



**RY-003-1016047**      Seat No. \_\_\_\_\_

**B. Sc. (Sem. VI) (CBCS) Examination**

**March - 2019**

**Botany : Paper - B - 602**

*(Plant Physiology, Biochemistry, Biostatistic,  
Microbiology and Biodiversity)*

*(New Course)*

**Faculty Code : 003**

**Subject Code : 1016047**

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

[Total Marks : 70

- Instructions :** (1) Attempt all the questions.  
(2) Answer with draw neat and labelled diagram wherever necessary  
(3) Figures to the right side indicated total marks for the questions

- 1 (A) Answer the following Objective type questions : 4  
(1) First part which comes out of a seed is \_\_\_\_\_  
(2) Optimum temperature for seed germination is \_\_\_\_\_  
(3) Leaf senescence is delayed by :  
(4) Mention true or false: abscisic acid was isolated for first time from mature cotton fruits.
- (B) Answer in brief : (Any **One** out of Two) 2  
(1) Write only name of different phases of germination.  
**OR**  
(2) Write the physiological function of ethylene.  
(Any four)
- (C) Answer in detail : (Any **One** out of Two) 3  
(1) Describe - Pentose phosphate pathway.  
**OR**  
(2) Explain in detail - Auxin

- (D) Write a note on : (Any **One** out of Two) 5
- (1) Explain in detail - Gibberellins
- OR**
- (2) Give information about the factors affecting germination.
- 2** (A) Answer the following Objective type questions : 4
- (1) Write the general formula of monosaccharides.
- (2) \_\_\_\_\_ enzymes bring hydrolysis of various compounds
- (3) Write only one example of contractile protein.
- (4) Define complex lipid :
- (B) Answer in brief : (Any **One** out of Two) 2
- (1) Write a note on - Conjugated protein.
- OR**
- (2) Write a note on - Mucopolysaccharides.
- (C) Answer in detail : (Any **One** out of Two) 3
- (1) Write a note on - Enzyme inhibition.
- OR**
- (2) Explain primary and tertiary structure of protein.
- (D) Write a note on : (Any **One** out of Two) 5
- (1) Explain classification of monosaccharides.
- OR**
- (2) Describe function of phospholipid.
- 3** (A) Answer the following Objective type questions : 4
- (1) What is sampling unit?
- (2) Write any two demerits of mean.
- (3) Nth root of the product of n observation is known as \_\_\_\_\_
- (4) Statistics word was first used by \_\_\_\_\_

(B) Answer in brief : (Any **One** out of Two) 2

- (1) Water holding capacity of 15 different soil was recorded as 60, 64, 62, 76, 70, 74, 70, 84, 82, 72, 76, 84, 78, 84 and 86.

Find out the mode of this series.

**OR**

- (2) Write the merits of mean.

(C) Answer in detail : (Any **One** out of Two) 3

- (1) Find out the arithmetic mean from data.

|                            |   |    |    |    |    |    |    |    |    |    |    |    |    |
|----------------------------|---|----|----|----|----|----|----|----|----|----|----|----|----|
| <i>Rate of Respiration</i> | 2 | 16 | 20 | 30 | 39 | 40 | 45 | 49 | 50 | 65 | 70 | 79 | 80 |
| <i>Frequency</i>           | 3 | 4  | 7  | 7  | 1  | 3  | 5  | 1  | 2  | 2  | 5  | 1  | 2  |

**OR**

- (2) Describe - cluster sampling.

(D) Write a note on (Any **One** out of Two) 5

- (1) Find out SD of the following data :

|                     |    |    |    |    |    |    |    |
|---------------------|----|----|----|----|----|----|----|
| <i>Size of item</i> | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| <i>Frequency</i>    | 2  | 7  | 11 | 15 | 10 | 4  | 1  |

**OR**

- (2) Chlorophyll percentage g/100 gm of leaf of Ocimum was recorded as 23, 22, 20, 24, 16, 17, 18, 19, 27 and 21.

Calculate the standard deviation.

4 (A) Answer the following Objective type questions : 4

- (1) Explain the term - Chromophores.
- (2) What is the role of agar.
- (3) Explain the term - Indicator media.
- (4) Give the example of semi synthetic media.

(B) Answer in brief : (Any **One** out of Two) 2

- (1) Give information about gram staining method.

**OR**

- (2) Explain : Differential media.

- (C) Answer in detail : (Any **One** out of Two) **3**  
(1) Write a note on - structure of ecoli.  
**OR**  
(2) Discuss the method of sterilization in microbiology.
- (D) Write a note on (Any **One** out of Two) **5**  
(1) Explain - structure of T4 bacteriophages  
**OR**  
(2) What is pure culture? Describe the pour plate and spread plate method.
- 5** (A) Answer the following Objective type questions : **4**  
(1) Biodiversity termed was coined by \_\_\_\_\_  
(2) \_\_\_\_\_ refers to the diversity on the smallest scale.  
(3) Where Sunderbans is located?  
(4) Which wild life sanctuaries is located in Rajasthan?
- (B) Answer in brief : (Any **One** out of Two) **2**  
(1) Write a note on -  $\alpha$  - diversity  
**OR**  
(2) Give information on species diversity.
- (C) Answer in detail : (Any **One** out of Two) **3**  
(1) Write the silent features of National parks  
**OR**  
(2) Write a note on - NBPGR
- (D) Write a note on : (Any **One** out of Two) **5**  
(1) Describe different zones of biosphere reserves.  
**OR**  
(2) Explain in detail - wild life sanctuary