



SM – 386

IV Semester B.Sc. Examination, May/June 2018
(CBCS) (Fresh + Repeaters) (2015-16 and Onwards)
BOTANY (Paper – IV)
Gymnosperms and Embryology of Angiosperms

Time : 3 Hours

Max. Marks : 70

Instructions : 1) Answer *all* questions.
2) Draw diagrams *wherever* necessary.

PART – A

- A. Explain/Define **any ten** of the following in **two** or **three** sentences : (10×2=20)
- 1) What is coenomegaspore ?
 - 2) What is Pollen Kit ?
 - 3) What is transfusion tissue ?
 - 4) What is an amphitropous ovule ?
 - 5) What is Pollen Chamber ? Give an example.
 - 6) What is NEMEC Phenomenon ?
 - 7) What is Palynogram ?
 - 8) What are Pollinia ? Give an example.
 - 9) What is Parthenocarpy ? Mention the types.
 - 10) Draw a neat labelled diagram of Pinus megasporophyll.
 - 11) Name the types of Pollen tetrads.
 - 12) Name the two cells in a mature Angiosperm Pollen grain.

PART – B

- B. Write critical notes on **any four** of the following : (4×5=20)
- 13) Functions of tapetum.
 - 14) Internal structure of coralloid root of cycas.
 - 15) Mellissopalynology.
 - 16) Cleavage Polyembryony.
 - 17) Male cone of Gnetum.
 - 18) What is placentation ? Explain the types.

P.T.O.



PART - C

(3x10=30)

C. Give a comprehensive account of **any three** of the following :

- 19) Cellular and Helobial type of endosperm development.
- 20) Economic importance of Gymnosperms.
- 21) Explain microsporogenesis and add a note on anther wall layers.
- 22) Describe the process of fertilization in Angiosperms.
- 23) Explain the development and structure of Dicot embryo.

PART - B

- 13) Functions of tapetum
- 14) Internal structure of conoid root of dicots
- 15) Molluscaryology
- 16) Cleavage Polymery
- 17) Male cone of Gnetum
- 18) What is placentation? Explain the types

(4x5=20)