The Bodwad Sarvajanik Co-Op, Education Society Ltd., Bodwad

Arts, Commerce and Science College Bodwad.

Question Bank (MCQ)

S.Y.BSc :2021-22

Zoology Paper II: Biochemistry

ZOO 302 Biochemistry		
Q.No.	**Multiple Choice Question**	**Ans**
1.	Gluconeogenesis takes place mostly in…….. A) Heart B) Kidney C) Stomach D**) Liver**	D
2.	The general test for detection of carbohydrates is …….. A) Iodine test B**) Molisch test** C) Barfoed test D) Osazone test	B
3.	……. is a metabolic process responsible for Metabolite? A) Glycolysis B) **Gluconeogenesis** C Glycolytic D) Proteolysis	B
4.	Conversion of Alanine to carbohydrate to known…… A) Glycogenesis B) **Gluconeogenesis** C) Gluconeogenolysis D) Photosynthesis	B
5.	Gluconeogenesis is exactly opposite process of ……. A) **Glycolysis** B) Lyponeogenesis C) Glucolytic D) Proteolysis	A
6.	Kreb Cycle is also called as..... cycle A) BCA B) AKA C**) TCA** D) TCB	C
7.	Glycolysis takes place in .....organism. A) Aerobic B) Anaerobic C)**Both(A) and (B)** D) None	C
8.	……is a metabolic process responsible for glucose degradation. A**) Glycolysis** B) Gluconeogenesis C) Glucolytic D) Proteolysis	A
9.	Pentose production is increased in **A) HMP shunt** B) Uromic acid pathway C) EM pathway D) TCA cycle	A
10.	In glycolysis glucose is converted into…… A) Fructose **B) Pyruvate** C) Carbohydrate D) Pyruvic acid	B
11.	The following is an enzyme required for glycolysis:…… **A) Pyruvate kinase** B) Pyruvate carboxylase C) Glucose-6-phosphatase D) Glycerokinase	A
12.	Our body can get pentoses from ……. A) Glycolytic pathway B) Uromic acid pathway C) TCA cycle **D) HMP shunt**	D

13.	Conversion of glucose to glucose 6- phosphate in liver is by…… A) Hexokinase only B) Glucokinase only C**) Hexokinase and glucokinase** D) Glucose-6-phosphate dehydrogenase	C
14.	Which of the following is not an enzyme involved in glycolysis? A) Euolase B) Aldolose C) Hexokinase D**) Glucose oxidase**	D
15.	The following is an enzyme required for glycolysis:…… **A) Pyruvate kinase** B) Pyruvate carboxylase C) Glucose-6-phosphatose D) Glycerokinase	A
16.	The tissues with the highest glycogen content are……. A) Muscle and kidney B) Kidney and Liver **C) Liver and muscle** D) Brain and Liver	C
17.	Glucose absorption may be decreased in…… A) **Oedema** B) Nephritis C) Rickets D) Osteomalitis	A
18.	Glycogen synthetase activity is depressed by A) Glucose B) Insulin C**) Cyclic AMP** D) Fructokinase	C
19.	The branching enzyme acts on the glycogen when the glycogen chain has been lengthened to between glucose units:…… A) 1 and 6 B) 2 and 7 C) 3 and 9 D) **6 and 11**	D
20.	Cyclic AMP is formed from ATP by the enzyme adenylate cyclase which is activated by the hormone:……. A) Insulin B) **Epinephrine** C) Testosterone D) Progesterone	B
21.	Hexokinase has a high affinity for glucose than…… A) Fructokinase B) Galactokinase C) **Glucokinase** D) All of the above	C
22.	Dihydroxyacetone phosphate and glyceraldehyde 3-phosphate are intercoverted by…… A) Triose isomerase B) **Phosphotriose isomerase** C) Diphosphotriose somerase D) Dihydroxyacetone phosphorylase	B
23.	Citrate is converted to isocitrate by aconitase which contains……. A) Ca^{++} B**)** $\mathbf{Fe^{++}}$ C) Zn^{++} D) Mg^{++}	B

24.	The reaction succinyl COA to succinate…… A) CDP B**) ADP** C)GDP D)$NADP^+$	B
25.	The carrier of the citric acid cycle is…….. A) Succinate B) Fumarate C) Malate D) **Oxaloacetate**	D
26.	Gluconeogenesis is increased in the following condition:…….. A) Diabetes insipidus B) **Diabetes Mellitus** C) Hypothyroidism D) Liver diseases	B
27.	The number of molecules of the ATP produced by the oxidation of acetyl CoA in TCA cycle is…… A) 6 B) 8 C) 10 D**) 12**	D
28.	Kreb cycle takes place in…….. A) Nucleus B) Ribosome C) **Mitochondria** D) Golgi bodies	C
29.	Kreb cycle Converts Pyruvate to energy in the form of……. A) **ATP** B) ADP C) Pi D) Glucose	A
30.	The cellular energy currency is ……. A) Dollar B) **ATP** C) Cells D) ADP	B
31.	Dietary fats after absorption appear in the circulation as…….. A) HDL B) VLDL C) LDL D) **Chylomicron**	D
32.	Free fatty acids are transported in the blood…….. A) **Combined with albumin** B) Combined with fatty acid binding protein C) Combined with β – ibuprotein D) Ibutein free salts	A
33.	Long chain fatty acids are first activated to CoA in… A) **Cytosol** B) Microsomes C) Nucleus D) Mitochondria	A
34.	The enzyme acyl-CoA synthase catalyses the conversion of a fatty acid of an active fatty acid in the presence of….. A) AMP B) ADP C) **ATP** D) GTP	C
35.	The enzymes of β-oxidation are found in A) **Mitochondria** B) Cytosol C) Golgi apparatus D) Nucleus	A

