PSG COLLEGE OF ARTS & SCIENCE

(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2023

(First Semester)

Branch - BOTANY

PLANT DIVERSITY - II

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

 $(10 \times 1 = 10)$

| ALL questions carry EQUAL marks $(10 \times 1 = 10)$ | | | | | |
|--|-----------------|--|------------|-----|--|
| Module No. | Question No. | Question | K Level | СО | |
| 1 | 1 | The main plant body of pteridophyte is a) gametophyte c) macrophylls b) sporophyte d) angiosperm | K1 | CO1 | |
| | 2 | The leaf of ferns are a) microphylls b) macrophylls d) strobili | K2 | CO1 | |
| 2 | 3 | The distinct compact structure called strobili or cones are found in a) Selaginella c) both a and b b) Equisetum d) gymnosperms | K1 | CO1 | |
| | 4 | The sporangia produce spores in spore mother cell by a) mitosis b) meiosis c) amitosis d) zygotene | K2 | CO1 | |
| 3 | 5 | Inverted omega-shaped organization of vascular bundles is seen in a) cycas root b) cycas stem c) cycas leaflet c) cycas rachis | K1 | CO1 | |
| | 6 | Pick the pair that is incorrectly matched. a) Cycas – coralloid roots b) Abies – wood tar, wood gas c) Pinus – Mycorrhizal roots d) Sequoia – Redwood tree | K2 | CO1 | |
| 4 | 7 | In the cycas, vegetative reproduction is by means of a) Leaf b) Bulbils c) Corals d) Seeds | K1 | CO1 | |
| | 8 | The gymnosperms are that means they produce different male and female spores. a) Homosporous c) Microspores b) Heterosporous d) Megaspores | K2 | CO1 | |
| 5 | 9 | Radiocarbon dating can help find the age range of biological specimens no older than: a) 50,000 years c) 500,000 years b) 100,000 years d) 1,000,000 years | K1 | CO1 | |
| | 10 | The scientific study of the structure of bones, skeletal elements and micro bone morphology are called: a) Osteology b) Herpetology d) None of the above | K2 | COI | |

22BOP102N/ 22BOP102 Cont...

SECTION - B (35 Marks)

Answer ALL questions
ALL questions carry EQUAL Marks

 $(5 \times 7 = 35)$

| Module | Question | Question | K | СО |
|--------|----------|--|-------|-----|
| No. | No. | | Level | |
| 1 | 11.a. | Analyze the reproduction in Nephrolepis. | | |
| | (OR) | | K4 | CO3 |
| | 11.b. | Examine the anatomy of Pteridium. | | |
| | 12.a. | Evaluate the economic importance of Pteridophytes. | K5 | |
| 2 | | (OR) | | CO4 |
| | 12.b. | Explain the morphology of Salvinia. | | |
| | 13.a. | Analyze the account of Pteridospermales. | | CO3 |
| 3 | | (OR) | K4 | |
| | 13.b. | Distinguish the general characters of Gymnosperms. | | |
| | 14.a. | Criticize the anatomy of Taxus. | | |
| 4 | | (OR) K5 | | CO4 |
| | 14.b. | Explain the morphology of <i>Pinus</i> cone. | | |
| | 15.a. | Elaborate the methods of fossilization. | | |
| 5 | | (OR) | K6 | CO5 |
| | 15.b. | Discuss the features of Williamsonia. | | |

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks $(3 \times 10 = 30)$

| Module No. | Question No. | Question | K Level | СО |
|---------------|-----------------|--|------------|-----|
| 1 | 16 | Analyze the life cycle patterns of Equisetum. | K4 | CO3 |
| 2 | 17 | Explain the stelar evolution in pteridophytes. | K5 | CO4 |
| 3 | 18 | Examine the elaborate the account of pentoxylales. | K4 | CO3 |
| 4 | 19 | Elaborate the economic importance of Gymnosperms. | K6 | CO5 |
| 5 | 20 | Explain the Geological time scale. | K5 | CO4 |