DAB-6

Seat No. _____

B. Sc. (Sem. II) (CBCS) (W.E.F. 2019) Examination

April - 2022

B - 201 : Angiosperms, Biochemistry, Genetics & Techniques

(General Option)

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) This question paper contains ten questions. Any five questions are compulsory.
(2) Write answers of all the questions in main answer sheet.
(3) Draw neat and labeled diagram wherever necessary.
(4) Figures to the right side indicate full marks for the question.

1 (a) Objective type questions : **4**
(1) Give the name of parts of leaf.
(2) State different region of root.
(3) What is the function of root cap ?
(4) The leaf margin with rounded teeth is known as _____.

(b) Answer in brief : **2**
Give any two functions of root

(c) Answer in detail : **3**
Describe types of habit in plants.

(d) Write a note on : **5**
Explain types of leaf.

2 (a) Objective type questions : **4**
(1) What is phyllotaxy ?
(2) The swollen leaf base is known as _____.
(3) State any two names of weak stem type.
(4) True or false : The arrangement of veins and veinlets in leaves is known as venation.

(b) Answer in brief : **2**
Draw a labeled diagram of typical leaf.

(c) Answer in detail : **3**
Give a brief idea about habitat.

(d) Write a note on : **5**
Describe Root in detail.

3 (a) Objective type questions : **4**

(1) What is the function of corolla ?

(2) What is the main function of flower ?

(3) State the name of cymose inflorescence.

(4) Give any one name of special inflorescence.

(b) Answer in brief : **2**

Draw a labeled diagram of typical flower.

(c) Answer in detail : **3**

Explain in brief about types of Racemose inflorescence.

(d) Write a note on : **5**

What is aestivation ? Describe types of aestivation in detail.

4 (a) Objective type questions : **4**

(1) Which type of position of ovary is found in epigynous flower ?

(2) Define aestivation.

(3) True or false : Arrangement of flowers on the stem is called Inflorescence.

(4) In floral formula, $K_{(4)}$ means _____.

(b) Answer in brief : **2**

Describe different position of flower.

(c) Answer in detail : **3**

Explain symmetry of flower with diagram.

(d) Write a note on : **5**

Define placentation and write a note on types of placentation.

5 (a) Objective type questions : **4**

(1) True or false : Lal Karen (red oleander) belongs to Apocynaceae family.

(2) Give one difference between polypetalae and gamopetalae.

(3) Give the name of scientists who has given natural plant classification system.

(4) Write the scientific name of Garden lily.

(b) Answer in brief : **2**

Write any two merits of Bentham and Hookers classification system.

(c) Answer in detail : **3**

Write distinguishing characters of Rosaceae family.

(d) Write a note on : **5**

Explain Apocynaceae family with floral formula and floral diagram.

6 (a) Objective type questions : **4**

(1) Write the scientific name of Periwinkle (Barmasi).

(2) True or false : Apocynaceae family contains latex producing plants.

(3) Give any one common name of plants belongs to Amaryllidaceae family.

(4) Bicarpellate means _____.

(b) Answer in brief : **2**

Give the classification of Rosaceae family.

(c) Answer in detail : **3**

Give distinguishing characters of Amaryllidaceae family.

(d) Write a note on : **5**

Explain Bentham and Hooker's classification with reasons.

7 (a) Objective type questions : **4**

(1) Define chromatography ?

(2) Who gave the concept of pH ?

(3) Give the full form of MS media used for plant tissue culture.

(4) What is callus culture ?

(b) Answer in brief : **2**

Explain in brief 'Totipotency'.

(c) Answer in detail : **3**

Explain in brief 'Growth to hormones' with respect PTC.

(d) Write a note on : **5**

Explain in brief with diagram 'Paper chromatography'.

8 (a) Objective type questions : **4**

(1) What is Rf value ?

(2) Define Plant tissue culture.

(3) Who gave the concept of Paper chromatography ?

(4) Write function of spectrophotometer.

(b) Answer in brief : **2**

What is pH ? Write the principle of pH meter.

(c) Answer in detail : **3**

Write principle and applications of paper chromatography.

(d) Write a note on : **5**

Explain Plant tissue culture with its application.

9 (a) Objective type questions : **4**

(1) Result of phenotypic ratio of F_2 generation in Mendel's experiment of inheritance of two genes (dihybridization) is _____.

(2) True or false : Transcription occurs in Ribosomes.

(3) Amino acids required in the human diet and not synthesized by the body are called _____.

(4) Who is called as 'father of modern genetics' ?

(b) Answer in brief : **2**

Write any four general characters of amino acids.

(c) Answer in detail : **3**

Draw a labeled diagram of Watson-Crick model of DNA.

(d) Write a note on : **5**

Give only names of classes of enzyme and explain mechanism of enzyme action.

10 (a) Objective type questions : **4**

(1) True or false : Mendelism is related with anatomy.

(2) 'Lock and key' hypothesis was proposed by _____.

(3) Who controls replication of DNA ?

(4) The branch of science which deals with study of enzymes is known as _____.

(b) Answer in brief : **2**

Write about structure of amino acid.

(c) Answer in detail : **3**

Write a note on translation.

(d) Write a note on : **5**

Explain mono hybrid experiment of Mendel.

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