



Attempt this Paper on this Question Sheet only.

Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the right answer cutting and overwriting is not allowed. (10x1=10)

- 1. Both Erythrocytes and Leukocytes are formed in :**
 - a. Thymus
 - b. Bone Marrow
 - c. Lymph nodes
 - d. Arterial walls

- 2. Major part of the Plasma consists of:**
 - a. Organic Substances
 - b. Inorganic Substances
 - c. Blood cells
 - d. Water

- 3. During storage of blood anticoagulant added to it may be:**
 - a. Sodium Oxalate
 - b. Sodium Chloride
 - c. Potassium Chloride
 - d. Thromboplastin

- 4. Naturally acquired active immunity would be most likely acquired through which of the following processes:**
 - a. Vaccination
 - b. Immunized Sera
 - c. Natural birth
 - d. infection with disease causing organism followed by recovery

- 5. Which of the following substances will not stimulate an immune response unless they are bound to a larger molecule:**
 - a. Antigen
 - b. Antibody
 - c. Hapten
 - d. Immunogen

- 6. B cells mature in the ----- while T-cells mature in the:**
 - a. Thymus/bone marrow and gut associated lymphoid tissues (GALT)
 - b. Spleen/bone marrow and GALT
 - c. Bone marrow and GALT/ Thymus
 - d. Bone marrow/Liver

7. Which of the following method could be used to check the molecular weight of your purified protein?
- SDS-PAGE only
 - Mass Spectrometry
 - Analytical SEC
 - All of the above
8. By adding SDS (sodium dodecyl sulphate) during electrophoresis of proteins, it is possible to:
- Determine a protein's isoelectric point
 - Determines an enzyme specific activity
 - Determine the amino acid composition of the protein
 - Separates proteins exclusively on the basis of molecular weight
9. Deficiency of Vitamin B complex causes:
- | | |
|---------------|------------|
| a. Dermatitis | b. Rickets |
| c. Peliagra | d. Scurvy |
10. Which food has maximum biological value for proteins?
- | | |
|--------------|---------|
| a. Soya bean | b. Egg |
| c. Meat | d. Fish |

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ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q.2. Give short answers of the following: (10x2=20)

1. How Hemoglobin is synthesized and metabolized?
2. Write down the normal composition of Urine?
3. Write down the role of Immunoglobulin A?
4. Define Peripheral blood and role of peripheral leukocytes?
5. Explain the deficiency symptoms of vitamin D?
6. What do you understand by lypholization?
7. Write down the physiological functions of Vitamin C?
8. Define Radioisotopes and their applications?
9. What do you understand by Bence-Jones proteinuria?
10. What is the basic principle of RIA?

Q.3. Answers the following questions.

1. Define Inflammation? What are the cardinal signs of inflammation and how many phases involved in an inflammatory process? (13)
2. Explain the Chemistry, Metabolism, physiological functions and deficiency symptoms of Vitamin E? (12)
3. What do you understand by Polyacrylamide and agarose gel Electrophoresis? (10)
4. Explain Gaseous Transport? (5)