

## Winning is a habit for me

1. A 15-day old neonate has multiple episodes of subtle seizures. On examination blond hair and blue iris is noted while parents have black hair and brown eyes. Which disease is suspected?
  - a. Albinism
  - b. Tyrosinemia
  - c. PKU
  - d. MSUD
2. Correct about Lipoprotein 'A'?
  - a. Promotes atherosclerosis
  - b. Reduces atherosclerosis
  - c. Delivers cholesterol to liver
  - d. Delivers cholesterol from peripheral tissue to liver
3. Fish oil is good for people with?
  - a. Elevated LDL
  - b. Elevated triglycerides
  - c. Day blindness
  - d. All of the above
4. Cardiolipin is \_\_\_\_\_?
  - a. Phosphadityl-choline
  - b. Phosphatidyl-ethanolamine
  - c. Diphosphadityl glycerol
  - d. Sphingomyelin
5. Which of the following is not an enzyme?
  - a. Racemase
  - b. Ribozyme
  - c. Peptidase
  - d. Mutase
6. Which of the following is a cofactor for cytochrome oxidase?
  - a. Zinc
  - b. Magnesium
  - c. Copper
  - d. Molybdenum
7. Correct about gangliosides is?
  - a. Glycolipids with sialic acid and found in nerve endings
  - b. Glycolipids with sialic acid and found in white matter of brain
  - c. Glycophospholipids with lecithin and found in lungs
  - d. Glycophospholipids with alcohol and found in adrenal gland
8. NAD<sup>+</sup> is a coenzyme for which of the following enzyme?
  - a. Transaminase
  - b. Transketolase
  - c. Carboxylase
  - d. Dehydrogenase
9. Which is not a component of Michaelis Menton equation?
  - a. Initial velocity
  - b. Maximum velocity
  - c. Substrate concentration
  - d. Temperature
10. Which of the following has least content of PUFA?
  - a. Safflower oil
  - b. Sunflower oil
  - c. Rapeseed oil
  - d. Coconut oil
11. Neuraminidase enzyme is inhibited by?
  - a. Acyclovir
  - b. Oseltamivir
  - c. Methotrexate
  - d. Allopurinol
12. True about competitive inhibition?
  - a. Km remains the same and Vmax decrease
  - b. Km remains the same and Vmax increases
  - c. Km increases and Vmax is reduced
  - d. Km increases and Vmax is same
13. Which is correct about cervonic acid?
  - a. Omega 3 fatty acid
  - b. Omega 6 fatty acid
  - c. Omega 9 fatty acid
  - d. All of the above
14. Which of the following is an imino acid?
  - a. Arginine
  - b. Histidine
  - c. Leucine
  - d. Proline
15. Correct about ergosterol is?
  - a. Precursor for vitamin D
  - b. Precursor for coproporphyrin
  - c. Precursor for Histamine
  - d. Precursor for trans-fatty acids
16. Which is Correct about Zwitter ion?
  - a. Positive charge
  - b. Negative charge
  - c. Does not move towards anode or cathode
  - d. Shows positive migration towards cathode
17. Nitric oxide is formed from?
  - a. Aspartate
  - b. Asparagine
  - c. Alanine
  - d. Arginine
18. Which is correct about 21<sup>st</sup> amino acid?
  - a. Selenocysteine coded by UGA stop codon
  - b. Selenocysteine coded by UAG stop codon
  - c. Pyrrolysine coded by UAG stop codon
  - d. Pyrrolysine coded by UGA stop codon
19. Correct about glycine?
  - a. Largest amino acid
  - b. Optically active
  - c. Every second amino acid in collagen is glycine
  - d. It is both excitatory and inhibitory neurotransmitter
20. Correct about function of glutathione?
  - a. Binding of carbon dioxide to hemoglobin
  - b. Free radical scavenger
  - c. Conformational ability in collagen
  - d. Synthesis of betaine
21. Test for folic acid deficiency?
  - a. Schilling test
  - b. FIGLU levels in urine
  - c. ALA levels in urine
  - d. Dihydrofolate reductase assay
22. During starvation neurons will use?
  - a. Homocysteine
  - b. Valine
  - c. Taurine
  - d. Glutamine
23. Homocysteine accumulation leads to acute coronary syndrome. Which of the following is responsible?
  - a. Deficiency of thiamine
  - b. Deficiency of riboflavin
  - c. Deficiency of niacin
  - d. Deficiency of cyanocobalamin
24. Serotonin is produced by?
  - a. Tryptophan
  - b. Tyrosine
  - c. Glycine
  - d. Histidine

