

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

Branch- BOTANY

PLANT DIVERSITY- I

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 × 1 = 10)

Question No.	Question	K Level	CO
1	The thallus of <i>Voucheria</i> is a) Colonial b) Filamentous c) Unbranched d) Coenocytic	K1	CO1
2	This condition is not applicable to the formation of auxospores in Pennales. a) Autogamy b) Oogamy c) Parthenogenesis d) fusion of conjugating cells	K2	CO1
3	The aplanospores with a structure similar to parent cell are called: a) Akinetes b) Autospores c) Exospores d) Endospores	K1	CO2
4	Tubular fermenters are specifically used in the cultivation of: a) <i>Chlorella</i> b) <i>Nostoc</i> c) <i>Spirulina</i> d) <i>Anabaena</i>	K2	CO2
5	Which of the following is considered as organisms of uncertain affinity? a) Agaricales b) Mucorales c) Stemonitales d) Acrasiales	K1	CO3
6	The terminal swollen structure of germ tube is called: a) Haustorium b) Sclerotium c) Appressorium d) Coenobium	K2	CO3
7	Heterothallic fungi show difference in strains of their thalli in respect of: a) sex b) compatibility c) Habit d) Both (a) & (b)	K1	CO4
8	The algal layer of the lichen thallus is also called: a) Apothecial layer b) Gonidial layer c) Myco layer d) Phyco layer	K2	CO4
9	In bryophytes sex is determined by: a) sex chromosomes b) environment c) sporophyte d) Both (a) & (b)	K1	CO5
10	The antheridium of <i>Polytrichum</i> is covered by a whorl of specialized leaves, called: a) pinnate leaves b) paraphyses c) perigonial leaves d) operculum	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	List the parameters considered significant for the classification of algae by Fritsch.	K1	CO1
	(OR)		
11.b.	Why diatoms are considered as articulated organisms?		
12.a.	Organize the pattern of phylogenetic thallus variations among the algae.	K3	CO2
	(OR)		
12.b.	Apply your knowledge and interpret that algal biofuel could be an alternate for conventional energy resource.		
13.a.	Trace the contributions of Indian mycologists.	K3	CO3
	(OR)		
13.b.	Examine the fruit bodies of Cleistothecium and Perithecium.		
14.a.	Analyse the mechanism of fungal spore dispersal.	K4	CO4
	(OR)		
14.b.	Distinguish between homothallic and heterothallic properties of fungi.		
15.a.	Evaluate the trends of gametophyte structure from subterranean to erect nature.	K5	CO5
	(OR)		
15.b.	Compare the structure of sporophytes of <i>Anthoceros</i> and <i>Polytrichum</i> .		

SECTION - C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

Question No.	Question	K Level	CO
16	Show that algae play a vital role in the economy of agriculture and pharmaceutical industry.	K1	CO1
17	Construct a technical map showing the steps involved in mass cultivation of <i>Spirulina</i> .	K3	CO2
18	Identify and explain various stages of reproductive structures of <i>Puccinia</i> .	K3	CO3
19	Examine the attributes of lichens towards biomedical applications.	K4	CO4
20	Critically assess the economic and ecological importance of bryophytes.	K5	CO5

Z-Z-Z END