



Seat No. _____

HAK-003-2015038

B. Sc. (Sem.-V) (CBCS) Examination

May - 2023

Botany : B-502

(Biology of Seed Plants)

(New Coures)

Faculty Code : 003

Subject Code : 2015038

Time : $2\frac{1}{2}$ Hours / Total Marks : 70

Instructions :

- (1) Attempt all the questions.
- (2) Answer with draw neat and labelled diagram wherever necessary.
- (3) Figures to the right side indicate total marks for the questions.

- 1 (a) Answer the following Objective type questions : 4
- (1) What is Mormon tea ?
 - (2) Which gymnosperm is known as “living fossils” ?
 - (3) *Ephedra* is commonly known as
 - (4) Mention True or False: Leaves of *Ephedra* are minute and scaly.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write external features of *Ephedra* leaf.

OR

- (2) Draw a labelled diagram of *Gnetum* young root.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Give the classification of *Gnetum*.

OR

- (2) Write about the internal structure of *Ephedra* young root.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Explain male cone of *Ephedra*.

OR

- (2) Describe L.S. of ovule of *Gnetum*.

- 2 (a) Answer the following objective type questions : 4
- (1) Who is considered as the father of taxonomy ?
 - (2) Write any distinguishing character of Disciflorae.
 - (3) *Genera Plantarum* is published by _____.
 - (4) Who gave natural system of classification ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write short note : Species.

OR

- (2) Write any two merits of Bentham and Hooker classification system.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Write a note on - Taxon.

OR

- (2) Write the demerits of Bentham and Hooker classification system.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Draw the outline of Bentham and Hooker classification.

OR

- (2) Write the principles of Taxonomy.

- 3 (a) Answer the following Objective type questions : 4
- (1) *Ipomoea* species belongs to _____ family.
 - (2) Give any one name of plant *Anonaceae* family.
 - (3) Which type of ovary is present in *Asteraceae* family ?
 - (4) *Corchorus* is belongs to _____ family.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Write the systematic position of *Annonaceae* family.

OR

- (2) Draw a floral diagram of Canaceae family.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Write a note on - Capitulum inflorescence.

OR

- (2) Give information about the whorls of *Papilionaceae* family.

- (d) Write a note on : (any 1 out of 2) 5
- (1) Give general characteristics of *Solanaceae* family with floral formula and floral diagram. Give the two examples of plants belonging to it.

OR

- (2) Give general characteristics of *Malvaceae* family with floral formula and floral diagram. Give the two examples of plants belonging to it.

- 4 (a) Answer the following objective type questions : 4

- (1) Which type of inflorescence found in *Cyperaceae* family?
- (2) Which type of corolla is present in *Papilionaceae* family?
- (3) Give the scientific name of Heena which belongs to *Lythraceae* family?
- (4) How many carpels are present in *Mimoseae* family?

- (b) Answer in brief : (any 1 out of 2) 2

- (1) Write the floral formula of *Nyctaginaceae* family.

OR

- (2) Write the floral formula of *Asteraceae* family.

- (c) Answer in detail : (any 1 out of 2) 3

- (1) Write general characteristic of *Capparidaceae* family.

OR

- (2) Assign the following plants to the respective family.

(a) *Colotropis procera*

(b) *Tecoma stans*

(c) *Cleome viscosa*

- (d) Write a note on : (any 1 out of 2) 5

- (1) Give general characteristics of *Asclepidiaceae* family with floral formula and floral diagram.

OR

- (2) Give general characteristics of *Bignoniaceae* family with floral formula and floral diagram. Give the two examples of plants belonging to it.

- 5 (a) Answer the following objective type questions : 4
- (1) Define - Embryogenesis.
 - (2) The intine of pollen grain is made up of
 - (3) How many cells are present in typical embryo sac ?
 - (4) Write the function of tapetam.
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Draw a labelled diagram of structure of pollen grain.
- OR**
- (2) Write a note on Helobial endosperm.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Explain Cellular endosperm.
- OR**
- (2) Describe embryo development in monocotyledons.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Describe embryo development in dicotyledons.
- OR**
- (2) Explain - Nuclear endosperm.
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