



**DBW-003-1012006**

Seat No. \_\_\_\_\_

**B. Sc. (Sem. II) (CBCS) (W.E.F. 2016) Examination**

## July - 2022

**B-201 : Angiosperms, Tools & Techniques in Botany, Biochemistry & Genetics**

**Faculty Code : 003**

**Subject Code : 1012006**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

**Instructions :** (1) Answer with neat and labeled diagram wherever necessary.

(2) Figures to the right side indicate total marks for the questions.

**1** (a) Answer the following Objective type questions : **04**

(1) Write down different zone of root.

(2) Write only names of different habitat.

(3) Define habitat.

(4) Give the names of the three main parts of a leaf.

(b) Answer in brief (Any One) 02

(1) Draw labeled diagram of typical leaf.

(2) Give any two functions of root.

(c) Answer in detail (Any One) **03**

(1) Write about herb, shrub and tree.

(2) Describe functions of stem.

(d) Write a note (any One) **05**

(1) Explain : Palmetly compound leaf.

(2) Explain : Venation.

- 2** (a) Answer the following Objective type questions : **04**
- (1) What is the main function of flower ?
  - (2) Write down names of different floral whorls.
  - (3) Give the name of fruit type of pomegranate and apple ?
  - (4) What is the main function of corolla ?
- (b) Answer in brief (any One) **02**
- (1) Draw a labeled diagram of typical flower :
  - (2) Describe : Twisted aestivation.
- (c) Answer in detail (Any One) **03**
- (1) Describe types of dry dehiscent fruits.
  - (2) Describe types of aestivation.
- (d) Write a note on Any One. **05**
- (1) Explain : Racemose Inflorescence.
  - (2) What is placentation ? Explain it in detail.
- 3** (a) Answer the following Objective type questions : **04**
- (1) Give one difference between polypetalae and gamopetalae.
  - (2) Family Apocynaceae belongs to \_\_\_\_\_ series.
  - (3) The scientific name of maize is
  - (4) Give the common name of Vinca rosea.
- (b) Answer in brief (any One) **02**
- (1) Give the classification of Poaceae family.
  - (2) Write scientific names of any two plants of family Malvaceae.
- (c) Answer in detail (Any One) **03**
- (1) Give floral formula and draw floral diagram of Nyctaginaceae family.
  - (2) Write demerits of Bantham and Hooker's classification system.

- (d) Write a note on Any One: **05**
- (1) Explain : Apocynaceae family with floral formula and floral diagram.
  - (2) Explain : Malvaceae family with floral diagram and floral formula.
- 4 (a) Answer the following Objective type questions : **04**
- (1) Who invented simple optical microscopy ?
  - (2) Define chromatography ?
  - (3) Give the full form of MS media used for plant tissue culture.
  - (4) Who gave the concept of pH ?
- (b) Answer in brief (Any One) **02**
- (1) Write down equation of Rf value.
  - (2) Define explant.
- (c) Answer in detail (Any One) **03**
- (1) Write down Beer and Lambert's Law.
  - (2) Write principle of pH meter.
- (d) Write a note on (Any One) **05**
- (1) Describe brief accounts of Paper chromatography.
  - (2) Describe brief accounts of colorimeter.
- 5 (a) Answer the following Objective type questions : **04**
- (1) Lock and Key hypothesis was proposed by \_\_\_\_.
  - (2) True or False : Amino acids are building block of protein.
  - (3) The distance between two adjacent nucleotide is \_\_\_\_.
  - (4) The branch of science which deals with study of enzyme is known as \_\_\_\_.

- (b) Answer in brief (Any One) **02**
- (1) Write names of essential amino acids.
  - (2) State difference between nucleoside and nucleotide.
- (c) Answer in detail (Any One) **03**
- (1) Write Mendel's law of dominance.
  - (2) Draw a labeled diagram of Watson-Crick model of DNA.
- (d) Write a note on Any One : **05**
- (1) Explain : Mendel's Dihybrid experiment.
  - (2) Write down only names of classes of enzyme and explain mechanism of enzyme action.
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