

B.Sc. BOTANY
FIRST SEMESTER
ARCHEGONIATES AND PALAEOBOTANY
BSB-101

SET
A

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

(Objective)

Choose the correct answer from the following:

1 × 20 = 20

1. Psedoelaters are found in the capsules of:
a. *Anthoceros*
b. *Riccia*
c. *Marchantia*
d. *Polytrichum*
2. The conductive tissue differentiation of higher plants is indicated by:
a. Seta of *Sphagnum*
b. Apophysis of Moss
c. Sterile columella of *Anthoceros*
d. Calyptra of *Riccia*
3. Archegonium is:
a. A diploid tissue responsible for the formation of sporogenous tissue
b. A part of archegonia
c. A haploid tissue responsible for the formation of gametophytic cells
d. None of the above
4. Venter is the part of:
a. Sporogonium
b. Antheridium
c. Archegonium
d. Sporangium
5. Among the following which is not characteristic feature of Bryophyta?
a. Motile sperms
b. Water essential for fertilization
c. Presence of archegonium
d. Photosynthetically independent sporophyte
6. A prothallus is:
a. A structure in pteridophyta formed before thallus developed
b. A gametophytic free living structure formed in pteridophytes
c. A sporophytic free living structure formed in pteridophytes
d. A primitive structure formed after fertilization in pteridophytes
7. Strobili or cones are found in:
a. *Marchantia*
b. *Equisetum*
c. *Isoetes*
d. *Pteris*
8. Which is rootless fern?
a. *Pteris*
b. *Dryopteris*
c. *Salvinia*
d. *Adiantum*
9. Per sporophyll only one sporangia formed in:
a. *Selaginella*
b. Fern
c. *Pinus*
d. All of the above

10. Which of the following are homosporous pteridophytes?
 i) Selaginella iii) Salvinia ii) Lycopodium iv) Equisetum
 a. i and ii only b. ii and iii only
 c. i and iv only d. ii and iv only
11. The taxon "Gymnosperm" is a:
 a. Class b. Clade
 c. Kingdom d. Sub-kingdom
12. One of the greatest drawback of Sahní's (1920) classification of gymnosperms is the:
 a. Exclusion of Gnetales b. Exclusion of Cordaitales
 c. Exclusion of Ginkgoals d. Inclusion of Bennettitales
13. For gymnosperms, the Jurassic period is the age of:
 a. Conifers b. Ginkgo
 c. Cycads d. None of the above
14. Anomalous secondary growth is observed in:
 a. *Pinus* b. *Cycas*
 c. *Gnetum* d. All of the above
15. The process of development of female gamete is called:
 a. Microsporogenesis b. Megasporesogenesis
 c. Microgametogenesis d. Megagametogenesis
16. The Greek term "palaeo" means:
 a. Ancient b. Rock
 c. Fossil d. Geology
17. Father of Paleobotany is:
 a. James Hutton b. Birbal Sahni
 c. John Douglas d. Adolphe-Theodore Brongniart
18. Which of the following structures can be properly preserved by fossilization?
 a. Soft tissues b. Jelly fish
 c. Pollens d. Hardwood
19. Bennettitales became entirely extinct in most areas during the late:
 a. Cretaceous b. Premiam
 c. Triassic d. Jurassic
20. Cordaitales have reproductive cone-like structure resembling:
 a. Conifers b. Cycads
 c. Pines d. Gnetales

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Write the economic importance of Bryophyte. | 10 |
| 2. Write the comparative morphological characters of <i>Hepaticopsida</i> and <i>Bryopsida</i> group with proper examples. | 10 |
| 3. What is stele? Write about the different types of stele in pteridophytes with proper example. | 2+8=10 |
| 4. Write short notes on:
a) Primitive characters of <i>Psilotum</i>
b) Sporophytic structure of <i>Polytrichum</i> | 5+5=10 |
| 5. Write short notes on:
a) Classification of gymnosperms
b) Primitive characters of <i>Ginkgo</i> | 5×2=10 |
| 6. With proper diagrams, discuss on the reproduction, fertilization and pollination of <i>Gnetum</i> . | 2+8=10 |
| 7. What is paleobotany? Write note on the different types of fossils. | 3+7=10 |
| 8. Write note on the general account and reproduction of:
a) <i>Lepidodendron</i>
b) <i>Williamsonia</i> | 5×2=10 |

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