

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086**  
(For candidates admitted from the academic year 2023 – 2024 )

**B.Sc. DEGREE EXAMINATION, APRIL 2024**  
**BRANCH V(A) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY**  
**SECOND SEMESTER**

**COURSE : MAJOR – CORE**  
**PAPER : BRYOPHYTES, PTERIDOPHYTES AND GYMNOSPERMS**  
**SUBJECT CODE : 23BT/MC/BP24**  
**TIME : 3 HOURS** **MAX. MARKS: 100**

Q. No.	SECTION A (20 x 1 = 20 marks)	CO	KL
<b>I</b>	<b>Choose the correct answer</b>	1-5	K1
1.	The thalloid plant body is found in .....		
	a) <i>Marchantia</i> b) <i>Polytrichum</i> c) <i>Sphagnum</i> d) <i>Salvina</i>		
2.	‘Club moss’ belongs to.....		
	a) Fungi, b) Pteridophytes c) Phaeophytes d) Gymnosperms		
3.	Inverted omega-shaped organization of vascular bundles is seen in....		
	a) <i>Cycas</i> root b) <i>Cycas</i> leaflet c) <i>Cycas</i> stem d) <i>Cycas</i> rachis		
4.	Which of the following is not a type of fossilized plant.....		
	a) Petrified wood b) Coal c) Dinosaur bones d) Leaf impression		
5.	Alternation of generation is exhibited in ..		
	a) Bryophytes b) Pteridophytes c) Gymnosperms d) All the above		
<b>II</b>	<b>State whether true or false</b>	1-5	K1
6.	Cryptogams are grouped under plants like fern and mosses, which produce spores.		
7.	Pith is present in protostels.		
8.	The most advanced order in Gymnosperms is found in Gnetales		
9.	Birbal sahani is the Father of “Indian Paleontology”		
10.	The surviving nucellus in the seed is Perisperm		
<b>III</b>	<b>Fill in the Blanks</b>	1-5	K1
11.	In <i>Marchantia</i> the chloroplast is _____		
12.	<i>Lycopodium</i> is commonly known as _____		
13.	Winged Seeds are present in _____		
14.	Radiocarbon dating can help find the age range of biological specimens not older than _____		
15.	In Gymnosperms the integuments of ovules are _____		
<b>IV</b>	<b>Match the following</b>	1-5	K1
16.	Pseudo-elaters - Stem buds		
17.	Gemmae - Resin		
18.	Bulbils - Coal		
19.	Compression - <i>Anthoceros</i>		
20.	Amber - <i>Cycas</i>		
Q. No.	<b>SECTION B (8 x 2 = 16 marks)</b>	<b>CO</b>	<b>KL</b>
	<b>Answer any 8 of the following in 50 words</b>		
21.	Define Plant Amphibians	1-5	K2
22.	What is Protosteles	1-5	K2

23.	Asses Prothallus	1-5	K2
24.	Explain Green manure	1-5	K2
25.	What is Transfusion tissue?	1-5	K2
26.	Write about Periderm	1-5	K2
27.	Comment on Fossils	1-5	K2
28.	State Petrification	1-5	K2
29.	Define Heterospory	1-5	K2
30.	What is Peat moss ?	1-5	K2
<b>Q. No.</b>	<b>SECTION C</b> <b>Answer the following in 200 words</b>	<b>CO</b>	<b>KL</b>
31.	Explain the characteristic features of class Hepaticopsida. (or)	1-5	K3
32.	Explain the characteristic features of class Lycopside		
33.	Describe the anatomical features of <i>Lycopodium</i> Stem (or)	1-5	K3
34.	Outline the classification of Pteridophyta (Reimers, 1954)		
35.	Illustrate the anatomical features of Coralloid root of <i>Cycas</i> (or)	1-5	K4
36.	Enumerate the anatomical structure of <i>Pinus</i> needle		
37.	Describe the types of Fossils and Fossilization (or)	1-5	K4
38.	Describe stelar evolution in Pteridophytes		
<b>Q. No.</b>	<b>SECTION D</b> <b>Answer the following in 1000 words</b>	<b>CO</b>	<b>KL</b>
39.	Describe the vegetative and reproductive structure of <i>Polytrichum</i> (or)	1-5	K5
40.	Discuss the vegetative and reproductive structure of <i>Cycas</i> and add a note of its economic importance		
41.	Give a detailed account on Geological Time Scale (or)	1-5	K5
42.	Describe in detail the fossil forms of Pteridophyta.		

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