rice belongs to family:
(a) Malvaceae (b) Fabiaceae (c) Solonaceae
(d) Poaceae (e) None of these
- (v) Gametophyte of fern is called:
(a) Prothallus (b) Protocorm (c) Thallus
(d) Gametangia (e) None of these
- (vi) The sieve elements are major component of:
(a) Cambium (b) Apical meristem (c) Xylem
(d) Phloem (e) None of these
- (vii) Which one of these is a parasite:
(a) Sunflower (b) Begonia (c) Biden
(d) Brasica (e) None of these
- (viii) Sporophytic generation is borne upon gametophyte and is dependent on it. This feature is present in:
(a) Cycas (b) Adiantum (c) Equisetum
(d) All of these (e) None of these
- (ix) Double fertilization is a typical characteristic of:
(a) Algae (b) Fungi (c) Bryophytes
(d) Angiosperm (e) All of these
- (x) Marchantia reproduces vegetatively by:
(a) Apospory (b) Gemma Cup (c) Budding
(d) All of these (e) None of these
- (xi) Plant cell wall is composed of:
(a) Cellulose (b) Polypeptides (c) Phospholipids
(d) Starch (e) None of these
- (xii) Stele in which primary vascular tissues are arranged in discrete strands around a pit is called:
(a) Prostele (b) Radial stele (c) Centric stele
(d) Eustele (e) None of these
- (xiii) In which the following edible part is obtained from the Rhizome:
(a) Potato (b) Ginger (c) Sugar beet
(d) Onion (e) None of these
- (xiv) Fertilization within an unopened flower is called:
(a) Cleistogamy (b) Cleistocary (c) Isogamy
(d) Oogamy (e) None of these

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- (xv) Meiosis takes place during:
 - (a) Gamete formation
 - (b) Zygote formation
 - (c) Cambium formation
 - (d) All of these
 - (e) None of these
- (xvi) Edible fungus is:
 - (a) Penicillium
 - (b) Agaricus
 - (c) Aspergillus
 - (d) Phythium
 - (e) None of these
- (xvii) Speciation is:
 - (a) Origin of species
 - (b) Evolution of species
 - (c) Identification of species
 - (d) Preservation of species
 - (e) None of these
- (xviii) Collective name given to sporangia in fern is:
 - (a) Sorus
 - (b) Sporangium
 - (c) Spathe
 - (d) Sporangiphore
 - (e) None of these
- (xix) Small, spherical protein bodies surrounded by starch deposits in chloroplasts of many algae are:
 - (a) Lecoplasts
 - (b) Ribosomes
 - (c) Microsomes
 - (d) Pyenidium
 - (e) None of these
- (xx) Heterocysts are present in:
 - (a) Volvox
 - (b) Clostridium
 - (c) Cycas
 - (d) E-Coli
 - (e) None of these

PART – II

NOTE:	<p>(i) PART-II is to be attempted on the separate Answer Book.</p> <p>(ii) Attempt ONLY FOUR questions from PART-II. All questions carry EQUAL marks.</p> <p>(iii) Extra attempt of any question or any part of the attempted question will not be considered.</p>
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- Q.2.** (a) Describe the life history of any multicellular green alga. **(10)**
 (b) Write note on different parameters which are used in classification of algae. **(10)**
- Q.3.** (a) Describe the general characteristics and methods of reproduction in fungi. **(10)**
 (b) Discuss five plant diseases of economic importance caused by fungi. **(10)**
- Q.4.** Explain in detail the evolution of gametophyte and sporophyte in bryophytes? **(20)**
- Q.5.** What is pollination and fertilization? Give an account of post fertilization events leading to the development of seeds in angiosperms. **(20)**
- Q.6.** What do you understand by secondary growth? Describe the process in detail in a typical Dicot. Stem. **(20)**
- Q.7.** Explain the different systems of classification in angiosperms. Also discuss the modern trends in plant taxonomy. **(20)**
- Q.8.** Enlist the salient features of gymnosperms. Also describe the features in which this group resembles and differs with pteridophytes: **(20)**
