0301203C1010   **Seat No: _____**
B.Sc. Semester - 2 (CBCS) Examination
March/April- 2018
BOTANY-201
(CORE)

Time: 2:30 Hours   **Marks: 70**
Instructions:
 1. All questions are compulsory.
 2. Figures to the right indicate marks.

Q – 1   Answer the following questions as per the instruction
   (a) Answer the questions very shortly   (04)
     1. Define leaf and leaflet.
     2. Enlist the types of palmately compound leaf.
     3. Define – Habitat
     4. What are adventitious roots?
   (b) Answer shortly any one   (02)
     1. Describe multi-costate leaf venation.
     2. Differentiate the habit of plants on the basis of height.
   (c) Answer the following question (any one)   (03)
     1. Describe the regions of root.
     2. Give the functions and characteristics of stem
   (d) Answer the following question in detail (any one)   (05)
     1. Describe different types of leaf stipules.
     2. Describe different types of leaf margins.
Q – 2   Answer the following questions as per the instruction
   (a) Answer the questions very shortly   (04)
     1. Define – Spike inflorescence.
     2. Which type of special inflorescence is observed in genus Ficus?
     3. What is zygomorphic flower?
     4. Give examples of Berry fruits.
   (b) Answer shortly any one   (02)
     1. Enlist types of leaf bases.
     2. Define – Quincuncil aestivation with diagram
   (c) Answer the following question (any one)   (03)
     1. Explain Verticillaster inflorescences with diagram.
     2. Discuss functions of carpel.
   (d) Answer the following question in detail (any one)   (05)
     1. Explain with an examples – simple dry fruits
     2. Describe various types of placentation
Q – 3   Answer the following questions as per the instruction
   (a) Answer the questions very shortly   (04)
     1. Give the vernacular names of following plants
       Sida cordifolia; Abutilon indicum.
     2. Give the flower formula of Nyctaginaceae family.
     3. Give the Botanical name of Gulbas and Satodi.
     4. State the characters of order Gentianales.
   (b) Answer shortly any one   (02)

1. Describe androecium and gynoecium of Malvaceae family.
2. Describe androecium and gynoecium of Nyctaginaceae family.
(c) Answer the following question (any one) (03)
   1. State the merits of Bentham and Hooker's classification system.
   2. Give the demerits of Bentham and Hooker's classification system.
(d) Answer the following question in detail (any one) (05)
   1. Give the outline of classification of monocotyledons by Bentham and Hooker.
   2. Describe the characters of Poaceae family in detail.

Q –4   Answer the following questions as per the instruction
(a) Answer the questions very shortly (04)
   1. By whom electron microscope was discovered?
   2. Which type of paper is used in paper chromatography?
   3. What is totipotency?
   4. Give the name of electrodes used in pH meter.
(b) Answer shortly any one (02)
   1. State the principle of pH meter
   2. Define resolution power.
(c) Answer the following question (any one) (03)
   1. Give the laws of colorimeter.
   2. Explains the deference between TEM and SEM.
(d) Answer the following question in detail (any one) (05)
   1. Discuss the role of sterilization in plant tissue culture.
   2. Describe the structure of light microscope.

Q – 5   Answer the following questions as per the instruction
(a) Answer the questions very shortly (04)
   1. The first step in β – oxidation process involves the activation of fatty acid in the presence of _____.
   2. Which enzyme is known as molecular scissors?
   3. What do you mean by "P" and "A" site on Ribosomes?
   4. A dihybrid, tall plant bearing yellow flowers (Tt, Yy) was crossed with a dwarf plant bearing white flowers (tt, yy). What percentage of the progeny is expected to be homozygous tall bearing yellow flowers?
(b) Answer shortly any one (02)
   1. Give the classification of amino acids based on reaction in solution.
   2. Draw the pathway of β – oxidation
(c) Answer the following question (any one) (03)
   1. Discuss the difference between cofactors and coenzyme.
   2. State the Mendel's laws with explanation.
(d) Answer the following question in detail (any one) (05)
   1. Describe the action mechanism of enzyme
   2. Describe the process of DNA replication.

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