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

# B.Sc. Semester - 4 (*CBCS*) Examination
## April/May -2022 [OLD COURSE]
## BOTANY (CORE)

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

**Instructions:**

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

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| **1.(A)** | **Write the brief answer (Any 1 out of 2)** | **07** |
| (1) | Explain detail: Internal structure of dicot leaf. | |
| (2) | Describe with figure: Anomalous secondary growth in *Dracaena.* | |
| **1.(B)** | **Give the Answer: (Any 1 out of 2)** | **04** |
| (1) | Give the difference between dicot and monocot root. | |
| (2) | Explain the secondary growth in dicot stem. | |
| **1. (C)** | **Answer the following Objective type questions: (Any 3 out of 5)** | **03** |
| (1) | In dicot stem, the secondary growth takes place by<br>A) Primary cambium<br>B) Development of cambium in stele and in the cortical region<br>C) Development of cambium in stele region<br>D) Secondary cambium | |
| (2) | Which type of the vascular bundles is found in *Dracaena*? | |
| (3) | Change of gases takes place in bark through …… | |
| (4) | Mention True or False: Monocot roots are mostly polyarch. | |
| (5) | What forms the cambial ring in a dicot stem during the secondary growth? | |
| **2.(A)** | **Write the brief answer (Any 1 out of 2)** | **07** |
| (1) | Explain the double fertilization process in angiosperms. | |
| (2) | Describe the development of male gametophyte. | |
| **2.(B)** | **Give the Answer: (Any 1 out of 2)** | **04** |
| (1) | Explain the three main routes by which pollen tube may enter the ovule. | |
| (2) | Write a note on Monosporic embryo sac. | |
| **2.(C)** | **Answer the following Objective type questions: (Any 3 out of 5)** | **03** |
| (1) | The process of double fertilization was discovered by …….. | |
| (2) | Pollen grains are produced inside the ……. | |
| (3) | Which structure is considered the male reproductive part of a flowering plant? | |
| (4) | What are the three main parts of the carpel? | |
| (5) | Monosporic eight nucleate embryo sac is referred to as… | |
| **3.(A)** | **Write the brief answer (Any 1 out of 2)** | **07** |
| (1) | Describe the mechanism of translocation of organic solutes. | |
| (2) | Describe methods for the Breaking of seed dormancy. | |
| **3.(B)** | **Give the Answer: (Any 1 out of 2)** | **04** |
| (1) | Explain the thistle funnel experiment. | |
| (2) | Write a note on : Hormonal theory of vernalization. | |

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| **3.(C)** | **Answer the following Objective type questions: (Any 3 out of 5)** | **03** |
| (1) | Which plant exhibit seed dormancy due to immature embryo?<br>(a) Orchids (b) Xanthium (c) Digera (d) Solanum | |
| (2) | Who supported mass flow theory? | |
| (3) | Write any two importance of imbibition. | |
| (4) | Induction of flowering by low temperature in plant is : | |
| (5) | Water will be absorbed by root hair when… | |
| **4.(A)** | **Write the brief answer (Any 1 out of 2)** | **07** |
| (1) | Describe the different mode of soil erosion. | |
| (2) | Describe biological methods of soil conservation. | |
| **4.(B)** | **Give the Answer: (Any 1 out of 2)** | **04** |
| (1) | Explain soil profile. | |
| (2) | What is remote sensing? Write the major applications of remote sensing for the management of ecosystem. | |
| **4.(C)** | **Answer the following Objective type questions: (Any 3 out of 5)** | **03** |
| (1) | During laterization process in formation of soil, …….. minerals are accumulating in soil. | |
| (2) | The size of the Coarse sand particle is …….. | |
| (3) | In soil, ……. water is easily available to plant. | |
| (4) | Mention True or False: Sedimentary rocks formed due to cooing of Lava. | |
| (5) | Remote sensing techniques make use of the properties …… of emitted, reflected or diffracted by the sensed object<br>(a) Electric wave (b) Sound wave<br>(c) Electromagnetic wave (d) Wind wave | |
| **5.(A)** | **Write the brief answer (Any 1 out of 2)** | **07** |
| (1) | Explain cytoplasmic inheritance in *Mirabilis jalapa*. | |
| (2) | Describe mass selection in detail. | |
| **5.(B)** | **Give the Answer: (Any 1 out of 2)** | **04** |
| (1) | Describe the types of polyploidy. | |
| (2) | Give information about the tools used in herbarium technique. | |
| **5.(C)** | **Answer the following Objective type questions: (Any 3 out of 5)** | **03** |
| (1) | The term pure line was coined by …….. | |
| (2) | Write the size of typical herbarium sheet. | |
| (3) | Write the name of methods used for making hydrated artificial seeds. | |
| (4) | Which things should be recorded at the time of collection? | |
| (5) | Mirabilis jalapa is a good example of ……<br>(a) Complete dominance (b) Plastid inheritance (c) Both (a) and (b)<br>(d) None of the above | |

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