

1. Refsum disease is due to the accumulation of following fatty acid:

a. Palmitic acid	c. Arachidnic acid	B
b. Phytanic acid	d. All the above	

2. Hemoglobin is a

a. Simple protein	c. Conjugated protein	C
b. Derived protein	d. None of the above	

3. All the following statements regarding enzyme specificity are correct, except

a. Glucokinase phosphorylates only glucose	D
b. Hexokinase exhibits relative substrate specificity	
c. Glucose-6-Phosphate undergoes multiple reactions, each catalysed by a separate enzyme	
d. Human enzymes act only on D-amino acid	

4. Regan isoenzyme is increased in

a. Carcinoma of lung	c. Paget disease	A
b. Osteoporosis	d. Cholestasis	

5. Occular manifestation in vitamin-A deficiency is

a. Night blindness	c. Xerophthalmia	D
b. Keratomalacia	d. all of the above	

6. Renal rickets is caused by

a. Decreased formation of cholecalciferol	C
b. Increased synthesis of 25-(OH)D3	
c. Decreased synthesis of calcitriol	
d. None of the above	

7. Premature infants are prone to vitamin-K deficiency because of

a. Poor placental transfer	D
b. Newborn intestine is devoid of bacteria during the first week of neonatal life	
c. Initial breast-milk (colostrum) is very low in vitamin-K	
d. All of the above	

8. Bence jones proteins are excreted in the urine of the patients of

a. Diabetes mellitus	c. nephrotic syndrome	B
b. Multiple myeloma	d. all of the above	

9. The affinity of Hb for oxygen is decreased by all, except

a. Low pH	c. high pCO ₂	D
b. Raised temperature	d. low pCO ₂	

10. The levels of AST and ALT are elevated in

a. Hemolytic jaundice	c. Hepatocellular jaundice	C
b. Obstructive jaundice	d. none of the above	

11. The following enzyme hydrolyses alpha-1,6 Glycosidic linkage of amylopectin
 a. Maltase
 b. Sucrase
 c. Isomaltase
 d. Lactase
12. Gallstones are mostly
 a. Cholesterol crystals
 b. Phospholipid crystals
 c. TAG crystals
 d. all of the above
13. Fatty acid is activated to acyl coA by the enzyme
 a. Thiokinase
 b. Pancreatic lipase
 c. Acyl transferase
 d. lipid esterase
14. Which of the following glucose transporters is insulin-dependent
 a. Na⁺ glucose symport in GIT
 b. GLUT 2 in liver
 c. GLUT 4 in skeletal
 d. All of the above
15. The enzyme deficient in Von-Gierkes disease (Type-I GSD) is
 a. Glycogen phosphorylase
 b. Phosphoglucomutase
 c. Disbranching enzyme
 d. Glucose-6-phosphatase
16. All of the following are hyperglycemic hormones except
 a. Cortisol
 b. Insulin
 c. Epinephrine
 d. Glucagon
17. Which of the following is associated with NADPH production?
 a. HMP shunt
 b. Cytosolic malic enzyme
 c. Cytosolic isocitrate dehydrogenase
 d. all of the above
18. The enzyme associated with reverse cholesterol transport
 a. LCAT
 b. HMG CoA Reductase
 c. ACAT
 d. Cholesterylester hydrolase
19. All the following substances act as lipotropic factors, except
 a. Arginine
 b. Choline
 c. Methionine
 d. Inositol
20. The urine sample of alkaptonuria patients responds to the Benedict's test due to presence of
 a. Glucose
 b. Phenylpyruvate
 c. Lactose
 d. Homogentisate
21. Parkinsonism is associated with an impairment in the synthesis of
 a. Epinephrine
 b. Ethanolamine
 c. Dopamine
 d. Serotonin

22. All the following amino acids contribute to purine synthesis except

a. Glycine	c. Aspartate	D
b. Glutamine	d. cysteine	

23. Lesh-Nyhan syndrome is caused by the deficiency of the following enzyme

a. Adenine phosphoribosyltransferase	C
b. IMP dehydrogenase	
c. HGPRT	
d. Xanthine oxidase	

24. In the well-fed state all the following processes are are active in the liver, except

a. Glucose uptake by hepatocytes	c. Gluconeogenesis	C
b. Glycolysis	d. Glycogenesis	

25. Rapid muscular activity for short durations derives energy from

a. Beta oxidation	c. ketolysis	B
b. Anaerobic glycolysis	d. all of the above	

26. The following is the major organ involved in the metabolism of xenobiotics

a. Brain	c. Muscle	B
b. Liver	d. Kidney	

27. Which of the following organs does not contribute to plasma calcium levels?

a. Bones	c. Kidneys	B
b. Teeth	d. Intestine	

28. Of two people of approx. the same weight the one with the higher BMR would most likely be

a. Older	c. Female if the other were male	D
b. A person with a sedentary lifestyle	d. Taller	

29. Marasmus is characterized by

a. Bilateral pitting edema	c. sparse, grey colored hair	B
b. Severe muscle wasting	d. all the above	

