



ER20-23T

10

8103

BOARD DIPLOMA EXAMINATION, (ER-20) MAY—2023

DPH - SECOND YEAR EXAMINATION

BIOCHEMISTRY AND CLINICAL PATHOLOGY

Time : 3 Hours]

[Total Marks : 80

PART—A

5×6=30

Instructions : (1) Answer *any six* questions.

(2) Each question carries **five** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Write the factors that affect enzyme activity. 5
2. Define and classify Proteins with example. 1+4=5
3. Define and classify Vitamins with examples and write the functions and deficiency diseases of Vitamin A. 1+2+2=5
4. What is Glycolysis and write the reactions of Glycolysis. 1+4= 5
5. Write the reactions of Urea cycle. 5
6. What are electrolytes and write the functions and deficiency diseases of (a) Calcium and (b) Sodium 5
7. Write about liver function tests and their clinical significances. 5

/8103

1

[Contd...



PART—B

3×10=30

- Instructions :** (1) Answer *any ten* questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

8. Write the structures of (a) Glucose (b) Maltose and (c) Galactose. 1+1+1=3
9. Write the classification of Amino Acids based on nutritional requirements with example. 3
10. Define the terms (a) Carbohydrates (b) Proteins and (c) Lipids 1+1+1=3
11. Write the mechanism of action of Enzymes. 3
12. Write the co-enzymes of B-complex vitamins. 3
13. Write about (a) fatty liver and (b) phenyl ketonuria. 3
14. Write the function and deficiency diseases of Iron. 3
15. Write lipid profile tests and their clinical significances. 2+1=3
16. Write about (a) Kwashiorkor and (b) Marasmus. 3
17. Write the significance of abnormal constituents of urine. 3
18. Write the role of platelets in health and disease. 3

/S103

2

{ Contd..

PART—C

1×20=20

- Instructions :** (1) Answer all questions.
(2) Each question carries **one** marks.
(3) Choose the correct answer or write the **correct** answer.

19. The active site of protein synthesis is
- (a) Nucleus
 - (b) Ribosomes
 - (c) Mitochondria
 - (d) Cell sap
20. Cobalt is the essential component of
- (a) Vitamin B1
 - (b) Vitamin B6
 - (c) Vitamin B12
 - (d) All of the above
21. Which of the following Vitamin deficiency causes Beri-Beri?
- (a) Vitamin A
 - (b) Vitamin B₁
 - (c) Vitamin B₆
 - (d) Vitamin B₁₂
22. Iodine is used for the prevention of
- (a) Goiter
 - (b) Pellagra
 - (c) Scurvy
 - (d) Diarrhoea

23. Dehydration is occurred due to _____
- (a) insufficient intake of water
 - (b) excessive water
 - (c) Both (a) and (b)
 - (d) None of the above
24. Decrease in number of Lymphocytes below the normal value is called as
- (a) lymphocytosis
 - (b) lymphopenia
 - (c) Both (a) and (b)
 - (d) purpura
25. An example of ketone bodies is
- (a) acetone
 - (b) acetoacetate
 - (c) beta-hydroxybutyrate
 - (d) All of the above
26. The end product of Glycolysis under anaerobic condition is
- (a) pyruvic acid
 - (b) lactate
 - (c) acetic acid
 - (d) acetoacetate
27. Diabetes Mellitus occurs due to deficiency of
- (a) insulin
 - (b) glucagon
 - (c) cortisone
 - (d) thyroxine

28. An example of non-reducing sugar is

- (a) fructose
- (b) galactose
- (c) sucrose ,
- (d) glucose

29. LDL refers to

- (a) bad cholesterol
- (b) good cholesterol
- (c) total cholesterol
- (d) None of the above

30. Red blood cells are also called as

- (a) leukocytes
- (b) erythrocytes
- (c) lymphocytes
- (d) platelets

31. Molisch test is used for the identification of _____.

32. Example of sulphur containing amino acid is _____.

33. Phenylketonuria occurs due to the deficiency of _____ enzyme.

34. Example of Pyrimidine nitrogenous bases is _____.

35. Deficiency of Vitamin-D leads to _____ in Children.

36. Benzidine test is used for detection of _____ in the urine.

37. Pellagra occurs due to the deficiency of _____.

38. Synthesis of Glycogen from glucose is called _____.

★★★