

B.Sc. Semester - 6 (CBCS) Examination**March/April-2023 (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 the following questions. (Any One) (07)

1. Explain the mechanism of Pentose phosphate pathway
2. Briefly discuss Factors affecting germination

Q.1(B) Answer the following questions. (Any One) (04)

1. Discuss in short: ABA
2. Write short notes on: Light resistance.

Q.1(C) Answer the following question. (Any Three) (03)

1. What is germination?
2. **Complete the statement:** The ability of plants to adjust themselves with stress is called.....
3. **True or False?** Kinetin and Zeatin are common cytokinins found in plants.
4. Name the product formed in PPP.
5. Which hormone is known as ripening hormone?

Q.2(A) Answer the following questions. (Any One) (07)

1. Give properties of carbohydrates.
2. Discuss biological functions of esters of fatty acids and alcohol.

Q.2(B) Answer the following questions. (Any One) (04)

1. Distinguish between: Competitive and non-competitive inhibition
2. Explain in short: Classification of Lipid with example

Q.2(C) Answer the following question. (Any Three) (03)

1. Give two examples of plant wax.
2. **Complete the statement:** The proteins which yield amino acids or their derivatives on hydrolysis is called.....
3. Define the term: Primary structure of protein
4. Write the chemical formula only: triglyceride
5. IUB system of enzyme classification is based on?

Q.3(A) Answer the following questions. (Any One) (07)

1. Compute the standard deviation for the following data.

Class	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	30	58	62	85	112	70	57	26

2. What is standard deviation? Write merits, demerits and uses of standard deviation.

Q.3(B) Answer the following questions. (Any One) (04)

1. The following table gives the marks obtained in Botany of nine students of B.Sc. in M.D.Science collage. Calculate mean of marks.

Roll no	1	2	3	4	5	6	7	8	9
Maks	67	69	66	68	72	63	76	65	70

2. Write Merits and Demerits of mode in statistics.

Q.3(C) Answer the following question. (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: Mode
4. Find out the median of Data: 5, 11, 06,10,14,21
5. What is Finite population?

Q.4(A) Answer the following questions. (Any One) (07)

1. Discuss in detail: morphology of T₄Phage
2. Describe physical methods of sterilization.

Q.4(B) Answer the following questions. (Any One) (04)

1. Write notes on Microbial staining
2. Classify Microbial media based on application or function.

Q.4(C) Answer the following question. (Any Three) (03)

1. **Give the technical term:** The time taken from infection until lysis.
2. What is pure culture?
3. **Define the term:** Gram positive
4. **True or False?** E.Coli is a Gram negative spherical bacterium.
5. What is broth?

Q.5(A) Answer the following questions. (Any One) (07)

1. Explain National park and Sanctuary
2. Explain Biodiversity for Human welfare

Q.5(B) Answer the following questions. (Any One) (04)

1. Distinguish between *in situ* conservation and *Ex situ* conservation
2. Explain concept of Biodiversity.

Q.5(C) Answer the following question. (Any Three) (03)

1. **True or False?** There is more solar energy available in tropics.
2. What is the expanded form of IUCN.
3. What is genetic diversity?
4. What are Ramsar sites?
5. Write the importance of cryopreservation in conservation of biodiversity.
