

**B.Sc. Semester - 5 (CBCS) Examination**  
**Oct/Nov. - 2022(Old Course)**  
**BIOLOGY OF SEED PLANTS (CORE)**

**Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

- Q.1 Give the answer of following questions. 14
- (A) Answer any one question in detail. 07
- (1) Reproductive structure of Gnetum.
  - (2) Reproductive structure of Ephedra.
- (B) Shortly answer any one question. 04
- (1) Describe the T.S. of Ephedra young stem.
  - (2) Describe the leaf anatomy of Gnetum.
- (C) Answer the following question very shortly. (Any Three) 03
- (1) True or false: Endosperm in Gnetum and Ephedra is triploid.
  - (2) Give the name of fossil plant stem was covered by persistent leaf base as we find in cycas.
  - (3) State two type of shoot and leaf morphology in Gnetum.
  - (4) Gnetum stem cortex is differentiated in to how many layers? State its name.
  - (5) Which species of Ephedra is exists in dry region of our country?
- Q.2 Give the answer of following questions. 14
- (A) Answer any one question in detail. 07
- (1) Describe the principles of taxonomy.
  - (2) Write down detail note on concept of family.
- (B) Shortly answer any one question. 04
- (1) Give the demerits of Bentham and Hooker classification system.
  - (2) Give the merits of Bentham and Hooker classification system.
- (C) Answer the following question very shortly. (Any Three) 03
- (1) True or false: Taxonomic group belonging to any one of the taxonomic Categories is known As taxon.
  - (2) Define: Taxonomy.
  - (3) Fill in the blank: \_\_\_\_\_ is the one specimen or other element designated by the author as the nomenclature type.
  - (4) Who is known as father of taxonomy?
  - (5) Who was the first to give concept of species?
- Q.3 Give the answer of following questions. 14
- (A) Answer any one question in detail. 07
- (1) Describe Solanaceae family characteristics with floral diagram, floral formula and two Examples of plants.
  - (2) Describe cannaceae family characteristics with floral diagram, floral formula and two examples of plants.
- (B) Shortly answer any one question. 04
- (1) Describe distinguishing characters of convolvulacer family.
  - (2) Describe distinguishing characters of Rosaceae family.

- (C) Answer the following question very shortly. (Any Three) 03
- (1) How many carpels and ovules present in capparidaceae?
  - (2) Give the name of family which you studied and come under caryciflorae series.
  - (3) State the types of inflorescence in Asteraceae family.
  - (4) Give the scientific name of zippo plant.
  - (5) Explain the unique structure of androecium in Asclepidaceae.
- Q.4 Give the answer of following questions. 14
- (A) Answer any one question in detail. 07
- (1) Describe Bignoneaceae family characteristics with floral diagram, floral formula and two examples of plants.
  - (2) Describe Polygonaceae family characteristics with floral diagram, floral formula and two examples of plants.
- (B) Shortly answer any one question. 04
- (1) Describe distinguishing characters of cypraceae family.
  - (2) Describe distinguishing characters of Tiliaceae family.
- (C) Answer the following question very shortly. (Any Three) 03
- (1) Give the floral formula of Asclepidaceae.
  - (2) Fill in the blank: The sepals of solanaceae family is \_\_\_\_\_
  - (3) Give the series and order name of Amaranthaceae family.
  - (4) Explain parianth with reference to cannaceae family.
  - (5) Give the Botanical name of kantado dabho.
- Q.5 Give the answer of following questions. 14
- (A) Answer any one question in detail. 07
- (1) Discuss the embryo development in monocotyledons.
  - (2) Discuss the embryo development in dicotyledons.
- (B) Shortly answer any one question. 04
- (1) State the functions of endosperm.
  - (2) State the characters of pollen grain.
- (C) Answer the following question very shortly. (Any Three) 03
- (1) Fill in the blank: In monocot embryo radicle is produced by \_\_\_\_\_
  - (2) As the consequence of triple fusion, a male gamete fuses with the Secondary nucleus, a triploid structure shortly called PEMC, give full form of PEMC.
  - (3) What is aleurone tissue?
  - (4) Fill in the blank: Suspensor is component of \_\_\_\_\_ embryo.
  - (5) In angiosperm, each pollen grain produces two male cells. What do these sperms do in the fertilization?

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