



PA-003-1016047

Seat No. _____

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

March / April - 2020

Botany : Paper - 602

*(Plant Physiology, Biochemistry, Biostatistics,
Microbiology & Biodiversity)*

(New Course)

Faculty Code : 003

Subject Code : 1016047

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

[Total Marks : **70**

- Instructions :**
- (1) Write answers of all questions in main answer book.
 - (2) Draw neat and labeled diagrams wherever necessary.
 - (3) Figures to the right side indicate full marks for the questions.
 - (4) Figures to the right side indicate full marks for the questions.

1 (A) Objective type questions : 4

- (1) Optimum temperature for seed germination is _____
- (2) Which pigment is present universally in all plants?
- (3) Give the name of plant hormones responsible for seed dormancy
- (4) First part which comes out of a seed is _____

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

- (1) Write physiological function of Ethylene (Any two)
- (2) Which factor affecting seed germination?
(Any two)

- (C) Answer in Detail : (Any **One** out of Two) **3**
- (1) Describe Pentose Phosphate Pathway
 - (2) Write short note on Absciscic acid
- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Explain in detail : Gibberellins
 - (2) Explain the different phases of Germination
- 2** (A) Objective type questions : **4**
- (1) A molecule that binds to an enzyme and decreases its activity is called _____
 - (2) Write the general formula of monosaccharides _____
 - (3) What is basic unit of protein?
 - (4) Define a Complex Lipid
- (B) Answer in Brief : (Any **One** out of Two) **2**
- (1) Give the classification chart of Carbohydrate
 - (2) Write a note on Conjugated Protein.
- (C) Answer in Detail : (Any **One** out of Two) **3**
- (1) Explain the quaternary structure of Protein
 - (2) Write a note on Enzyme Inhibition
- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Describe a function of Phospholipids
 - (2) State the functions of Carbohydrate in Cell.
- 3** (A) Objective type questions : **4**
- (1) Define: Median.
 - (2) What is sampling Unit?
 - (3) Define : Mean.
 - (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 the series
 - (2) Write merits of Mean
- (C) Answer in Detail : (Any **One** out of Two) **3**
- (1) Describe: cluster sampling.
 - (2) Find out the standard deviation for the following distribution 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21.
- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Chlorophyll percentage g/100 gm of leaf of Ocimum was recorded as 23, 22, 20, 24, 16, 17, 18, 19 and 21 Calculate the standard deviation
 - (2) Find out SD of the following data :
A sample of ten common limpet shells, from a rocky shore having the following basal diameters in millimeters 36, 34, 41, 39, 37, 43, 36, 37, 41, 39.
- 4 (A) Objective type questions : **4**
- (1) Give the example of semi synthetic media
 - (2) How many genes are present in E. coli bacteria?
 - (3) What is the role of Agar?
 - (4) Who coin the word bacteriophage and what does it mean?
- (B) Answer in Brief : (Any **One** out of Two) **2**
- (1) Define : Pure culture.
 - (2) Give information about the Gram staining method.
- (C) Answer in Detail : (Any **One** out of Two) **3**
- (1) Ultra structure of T4 phase.
 - (2) Discuss the method of sterilization in microbiology.

- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Give the detail of ultra structure of E.coli cell.
 - (2) What is pure culture? Describe the pour plate and spread plate method.
- 5** (A) Objective type questions : **4**
- (1) Where Sunderbans is located?
 - (2) Biodiversity is defined as _____.
 - (3) Which wild life sanctuary is located in Rajasthan?
 - (4) _____ refers to the diversity on the smallest scale.
- (B) Answer in Brief : (Any **One** out of Two) **2**
- (1) Give information on species diversity.
 - (2) Write the silent features of National parks.
- (C) Answer in Detail : (Any **One** out of Two) **3**
- (1) What is Alpha, Beta and Gamma diversity?
 - (2) Explain shortly - wild life sanctuary.
- (D) Write a note on : (Any **One** out of Two) **5**
- (1) Describe different zones of biosphere reserves.
 - (2) Justify the statement Biodiversity is for" Human welfare".
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