

B.Sc. Semester - 5 (CBCS) Examination
December - 2020 (Old Course)
BIOLOGY OF SEED PLANTS(CORE)

Time: 1:30 Hours

Marks: 42

Instructions:

1. Figures to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any three of the following questions.
-

Q – 1 Give the answer of following questions. (14)

(A) Answer any one question in detail (07)

- (1) Discuss the male cone of *Gnetum* and mature male gametophyte.
- (2) Discuss female cone of *Ephedra* and mature female gametophyte.

(B) Shortly answer any one question (04)

- (1) Explain mature structure of megaporengium in *Gnetum*.
- (2) Describe the T. S. of *Ephedra* young stem.

(C) Answer the following question very shortly (Answer any three) (03)

- (1) How many types of shoot and leaf morphology is observed in *Gnetum* states its name.
- (2) State the names of *Gnetum* stem cortex .
- (3) Which species of *Ephedra* is exists in dry region of our country.
- (4) Endosperm in *Gnetum* and *Ephedra* is triploid - True or False?
- (5) Give the name of fossil plant which stem was covered by persistent leaf base as we find in *Cycas*

Q – 2 Give the answer of following questions. (14)

(A) Answer any one question in detail (07)

- (1) Explain the concept of “Species” and “Families”
- (2) Discuss the classification system of Bentham and Hooker’s.

(B) Shortly answer any one question (04)

- (1) Describe merits of Bentham and Hooker’s classification system.
- (2) Draw only chart of Bentham and Hooker’s classification system.

(C) Answer the following question very shortly (Answer any three) (03)

- (1) Define Polyphyletic Origin of angiosperm.
- (2) State any two demerits of Bentham and Hooker’s classification system.
- (3) How many families of flowering plants were recognized in Engler and Prantl's System of Classification?
- (4) According to Englerian concept Unisexual, naked-flowers arranged in catkin and wind pollinated were considered as the lowest grade of floral organization – True or False?
- (5) Define monophyletic origin of angiosperm.

Q – 3 Give the answer of following questions. (14)

(A) Answer any one question in detail (07)

- (1) Describe floral characteristics, floral diagram, floral formula of Tiliaceae family with examples of plants.
- (2) Describe floral characteristics, floral diagram, floral formula of Asclepidaceae family with examples of plants.

(B) Shortly answer any one question (04)

- (1) Describe distinguishing characters of Convolvulaceae family.
- (2) Describe distinguishing characters of Bignoniaceae family.

(C) Answer the following question very shortly (Answer any three) (03)

- (1) _____ Family having trimerous perianth with aggregate of berries many seeded
- (2) fleshy fruits.
- (3) Define Order. Parietales
- (4) Give the Botanical Name of ଓଲି ଲତାଘୁଣି and କେରଡ଼ି
- (5) Give the Botanical Name of ଶାଢ଼ି ନିଞ୍ଜି ଝାଞ୍ଜି and ଘୁଆନିଞ୍ଜି ଝାଞ୍ଜି
- (6) Rosaceae family comes under _____ series?

Q – 4 Give the answer of following questions. (14)

(A) Answer any one question in detail (07)

- (1) Describe floral characteristics, floral diagram, floral formula of Amaranthaceae family with examples of plants.
- (2) Describe floral characteristics, floral diagram, floral formula of Cypraceae family with examples of plants.

(B) Shortly answer any one question (04)

- (1) Describe distinguishing characters of Polygonaceae family.
- (2) Describe distinguishing characters of Solanaceae family.

(C) Answer the following question very shortly (Answer any three) (03)

- (1) Capitulum Inflorescence, homogamous and ligulate, involucre of bracts present at the base of inflorescence are the characteristics of _____ family?
- (2) The Asteraceae family comes under _____ series?
- (3) Give the leaf morphology of Asclepiadaceae.
- (4) Give the Botanical Name of ଧରଣିଞ୍ଜି and ଧୂଳିଞ୍ଜି.
- (5) Give any two characters of Rosaceae family.

Q – 5 Give the answer of following questions. (14)

(A) Answer any one question in detail (07)

- (1) Describe in detail - Embryogeny of Dicots.
- (2) Describe in detail - Embryogeny of Monocots.

(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 (Answer any three) (03)

- (1) The development of an embryo up to the octant stage is almost similar in dicot and monocot. True or False?
- (2) An embryo may sometime developed from a cell of an embryo sac other than the egg. This is called?
- (3) The outermost proteinaceous layer of maize endosperm is called?
- (4) Define “Suspensor”
- (5) State the names of factors which affecting pollen grain germination.