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25. Urea bicycle links urea to TCA cycle through \_\_\_\_\_ and \_\_\_\_\_
- Ornithine and citrulline
  - Fumarate and aspartate
  - Arginine and citrulline
  - Arginine and fumarate
26. Obermeyer test is used for diagnosis of?
- Alkaptonuria
  - PKU
  - Hartnup disease
  - Trimethylaminuria
27. SDS -PAGE is used for separation of proteins. It is based on which of the following properties?
- Charge
  - Molecular weight
  - pH
  - all of the above
28. Which of the following is incorrect about Chylomicrons?
- Maximum triglyceride content
  - Least dense
  - Highest electrophoretic mobility
  - Major apolipoprotein is ApoB-48
29. Crumpled tissue paper cytoplasm in macrophages is a feature of?
- Fabry's disease
  - Gaucher' disease
  - Tay sach disease
  - Krabbe disease
30. What is enzyme defect in Fabry's disease?
- Alpha galactosidase
  - Beta galactosidase
  - Hexosaminidase A
  - Hexosaminidase B
31. Acid ceramidase deficiency leads to \_\_\_\_\_ disease
- Wolman
  - Farber
  - Sandhoff
  - Metachromatic leukodystrophy
32. Arcus senilis is due to
- Excess of LDL
  - Deficiency of LDL
  - Deficiency of L iduronidase
  - Excess of chondroitin sulfate
33. At physiological pH DNA molecules are?
- Positively charged
  - Negatively charged
  - Neutral
  - Amphipathic
34. What investigation would you like to perform in a boy child with history of recurrent self-inflicted injuries/ mutilation and skin rashes?
- Tryptophan levels
  - Uric acid
  - Orotic acid levels in urine
  - Serum lead levels
35. Hyperuricemia is found in?
- Gaucher disease
  - Familial Chylomicronaemia
  - Malignancy
  - Orotic aciduria
36. Which of the following is a quantitative DNA?
- Reverse Transcriptase-PCR
  - Real time- PCR
  - Nested-PCR
  - Multiplex-PCR
37. Vitamin H is?
- Biotin
  - Panthenic acid
  - Pyridoxal
  - Nicotinic acid
38. Erythrocyte transaminase activity is used for assay of?
- B1 deficiency
  - B3 deficiency
  - B6 deficiency
  - B9 deficiency
39. Major metabolic fuel of adipose tissue?
- Glucose
  - Ketone bodies
  - LDL
  - HDL
40. Enzyme deficient in Farber disease?
- $\alpha$ -galactosidase
  - $\beta$ -galactosidase
  - Ceramidase
  - Arylsulfatase A
41. Non-carbohydrates that produce positive benedict test are?
- Ascorbic acid
  - Pantothenic acid
  - BUN
  - Triacylglycerol
42. No loss of genetic material occurs in?
- Deletion
  - Insertion
  - Inversion
  - substitution
43. Hay's test is used to detect?
- Urine bile salts
  - Urine ketones
  - Urine sugar
  - Urine amino acids
44. Smallest unit of genetic expression which codes for a polypeptide chain?
- Intron
  - Exon
  - Spliceosome
  - Cistron
45. A Which of the following process will occur in both cytoplasm and mitochondria?
- Beta fatty acid oxidation
  - Steroid synthesis
  - HMP shunt
  - Gluconeogenesis
46. Which of the following is an amphibolic pathway?
- Krebs cycle
  - Urea cycle
  - Heme synthesis
  - Ketogenesis
47. Antimycin inhibits?
- Cytochrome oxidase
  - Electron transfer from cyt B to Cyt C1
  - NADH- CoQ reductase
  - ADP phosphorylation
48. Phenylalanine promotes growth of?
- Bacillus subtilis
  - Bacillus Stearothermophilus

