

B.Sc. Semester - 6 (CBCS) Examination
April/May-2022 (NEW COURSE)
Physiology, Biochemi, Biostat. (Core (New))

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q.1(A) **Answer in very short:** (04)
1. What is sap?
 2. **Complete the statement:** Curtis stated that transpiration is a.....
 3. Which two types of resistance mechanism operating in plants?
 4. Which two factors induced physiological mechanism for flowering?
- Q.1(B) **Answer in brief (any one):** (03)
1. Distinguish between: Short day plants and Long day plants
 2. Write Significance of Transpiration.
- Q.1(C) **Answer in detail (any one):** (07)
1. Discuss Transpiration pull and cohesion theory.
 2. Describe Drought and Frost resistance.
- Q.2(A) **Answer in very short:** (04)
1. What is substrate analogue?
 2. Which lipid makes the cell walls strong and impermeable to water?
 3. Define the term: Primary structure of protein
 4. Which carbohydrate is used as a bacteriological culture medium?
- Q.2(B) **Answer in brief (any one):** (03)
1. Give outline of classification of Carbohydrates.
 2. Write properties of alkaloids.
- Q.2(C) **Answer in detail (any one):** (07)
1. What is enzyme inhibition? Discuss three types of reversible enzyme inhibition
 2. Discuss biological functions of polymer of Amino acids
- Q.3(A) **Answer in very short:** (04)
1. Find coefficient of variation, If STDV and mean is 2.8 and 42.3
 2. Who first used the term variance?
 3. Define the term: Dispersion
 4. Find out the median of Data: 5, 11, 06,10,14,21
- Q.3(B) **Answer in brief (any one):** (03)
1. Give difference between: Mean and Median
 2. Write Merits and Demerits of Standard Deviation.

Q.3(C) **Answer in detail (any one):** (07)

1. Compute the standard deviation for the following data.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	05	10	20	40	30	20	10	04

2. A cross involving different genes gave rise to F₂ Generation of tall and dwarf in the ratio of 110:90. Test by means of chi-square whether this value is deviated from the Mendel's monohybrid ratio 3:1. (Table value is 3.84).

Q.4(A) **Answer in very short:** (04)

1. What is sterilised by using Flaming?
2. What is Broth?
3. Define the term: Single cell protein
4. True or False? E. Coli is a Gram negative spherical bacterium.

Q.4(B) **Answer in brief (any one):** (03)

1. Draw well labelled diagram of corona virus
2. Write industrial application of microbes in production of antibiotics.

Q.4(C) **Answer in detail (any one):** (07)

1. Describe staining technique developed by Hans Christian Gram .
2. Describe Ultra structure of Bacteriophage in detail.

Q.5(A) **Answer in very short:** (04)

1. True or False? Tikka disease of groundnut is a viral disease
2. Fill in the blanks: Bordeaux mixture is named after a city in.....
3. What is plant pathogen?
4. Circular, rough or crustaceous lesions developed on infected parts are known as?

Q.5(B) **Answer in brief (any one):** (03)

1. Write notes on: Symptoms of Citrus canker.
2. Write notes on: Disease cycle of whip smut of Sugarcane

Q.5 (C) **Answer in detail (any one):** (07)

1. Discuss classification of plant disease.
2. Explain curative and biological measures of plant disease control
