

PARUL UNIVERSITY
FACULTY OF PHARMACY
D. Pharm., October 2019 Examination

Semester: 1

Subject Code: 08600104

Subject Name: Biochemistry and clinical pathology

Date: 23/10/2019

Time: 10.00 am to 1.00 pm

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. Which of the following is also known as invert sugar?
a) Sucrose
b) Fructose
c) Dextrose
d) Glucose
2. Carbohydrates are also known as _____
a) Hydrates of carbon
b) Carbonates
c) Glycolipids
d) Polysaccharides
3. Amino acid are joined by
a) Peptide bond
b) Ionic bond
c) Hydrogen bond
d) Glycosidic bond
4. What is an apoenzyme?
a) It is a protein portion of an enzyme
b) It is a non-protein group
c) It is a complete, biologically active conjugated enzyme
d) It is a prosthetic group
5. Which of the following is not a fat-soluble vitamin?
a) Vitamin D
b) Vitamin K
c) Vitamin C
d) Vitamin A
6. Which of the following vitamin serves as a hormone precursor?
a) Vitamin C
b) Vitamin A
c) Vitamin K
d) Vitamin D
7. The abnormal constituent of urine is
a) Albumin
b) Urea
c) Creatinine
d) Sodium
8. Which of the following is a sulphur containing amino acid
a) Glycine
b) Methionine
c) Threonine
d) Tyrosine
9. Fructose and Glucose can be distinguished by
a) Selwinoff's reagent
b) Benedict's reagent
c) Fehling's reagent
d) Barfoed's reagent
10. Vitamin K deficiency results in the disorder
a) Dermatitis
b) Related growth
c) Color blindness
d) Defective blood clotting
11. Which of the following element is required for constriction of muscles
a) Na⁺
b) Ca⁺⁺ and K⁺
c) Ca⁺⁺
d) Na⁺ and Mg⁺⁺
12. Vitamin B₂ is a component of
a) NAD⁺
b) FAD
c) TPP
d) CoA
13. Normal urine
a) Neutral
b) Highly acidic
c) Slightly alkaline
d) Slightly acidic

14. Milky white color of urine is due to the presence of
 a) Fat globules
 b) Hemoglobin
 c) Nephritis
 d) Albumins
15. β - oxidation is a the breakdown of
 a) Polysaccharides
 b) Polypeptides
 c) Long chain fatty acids
 d) Amino acids and sugar
16. Goiter is a caused by the deficiency of
 a) Fluorine
 b) Iodine
 c) Chloride
 d) Sulphide
17. Unsaturated fatty acid contain
 a) One or more double bonds
 b) Nonpolar hydrocarbon chain
 c) Single bond
 d) All above
18. Secondary structure of protein is stabilized by
 a) Disulphide bonds
 b) Electrostatic forces
 c) Hydrophobic bonds
 d) Hydrogen bond
19. Biuret test perform for
 a) Protein
 b) Sugar
 c) Lipid
 d) All above
20. Blood platelets are formed in the
 a) Spleen and bone marrow
 b) Heart
 c) Liver
 d) Kidney

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

(40)

1. Define Carbohydrates. Classify them with suitable examples and Write note on chemical properties of carbohydrate.
2. Explain primary and secondary structure of proteins.
3. Define lipids. What is the role of lipid in living organisms?
4. Write note on biological role of vitamin A and vitamin C.
5. Write note on glycolysis.
6. Write detail account of cholesterol biosynthesis.
7. Discuss urea cycle.
8. Write note on disorders of protein metabolism.
9. What are the lymphocytes?
10. Describe the general functions of major and trace elements in human body.

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

(20)

1. Write note on clinical importance of Inulin and Dextran.
2. Discuss competitive and non-competitive inhibitions.
3. Define terms: saponification and iodine value
4. What is metabolic water?
5. Write note on biological role of calcium
6. Give significance of SGOT and SGPT.
7. Write note on energetics of TCA cycle.
8. Write short note on ketogenesis.
9. What is transamination?
10. Name the abnormal condition of urine.
11. What is difference between nucleotide and nucleoside?
12. Discuss cori cycle.