

**D.PHARM.
SECOND YEAR
BIOCHEMISTRY & CLINICAL PATHOLOGY
ER 20-23T [SPECIAL REPEAT]**
[USE OMR FOR OBJECTIVE PART]

**SET
A**

Duration: 3 hrs.

Full Marks: 80

[PART-A : Objective]

Choose the correct answer from the following:

1×20=20

- The two main components of starch
 - Glucose and fructose
 - Amylose and amylopectin
 - Glycogen and cellulose
 - None of the above
- Which test is used to distinguish between monosaccharide and disaccharide
 - Barfoed's Test
 - Benedict's Test
 - Seliwanoff's Test
 - Molisch's Test
- The first amino acid produced during protein synthesis is
 - Arginine
 - Formylated arginine
 - Formyl methionine
 - Methionine
- A keto-sugar can be detected by
 - Fehling's Test
 - Benedict's Test
 - Seliwanoff's Test
 - Aniline acetate Test
- Which of the following is an essential amino acid?
 - Phenylalanine
 - Tyrosine
 - Alanine
 - Both b & c
- Creatinuria is caused due to the deficiency of vitamin?
 - A
 - E
 - D
 - K
- Which of the following is not a function of iron?
 - Oxygen transport
 - Immune function
 - Brain function
 - Gene regulation
- Folate deficiency causes
 - Microcytic anemia
 - Hemolytic anemia
 - Iron deficiency anemia
 - Megaloblastic anemia
- Which nitrogen base is not found in DNA
 - Thyamine
 - Uracil
 - Cytosine
 - Guanine
- Anti-oxidant activity is present in
 - B-carotene
 - Retinol
 - Retinoic acid
 - All of the these

11. The double helix structure of DNA can be developed through?
a. Scanning electron microscopy b. X-ray crystallography
c. Ultra-centrifugation d. Compound microscope
12. The catalytic efficiency of two different enzymes can be compared by
a. Formation of product b. K_m value
c. Molecular size of the enzymes d. At normal body temperature
13. What is the normal rate of GFR?
a. 120-125 ml/min b. 120-130ml/min
c. 120 ml/min d. 125 ml/min
14. Which of the following enzymes is a sensitive marker of alcoholic liver diseases?
a. Alanine transaminase b. Aspartate transaminase
c. Gamma glutamyl transferase d. Alkaline phosphate
15. Which of the following statements is known as the rate limiting step in glycolysis?
a. Enolase b. Phosphofructokinase
c. Phosphohexose isomerase d. Glyceraldehyde-3 phosphate dehydrogenase
16. Ketone bodies are by products of metabolism of?
a. Carbohydrate b. Protein
c. Fat d. All of the above
17. Fatty acid metabolism occurs in
a. Cytosol b. Mitochondrial matrix
c. Endoplasmic reticulum d. All of the above
18. Van den bergh reaction is useful in understanding?
a. Jaundice b. Kidney function test
c. Urine physical examination d. None
19. What is the net gain of ATP during the conversion of glucose to pyruvate?
a. 2 ATP b. 4ATP
c. 6ATP d. 32 ATP
20. Which of the following is the correct sequence of electron acceptors in ETC for production of ATP
a. Cyt b, c, a, a₃ b. Cyt a, a, b, c
c. Cyt c, b, a, a₃ d. Cyt b, c, a₃, a

[PART-B : Short Answers]

[Answer any ten (10) from the following]

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|---|----------------|
| 1. What is carbohydrate and difference between reducing sugar and non-reducing sugar | [3x10=30]
3 |
| 2. What is Barfoed's Test tells us about and write its significance and principle? | 1+2=3 |
| 3. Define the following with example:
a. triglycerides
b. saponification.
c. rancidity | 1+1+1=3 |
| 4. What is red biotechnology? Write the application of biotechnology | 1+2=3 |
| 5. Define minerals and classify them | 1+2=3 |
| 6. Write the difference between DNA and RNA. | 3 |
| 7. Mention the liver function test method? | 3 |
| 8. What is metabolism and write the difference catabolism and anabolism? | 1+2=3 |
| 9. Write in brief about the salient of glycolysis? | 3 |
| 10. Write the different abnormal cells of erythrocytes cells and their significance? | 3 |
| 11. What is electron transport chain and write its function? | 1+2=3 |

[PART-C : Long Answers]

[Answer any six (6) from the following]

[5x6=30]

1. Explain the various factor affecting enzyme activity. 5
2. What is dehydration and cause of dehydration and oral rehydration therapy? 5
3. Explain the classification of amino acid based on chemical nature and nutritional requirement 5
4. Describe the Watson crick structure of DNA and write its two functions? 5
5. Explain the kreb cycle of carbohydrate metabolism. 5
6. Explain in brief about the ketogenesis metabolic pathway. 5
7. Write down the chemical properties of carbohydrates and its biological 5

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