

**M.Sc. 1st Semester Examination, 2018**

**BOTANY**

**(Pteridology & Gymnosperms)**

**Paper : BOT-104C(T)**

**Course ID : 11354**

**Time: 2 Hours**

**Full Marks: 30**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**Group – A  
(Pteridology)**

1. Answer *any two* of the following: 1×2=2
- (a) Write the name of an early vascular plant mentioning its age of occurrence.
- (b) Name two important member of Zosterophyllophyta.
- (c) Differentiate endoscopic and exoscopic embryo development.
- (d) What do you mean by anisoporous plant? Give example.
2. Answer *any one* of the following: 5×1=5
- (a) Describe the evolutionary tendency in the change of shape of sporangia and branching pattern among Rhyniopsida with suitable drawing. 2+3=5
- (b) Write about apogamous nature of pteridophytes. 5
3. Answer *any one* of the following: 8×1=8
- (a) What is heterospory? How seed habit is being achieved by higher plants from heterospory? 2+6=8
- (b) Discuss the evolution of sorus in ferns. 8

**Group – B  
(Gymnosperms)**

4. Answer *any two* of the following: 1×2=2
- (a) What is epimatium?
- (b) What is Copal?
- (c) What is index fossil?
- (d) What is amber?

5. Answer *any one* of the following: 5×1=5
- (a) How petrified fossils are formed in nature? How it differs from compression type of fossils? 3+2=5
- (b) Discuss the role of gymnosperm as a source of wood and resin. Name one medicinally important Gymnosperm. 4+1=5
6. Answer *any one* of the following: 8×1=8
- (a) Give an account of male and female reproductive organs of *Glossopteridaceae* with labelled diagram. Write the stratigraphic range of the plant with area of occurrence. (3+3)+2=8
- (b) Characterize Gnetales. Give a comparative account of Ephedra and Welwitschia. 3+5=8
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