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NBF-003-1012006 Seat No. _____

B. Sc. (Sem. II) (CBCS) Examination

April / May - 2017

Botany : B - 201

(Angiosperm, Tools and Techniques in Botany, Biochemistry and Genetics)

(New Course)

Faculty Code : 003

Subject Code : 1012006

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

Instructions : (1) This question paper contains five questions. All are compulsory.

(2) Draw neat and labelled diagrams wherever necessary.

(3) Figures to the right indicate marks,

1 (A) Write answer in very short : **4**

(1) Define word: Annual

(2) In dicot plant which type of Venation is mainly found?

(3) Define word: Stipules

(4) Nodes and Internodes are characteristic of _____?

(B) Write answer in brief : (any 1 out of 2) **2**

(1) Only Draw and labelled - Tap Root

(2) Write down two characters of Aquatic habitat plant

(C) Write notes on : (any 1 out of 2) **3**

(1) Function of Stem

(2) Explain types of Pinnate Compound Leaf (Diagram not necessary)

(D) Write answer detail : (any 1 out of 2) **5**

(1) Describe Typical Leaf

(2) Describe types of Phyllotaxy

2 (A) Write answer in very short : **4**

(1) Which symbol use for five fuse petals and five free sepals?

(2) Give any two examples of Raceme inflorescence

(3) Define word; Perianth

(4) Part of typical Stamen known as...

(B) Write answer in brief : (any 1 out of 2) **2**

(1) Catkin Inflorescence

(2) Legume Fruit

(C) Write notes on : (any 1 out of 2) **3**

(1) Only Draw and labelled - Typical Flower

(2) Aggregate Fruit

(D) Write answer detail : (any 1 out of 2) **5**

(1) Describe types of Aestivation

(2) Describe types of Placentation

3 (A) Write answer in very short : **4**

(1) Give scientific name of JASUD

(2) Give scientific name of BARMASI

(3) Give scientific name of BOGAINVEL

(4) Give scientific name of MAIZE

(B) Write answer in brief : (any 1 out of 2) **2**

(1) Give Classification of Family Malvaceae without reason

(2) Give Classification of Family Nyctaginaceae without reason

(C) Write notes on : (any 1 out of 2) **3**

(1) Write flower formula and Draw Floral diagram of *Nerium indicum*

(2) Write flower formula and Draw Floral diagram of *Mirabilis jalapa*

(D) Write answer detail : (any 1 out of 2) **5**

(1) Explain Floral character of Malvaceae with floral diagram

(2) Explain Floral character of Poaceae with floral diagram

4 (A) Write answer in very short : **4**

(1) The main technique involved in agriculture biotechnology is called.

(2) Chromatography derived by _____.

(3) Give range of pH Scale with its nature

(4) What is the function of eye piece in Light microscope ?

(B) Write answer in brief : (any 1 out of 2) **2**

(1) Give two Principles of Chromatography

(2) Give two Principles of Colorimeter

(C) Write notes on : (any 1 out of 2) **3**

(1) Give three differences between light microscope and electron microscope

(2) Write down steps of measurement of pH

(D) Write answer detail : (any 1 out of 2) **5**

(1) Describe SEM

(2) Describe Steps and Application of Tissue culture

5 (A) Write answer in very short : **4**

(1) If the DNA sequence is AGCTTAGCC than which sequence of RNA ?

(2) Which type of main BOND found in Protein structure?

(3) How many Nucleotides are found in 34 A° length of DNA ?

(4) Who is known as father of Genetics?

(B) Write answer in brief : (any 1 out of 2) **2**

(1) Write a short note on "Mendel's first law".

(2) Give three characters of Amino Acids

(C) Write notes on : (any 1 out of 2) **3**

(1) Explain Semi conservative method of DNA Replication

(2) Explain pyrimidine type of Nitrogen base

(D) Write answer detail : (any 1 out of 2) **5**

(1) Describe β-oxidation

(2) Mechanism of Enzyme.
