647510 **BSc4BotC0401** **Seat No: _____**

B.Sc. Semester - 4 (CBCS) Examination
March/April- 2018
BOTANY
(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. What is exarch xylem?
2. In which monocotyledon plants secondary growth is occurring?
3. Define – anomalous secondary growth.
4. Give name of the layer which is present inside the cortex and barrel shaped without inter cellular space.

(b) Answer shortly any one **(02)**

1. State the position of pericycle and pith.
2. What are medullary rays?

(c) Answer the following question (any one) **(03)**

1. Discuss the anatomical differences between monocot and dicot leaf.
2. Give the differences between intra-fascicular cambium and inter-fascicular cambium.

(d) Answer the following question in detail (any one) **(05)**

1. Describe the anomalous peculiarities in Bignonia stem.
2. Describe the anomalous secondary growth in monocot stem.

Q – 2 Answer the following questions as per the instruction

(a) Answer the questions very shortly **(04)**

1. Define – megasporogenesis.
2. How many types of embryo sac are found in plants? State its name.
3. The pollen grain undergoes mitotic division and produce two unequal cells. State the name of these two cells.
4. What is chalazogamy?

(b) Answer shortly any one **(02)**

1. State the significance of double fertilization.
2. Draw a labelled diagram of mature female gametophyte

(c) Answer the following question (any one) **(03)**

1. Describe Polygonum type of embryo sac development
2. Describe Plumbago type of embryo sac development

(d) Answer the following question in detail (any one) **(05)**

1. Describe process of megasporogenasis
2. Describe the process of double fertilization

Q – 3 Answer the following questions as per the instruction

(a) Answer the questions very shortly **(04)**

1. Define - passive absorption.
2. What is osmosis?

3. Define – varnalization
4. What is seed dormancy?

(b) Answer shortly any one **(02)**

1. Give only the name of factors which affects salt absorption
2. State the protoplasmic streaming theory for translocation.

(c) Answer the following question (any one) **(03)**

1. Describe the experiment of simple osmometer
2. State the difference between imbibitions and diffusion

(d) Answer the following question in detail (any one) **(05)**

1. Describe the mechanism of varnalization
2. Describe the causes of seed dormancy.

Q –4 Answer the following questions as per the instruction

(a) Answer the questions very shortly **(04)**

1. Give the names of mineral particles of soil
2. What is soil erosion?
3. Define soil conservation
4. State the principle of remote sensing.

(b) Answer shortly any one **(02)**

1. State the uses of remote sensing.
2. State Only names of the methods for soil conservation

(c) Answer the following question (any one) **(03)**

1. Describe the process of soil erosion by wind
2. Discuss the process of chemical weathering of soil.

(d) Answer the following question in detail (any one) **(05)**

1. Describe the process of soil erosion through water
2. Describe soil profile.

Q – 5 Answer the following questions as per the instruction

(a) Answer the questions very shortly **(04)**

1. Define artificial seeds.
2. What is herbarium?
3. Define polyploidy
4. What is Plasmon?

(b) Answer shortly any one **(02)**

1. Describe cytoplasmic inheritance in Yeast
2. State the names of tools used in herbarium technique.

(c) Answer the following question (any one) **(03)**

1. Describe cytoplasmic inheritance in Mirabillis jalapa
2. Discuss the methods of pure line selection.

(d) Answer the following question in detail (any one) **(05)**

1. Describe the types of polyploidy.
2. State the uses of artificial seeds.

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