647510 **0301203C1010** **Seat No :_____**

B.Sc. Semester - 2 (*CBCS*) Examination
March/April - 2023 (OLD COURSE)
BOTANY (CORE)

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

Instructions:

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

Q.1(A) Answer the following questions. **(04)**

1. Fill in the blanks: The leaf margin with rounded teeth is known as _____
2. Enlist the types of palmately compound leaf.
3. What are adventitious roots?
4. Define: Habitat.

Q.1(B) Answer the following question. (Any One) **(02)**

1. Differentiate the habit of plants on the basis of height.
2. Describe: multi-costate leaf venation.

Q.1(C) Answer the following question. (Any One) **(03)**

1. Give the functions and characteristics of stem.
2. Describe: the regions of root.

Q.1(D) Answer the following question. (Any One) **(05)**

1. Describe: different types of leaf margins.
2. Describe: different types of leaf stipules.

Q.2(A) Answer the following questions. **(04)**

1. Which type of special inflorescence is observed in genus Ficus?
2. Define: Spike inflorescence.
3. What is zygomorphic flower?
4. Give examples of Berry fruits.

Q.2(B) Answer the following question. (Any One) **(02)**

1. Define: Quincuncil aestivation with an example.
2. Define: Corymb type of inflorescence with an example.

Q.2(C) Answer the following question. (Any One) **(03)**

1. Discuss: Function of carpel.
2. Explain: Verticillaster inflorescences with diagram.

Q.2(D) Answer the following question. (Any One) **(05)**

1. Describe: Various types of placentation.
2. Explain with an examples: simple dry fruits.

Q.3(A) Answer the following questions. **(04)**

1. Give the scientific name of Gulbas.
2. Which family plants have caryopsis type of fruit?
3. Give the vernacular names of Abutilon indicum.
4. In which family staminal filaments are United surround the pistil?

Q.3(B) Answer the following question. (Any One) **(02)**

1. Describe: Androecium and gynoecium of Nictaginaceae family.
2. Describe: Androecium and gynoecium of Apocynaceae family.

Q.3(C) Answer the following question. (Any One) (03)

1. State the demerits of Bentham and Hooker's classification system.
2. State the merits of Bentham and Hooker's classification system.

Q.3(D) Answer the following question. (Any One) (05)

1. Describe: the characters of poaceae family in detail.
2. Give the outline of classification of monocotyledons by Bentham and Hooker.

Q.4(A) Answer the following questions. (04)

1. Fill in the blanks: The first TEM was designed by _____
2. Give the name of electrodes used in PH meter.
3. Which type of paper is used in paper chromatography?
4. Define: Resolution power of microscope.

Q.4(B) Answer the following question. (Any One) (02)

1. What is totipotency?
2. State the principle of P^H meter.

Q.4(C) Answer the following question. (Any One) (03)

1. Explain: the deference between TEM and SEM.
2. Give the Principle of colorimeter.

Q.4(D) Answer the following question. (Any One) (05)

1. Describe: the structure of light microscope.
2. Discuss: the role of sterilization in plant tissue culture

Q.5(A) Answer the following questions. (04)

1. Which enzyme is known as molecular scissors?
2. Fill in the blanks: The first step in β-oxidation process involves the activation of fatty acid in the presence of _____
3. A dihybrid, tall plant bearing yellow flowers (Tt, Yy) was crossed with a same characters bearing plant (Tt, Yy). What percentage of the progeny is expected to be homozygous tall bearing yellow flowers?
4. What do you mean by "P" and "A" site on Ribosomes?

Q.5(B) Answer the following question. (Any One) (02)

1. Draw the Pathway of β – oxidation.
2. Give the classification of amino acids based on reaction in solution.

Q.5(C) Answer the following question. (Any One) (03)

1. State the Mendal's laws with explanation.
2. Discuss: the difference between factors and coenzyme.

Q.5(D) Answer the following question. (Any One) (05)

1. Describe: the process of DNA replication.
2. Describe: the action mechanism of enzyme.

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