Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY
FACULTY OF PHARMACY
D. Pharm. Summer -2023 Examination

Year : 2 **Date:31/03/2023**
Subject Code: ER20-23T **Time: 2:00pm to 5:00pm**
Subject Name: Biochemistry & Clinical pathology **Total Marks: 80**

Instructions:
1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

Q.1 Multiple Choice Questions (MCQs) (1 Mark Each) **(20)**

1. The most active site of protein synthesis is the
   a) Nucleus b) Ribosome
   c) Mitochondrion d) Cell sap
2. Polysaccharides are
   a) Polymers b) Acids
   c) Proteins d) Oils
3. One of the following enzymes in glycolysis catalyses an irreversible reaction.
   a) Hexokinase b) Phosphofructokinase
   c) Pyruvate kinase d) All of Above
4. Polyuria can occur in
   a) Diabetes mellitus b) Acute glomerulonephritis
   c) Diarrhoea d) High fever
5. An aromatic amino acid is
   a) Lysine b) Tyrosine
   c) Taurine d) Arginine
6. Biuret reaction is specific for
   a) –CONH-linkages b) $–CSNH_2$ group
   c) $–(NH)NH_2$ group d) All of these
7. The enzymes of urea synthesis are found in
   a) Mitochondria only b) Cytosol only
   c) Both mitochondria and cytosol d) Nucleus
8. Essential fatty acid:
   a) Linoleic acid b) Linolenic acid
   c) Arachidonic acid d) All these
9. Which one is called good cholesterol?
   a) HDL b) LDL
   c) Triglycerides d) None of above
10. A high fiber diet is associated with reduced incidence of
    a) Cardiovascular disease b) C.N.S. disease
    c) Liver disease d) Skin disease
11. One manifestation of vitamin A deficiency is
    a) Painful joints b) Night blindness
    c) Loss of hair d) Thickening of long bones
12. Vitamin K is a cofactor for
    a) Gamma carboxylation of glutamic acid residue b) β-Oxidation of fatty acid
    c) Formation of γ-amino butyrate d) Synthesis of tryptophan
13. A Holoenzyme is
    a) Functional unit b) Apo enzyme
    c) Coenzyme d) All of these
14. The best source of iron is
    a) Organ meats b) Milk
    c) Tomato d) Potato

15. Pre- hepatic jaundice occurs because of
    a) Increased haemolysis
    b) Liver damage
    c) Biliary obstruction
    d) None of these
16. RNA does not contain
    a) Uracil
    b) Adenine
    c) Thymine
    d) Ribose
17. Genetic information flows from
    a) DNA to DNA
    b) DNA to RNA
    c) RNA to cellular proteins
    d) DNA to cellular proteins
18. The mineral present in the human body in larger amounts than any other cation is
    a) Sodium
    b) Calcium
    c) Potassium
    d) Iron
19. Kidney function tests is
    a) Urea
    b) Creatinine
    c) Uric acid
    d) All of above
20. Leucopenia is
    a) Increase WBC
    b) Decrease WBC
    c) Increase RBC
    d) Decrease RBC

Q.2 Long Answers (any 8 out of 10) (05 Mark Each) **(40)**

1. Define and classify carbohydrates. Write a note on disaccharides.
2. Explain introduction, daily requirements, dietary sources and function of vitamins C and B_{12}?
3. Write a note on β –oxidation of fatty acids.
4. Classify vitamins and briefly discuss their functions.
5. What is glycolysis? Give their metabolic reaction with energetics.
6. Write a note on urea cycle.
7. Write an account of the various factors affecting enzyme activity.
8. Write briefly on the different laboratory investigations employed to assess liver function.
9. Write a note on qualitative tests of carbohydrates and protein.
10. Write about reaction and energetic of Krebs-Henseleit cycle.

Q.3 Short Answers (2 Mark Each){ Answer any 10} **(20)**

1. What are the scopes of biochemistry?
2. What is gluconeogenesis and its important?
3. What is denaturation protein and its cause?
4. Classify lipid with example.
5. Write a note on structure of DNA.
6. What are the roles of metals in enzyme action?
7. Give an account of the enzymes involved in biological oxidation.
8. Give detail account on absorption and biochemical role of calcium.
9. Write a difference between normal and abnormal constituents of urine.
10. Enumerate lipid profile tests and its clinical significances.
11 What is oral rehydration therapy and its causes?
12 Write a identification tests of acetone and bile salts.