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- c. Bacillus cereus  
d. Bacillus coagulans
49. Orotic aciduria leads to?  
a. Kidney failure  
b. Anaemia  
c. Muscle cramps  
d. Aminoaciduria
50. Most common defect in galactosemia is?  
a. Galactose 1 uridyl transferase  
b. Galactokinase  
c. Phosphoglucomutase  
d. UDP Galactose 4 epimerase
51. Which Glycogen storage disorder leads to cardiomyopathy?  
a. Cori disease  
b. Anderson disease  
c. Mcardle syndrome  
d. Pompe disease
52. Best test for detection of inborn errors of metabolism is?  
a. Chorionic villus sampling  
b. P.U.B.S  
c. Tandem mass spectrophotometry  
d. Gel Electrophoresis
53. Which of the following is XLR?  
a. Nieman Pick  
b. Tay Sachs  
c. Krabbe disease  
d. Fabry disease
54. Most common lysosomal storage disorder is due to defect on which chromosome?  
a. Chromosome 1  
b. Chromosome 11  
c. Chromosome 13  
d. Chromosome 14
55. Which of the following transfers hepatic triglycerides to peripheral tissues?  
a. Chylomicrons  
b. VLDL  
c. LDL  
d. HDL
56. Excess of \_\_\_\_\_ leads to acute pancreatitis?  
a. Chylomicrons  
b. LDL  
c. HDL  
d. All of the above
57. Which of the following is an index of cholestasis?  
a. Lipoprotein A  
b. Apolipoprotein B  
c. Apo E  
d. Lipoprotein X
58. Which of the following vitamin deficiency can lead to dementia?  
a. Vitamin B6  
b. Vitamin B12  
c. Biotin  
d. Riboflavin
59. Cardiomyopathy is due to deficiency of:  
a. Zinc  
b. Iron  
c. Selenium  
d. Boron
60. Enzyme defect in essential fructosuria?  
a. Fructokinase  
b. Fructose 1 phosphate  
c. Aldolase B  
d. Fructose 1,6 Diphosphatase
61. Enzyme responsible for unwinding of DNA is?  
a. Helicase  
b. Primase  
c. DNA polymerase  
d. Transcriptase
62. Pseudo-uridine is found in?  
a. mRNA  
b. rRNA  
c. tRNA  
d. SnRNA
63. Mitochondrial DNA is?  
a. Closed circular  
b. Nicked circular  
c. Linear  
d. Open circular
64. After digestion by restriction endonucleases, DNA Strands can be joined again by?  
a. DNA polymerase  
b. DNA Ligase  
c. DNA Topoisomerase  
d. DNA Gyrase
65. Karyotyping under light microscopy is done by?  
a. R-Banding  
b. Q-Banding  
c. G-Banding  
d. C-Banding
66. Not involved in Cori's cycle?  
a. Blood  
b. Brain  
c. Liver  
d. Muscle
67. Enzyme common to glycogenesis and glycogenolysis is  
a. Phosphoglucomutase  
b. Glycogen synthetase  
c. Phosphorylase  
d. Phosphofructokinase
68. Correct matching about the cycle and the rate limiting step?  
a. Porphyrin synthesis: L-iduronidase  
b. TCA cycle: Isosorbide dehydrogenase  
c. Fatty acid oxidation: Acetyl CoA carboxylase  
d. Fatty acid synthesis: Carnitine acyltransferase
69. Cofactor in succinate dehydrogenase?  
a. Manganese  
b. Molybdenum  
c. Copper  
d. Iron
70. Longest RNA is?  
a. t-RNA  
b. r-RNA  
c. m-RNA  
d. all of the above
71. Which of the following is small interfering RNA?  
a. Si-RNA  
b. sno-RNA

- c. sn-RNA
  - d. SRP-RNA
72. Respiratory quotient of Carbohydrates is?
- a. 0.66
  - b. 0.71
  - c. 0.8
  - d. 1.0
73. Translation occurs in?
- a. Nucleus
  - b. Cytoplasm
  - c. Nucleolus
  - d. Mitochondria
74. Most rapid way to synthesise ATP is?
- a. Phosphocreatine
  - b. Cori cycle
  - c. Krebs cycle
  - d. Fatty-acid -oxidation

