Seat No: _____ Enrollment No: _____

PARUL UNIVERSITY

FACULTY OF PHARMACY

B.Pharm. Summer 2017 - 18 Examination

Semester: 2 **Date: 28/05/2018**
Subject Code: BP203T **Time: 10:00 am to 1:00 pm**
Subject Name: Biochemistry **Total Marks: 75**

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 synthesis of glucose from non-carbohydrate compounds is known as:
   a)Gluconeogenesis b)Glycogenesis
   c)Glycogenolysis d)Glycolysis
2. The enzymes which involved in the conversion of dopamine to nor-epinephrine:
   a)Dopamine β-hydroxylase b)Tyrosine hydroxylase
   c) Dopamine decarboxylase d) Dopamine N-methyl transferase
3. All are the Pyrimidine bases EXCEPT:
   a)Cytosine b)Thymine
   c)Uracil d)Adenine
4. A strong affinity between enzyme and substrate is seen in:
   a)Low km value b)High km value
   c) High substrate concentration d) Low substrate concentration
5. Protein part of enzyme is known as:
   a)Holoenzyme b)Apoenzyme
   c)Coenzyme d)None of the above
6. Transfer of an amino group from an amino acid to a keto acid is:
   a)Decarboxylation b)Transamination
   c)Oxidative deamination d)Deamination
7. The reaction is called endergonic in case of:
   a)Positive free energy(ΔG^o) b)Negative free energy(ΔG^o)
   c) Negative d) Positive environmental energy
8. The transport of electrons through the ETC is linked with the relase of free energy is known as:
   a) Anabolism b) Oxidative dephosphorylation
   c) Oxidative phosphorylation d) Catabolism
9. Phenylketonuria disorder occur due the deficiency of enzyme:
   a)Tyrosine transaminase b)Homogentisate oxidase
   c)Dihydrobiopterin reductase d)Phenylalanine hydroxylase
10. Michaelis-menten equation is used to explain the effect of substrate concentration on:
    a)Carbohydrate b)Enzyme
    c)Lipid d)Protein
11. In β oxidation of fatty acids which of the following are utilized as co-enzymes:
    a)NAD+ and NADP+ b)FADH2 and NADH + H+
    c)FAD and FMN d)FAD and NAD+
12. Cholesterol consist of:
    a)27 carbon atom b)30 carbon atom
    c)14 carbon atom d)35 carbon atom
13. Melanin is the pigment involve in the following disease:
    a)Tyrosinosis b) Albinism
    c)Tyrosinemia type II d)Neonatal tyrosinemia
14. The sugar present in nucleic acid is:
    a)Ribose b)Xylose
    c)Glucose d)Fructose

15. The end product of glycolysis under aerobic condition is:
    a)Lactate b)Pyruvate
    c)Citrate d)Oxaloacetate
16. The process in which RNA is synthesized from DNA:
    a) Translation b)Replication
    c) Transcription d)None of the above
17. Gout disease is related with:
    a)Uric acid b)Urea
    c)Ammonia d)Aspartate
18. The P:O ratio for the oxidation of NADH is:
    a)1 b)2
    c)4 d)3
19. In glycolysis,glucose is converted to glucose-6 phosphate in presence of enzyme:
    a)Glucokinase b)Aldolase
    c)Phosphohexose isomerase d)Enolase
20. Enzymes lose the catalytic activity at temperature above 70° C due to:
    a)Inhibition b)Saturation
    c)Denaturation d)None of the above

Q.2 Long Answers (any 2 out of 3) (10 Marks Each) **(20)**

1. Draw the structure of DNA & RNA. Explain the semi conservative method of DNA replication.
2. Explain TCA cycle & give detail note about its steps and ATP energy.
3. Describe in detail about various disorders of lipid metabolism.

Q.3 Short Answers (any 7 out of 9) (5 Marks Each) **(35)**

1. Give an account of fatty acid oxidation.
2. Write in a brief about urea cycle & its disorders.
3. Explain HMP shunt & add a note on G6PD deficiency.
4. Give a detail note about various Chemical reactions of Amino acids.
5. Define Genetic code.Describe the various characteristics of genetic code.
6. Discuss about the inhibitors of ETC and oxidative phosphorylation.
7. Write a short note on Michaelis-menten constant.
8. Discuss the Splitting & Energy generation phase of glycolysis.
9. Synthesis and significance of 5-HT & melatoin.