

B.Sc. Semester - 6 (CBCS) Examination**April/May-2022 (OLD COURSE)****PLANT PHY,BIOCHEM,BIOSTAT,MICROBIO AND BIODIVERSITY(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

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

Q.1(A) Answer in very short (any three): (03)

1. State the types of seed germination.
2. **Complete the statement:** NADPH₂ produced in PPP is used for the synthesis of.....
3. Ethylene is synthesised from which amino acid?
4. State the type of cold injury in plants.
5. At which temperature moist cells of plants are killed?

Q.1(B) Answer in brief (any one): (04)

1. Describe factors affecting seed germination
2. Write physiological role of Absciscic acid in plants

Q.1(C) Answer in detail (any one): (07)

1. Discuss Warburg-Dicken-Lipman pathway and its significance
2. Describe Role of Natural and synthetic Auxins in plants.

Q.2(A) Answer in very short (any three): (03)

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. Complete the statement: Fructose is also known as.....
5. Which carbohydrate is used as a bacteriological culture medium?

Q.2(B) Answer in brief (any one): (04)

1. Explain: Fatty acids and its types
2. Explain with examples: Desmolases and Mutases

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 (any three): (03)

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
5. What are the measures of central tendency according to Simpson and Kafla?

Q.3(B) **Answer in brief (any one):** (04)

1. Give difference between: population and sample
2. Write Merits, Demerits and uses 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. Calculate the mean, the median & the mode of the frequency distribution.

Class	130-134	135-139	140-144	145-149	150-154	155-159	160-164
Frequency	05	15	28	24	17	10	01

Q.4(A) **Answer in very short (any three):** (03)

1. What is sterilised by using Flaming?
2. What is Broth?
3. Define the term: Differential staining
4. What is serial dilution technique?
5. True or False? E.Coli is a Gram negative spherical bacteria.

Q.4(B) **Answer in brief (any one):** (04)

1. Explain total cell count method of measuring microbial growth.
2. What is pure culture? Explain streak plate culture

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

1. What is Microbial culture medium? Describe Natural and synthetic culture medium.
2. Describe Ultra structure of T₄ Phase in detail.

Q.5(A) **Answer in very short (any three):** (03)

1. Which regions of our country are known for their rich Biodiversity?
2. Define: Genetic diversity
3. What is in –situ conservation of Biodiversity?
4. What is the rank of India in world respect to Biodiversity?
5. How many species of angiosperm exist in India?

Q.5(B) **Answer in brief (any one):** (04)

1. Write notes on: Productive use value of Biodiversity
2. Distinguish between: National park and Sanctuaries

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

1. Discuss Species diversity and its types
2. What is Biodiversity? Write its significance and give idea of Biosphere reserve