30. Dental carries in children occur due to excess consumption of

a. Glucose	c. Sucrose	C
b. Lactose	d. Maltose	

31. The principal cation of the extracellular fluid (ECF) is

a. Na+	c. K+	A
b. Ca+	d. Mg+	

32. All the following conditions lead to hyponatremia except,

a. Vomiting and diarrhea	c. burns	D
b. Addison disease	d. Cushing syndrome	

33. The major bulk of acid load of the body is eliminated in the form of
 a. HCO_3^- c. H^+
 b. NH_4^+ d. H_2CO_3 **B**
34. Metabolic acidosis is characterized by
 a. Decreased HCO_3^- c. Increased HCO_3^-
 b. Decreased pCO_2 d. Increased pCO_2 **A**
35. Anionic gap represents the following in the plasma
 a. Unmeasured cations c. Unmeasured anions
 b. Measured cations d. Measured anions **C**
36. Hypoxia occurring in high altitude causes
 a. Metabolic alkalosis c. Metabolic acidosis
 b. Respiratory alkalosis d. Respiratory acidosis **B**
37. Elevation in the serum levels of all the following enzymes occur in liver dysfunction except:
 a. ALT c. AST
 b. CK d. GGT **B**
38. In liver cirrhosis, electrophoretic separation of plasma proteins show
 a. Reduced bands of albumin and prealbumin
 b. Decreased gamma globulins
 c. Increased Beta globulins
 d. All of the above **A**
39. Tumor markers for ovarian cancer are
 a. Beta HCG c. AFP
 b. CA-125 d. CEA **B**
40. All the following drugs act as anticancer agents, except
 a. Erythromycin c. Methotrexate
 b. Mercaptopurine d. Actinomycin-D **A**
41. Which of the following enzymes synthesize primers in Eukarotic replication?
 a. DNA Pol Alpha c. DNA Pol Beta
 b. DNA Pol Gamma d. DNA Pol I **A**
42. All the following drugs inhibit replication except,
 a. Ciprofloxacin c. 6-mercaptopurine
 b. Nalidixic acid d. Tetracyclin **D**
43. Hereditary nonpolyposis colon cancer occurs due to defect in
 a. Mismatch repair c. base excision repair
 b. Nucleotide excision repair d. double-strand break repair **A**

44. Holliday junction is capable of
 a. Moving upstream
 b. Moving in either direction
 c. Moving downstream
 d. not moving and staying static
45. The following TF directly binds to TATA box while transcription
 a. TFIIA
 b. TFIIE
 c. TFIID
 d. TFIIF
46. Beta thalassemia occurs due to
 a. Faulty editing
 b. Excessive methylation
 c. Faulty splicing
 d. all the above
47. Which is used as DNA probe?
 a. Peptidyl transferase
 b. RNA Ploymerase
 c. Reverse Transcriptase
 d. DNA polymerase
48. One of the following amino acids has six codons
 a. Tryptophan
 b. Serine
 c. Methionine
 d. Lysine
49. A silent mutation is ossible due to following character of genetic code
 a. Universality
 b. Non-overlapping
 c. Unambiguity
 d. Degeneracy
50. Which of the following is a toxoid and bacterial vaccine?
 a. TT
 b. DPT
 c. DT
 d. All the above
51. The enzymes Protein kinase A is activate by
 a. ATP
 b. cGMP
 c. cAMP
 d. DAG
52. Calmodulin binds to
 a. Na⁺
 b. H⁺
 c. Ca²⁺
 d. K⁺
53. Oxytocin and ADH are carried in the blood
 a. Bound to Albumin
 b. Bound to lipoproteins
 c. Bound to carbohydrates
 d. Bound to Globulins
54. Measuring the following substance in urine sample is used the diagnosis of pheochromocytoma
 a. Dopamine
 b. Monoamine oxdase (MAO)
 c. catechol-o-methyltransferase (COMT)
 d. Vanillylmandelic acid (VMA)

B

C

C

C

B

D

D

C

C

A

D

55. Overproduction of which of the hormones result in PCOD
a. Progesterone
b. Estrogens
c. Androgens
d. All of the above
56. Which is the disease related to impaired collagen synthesis
a. Ehler's –Danlos syndrome
b. I-cell disease
c. Marfan syndrome
d. All of the above
57. One of the substrates of urea cycle serves as precursor for polyamines
a. Ornithine
b. Arginosuccinate
c. Citruline
d. Arginine
58. The normal concentration of Blood urea in serum is
a. 60-100mg/dL
b. 2-10mg/dL
c. 15-40mg/dL
d. 100-120mg/dL
59. The main apoprotein present in the LDL is
a. A and D
b. E2 and C
c. B-100
d. B-48
60. Which is most common type of chromosomal aneuoploidy?
a. Trisomy 13
b. Klinefelter Syndrome
c. Down Syndrome
d. Trisomy 18

C

A

A

C

B

C