36.	Long chain fatty acids penetrate to inner mitochondrial membrane….. A) Fatty B Acetyl CoA derivative C) **As carnitine derivative** D) Requiring Na dependent carrier	C
37.	Atherosclerosis and coronary heart diseases are associated with the diet:… A) **High in total fat and saturated fat** B) Low in protein C) High in protein D) High in carbohydrate	A
38.	Cerebrovasular disease and hypertension is associated with…….. A) High calcium intake B) **High salt intake** C) Low calcium intake D) Low salt intake	B
39.	β-oxidation is breakdown of……Acetyl CoA A) Glucose B) Proteins C) Enzymes D) **Fatty acids**	D
40.	β-oxidation is takes place in ….. A) **Mitochondria** B) Cytosol C) Golgi apparatus D) Nucleus	A
41.	β-oxidation is…..... process. A) **streakly aerobic** B) streakly anaerobic C) anaerobic D) Both A and B	A
42.	Fatty acid oxidation does not happens in …… A) Heart B) Liver C**) Brain** D) Kidney	C
43.	Lipogenesis is the process of production of …… A) **Lipid** B) Carbohydrate C) Protein D) Enzymes	A
44.	The major storage form of lipids is……. A) Esterified cholesterol B) Glycerophospholipids C) **Triglycerides** D) Sphinolipids	C
45.	β-Oxidation of fatty acid requires all the following coenzymes except…… A) CoA B) FAD C) NAD D) **NADP**	D
46.	Which of the following can be oxidized by β-oxidation pathway? A) Saturated fatty acids B) Monosaturated fatty acids C) Polyunsaturated fatty acids D) **All of these**	D
47.	Ketone bodies are synthesized in…… A) Adipose tissue B**) Liver** C) Muscles D) Brain	B

48.	Niemann-Pick disease results from deficiencies from. A) Ceramidase B**) Spingnomylinase** C) Arylsulphatase A D) Hexosaminidase A	B
49.	Lipids are stored in the body mainly in the form of……. A) Phospholipids B) Glycolipids **C) Triglycerides** D) Fatty acids	C
50.	Fat depots are located in….. A) Intermuscular connective tissue B) Mesentary C) Omentum **D) All of these**	D
51.	Breakdown of……is lipolysis. **A) Lipid** B) Carbohydrate C) Protein D) Enzymes	A
52.	All proteins contain the….. **A) Same 20 amino acids** B) Different amino acids C) 300 Amino acids occurring in nature D) Only a few amino acids	A
53.	Proteins contain……. **A) Only L- α - amino acids** B) Only D-amino acids C) DL-Amino acids D) Both (A) and (B)	A
54.	The main sites for oxidative deamination are…… **A) Liver and kidney** B) Skin and pancreas C) Intestine and mammary gland D) Lung and spleen	A
55.	A positive nitrogen balance occurs…. A) In growing infant B) Following surgery C) In advanced cancer **D) Kwashiokar**	A
56.	The main site of urea synthesis in mammals… **A) Liver** B) Skin C) Intestine D) Kidney	A
57.	The enzymes of urea synthesis are found in…. A) Mitochondria only B) Cytosol only **C) Both mitochondria and cytosol** D) Nucleus	C
58.	The number of ATP required for urea synthesis is A) 0 B) 1 C) 2 **D) 3**	D

59.	Most of the ammonia released from L-amino acid reflects the coupled action of transaminase and…… **A) L-glutamate dehydrogenase** B) L-amino acid oxidase C) Histidase D) Serine dehydratase	A
60.	In urea synthesis, the amino acid functioning solely as an enzyme activator:….. **A) N-acetyl glutamate** B) Ornithine C) Citrulline D) Arginine	A
61.	Control of urea cycle involves the enzyme:……. **A) Carbamoyl phosphaste synthatease** B) Orritine transcarbamoylase C) Argininosuccinase D) Argenase	A
62.	Transfer of the carbamoyl moiety of carbamoyl phosphate to ornithine is catalysed by a liver mitochondrial enzyme:…….. A) Carbamoyl phosphate synthetase B) **Ornithine transcarbamoylase** C) N-acetyl glutamate synthetase D) N-acetyl glutamate hydrolase	B
63.	A compound serving a link between citric acid cycle and urea cycle is…….. A) Malate B) Citrate C) Succinate **D) Fumarate**	D
64.	Small amount of urinary oxalates is contributed by the amino acid:…….. **A) Glycine** B) Tyrosine C) Alanine D) Serine	A
65.	The amino acid which detoxicated benzoic acid to form hippuric acid is…… **A) Glycine** B) Alanine C) Serine D) Glutamic acid	A
66.	Non-Protein amino acids are ……. **A) Ornithine** B) β-alanine C) γ-amino butyric acid D) All of thease	A
67.	The amino acid that undergoes oxidative deamination at significant rate is…… A) Alanine B) Aspartate **C) Glutamate** D) Glutamine	C
68.	The major site of urea synthesis is….. A) Brain **B) Kidneys** C) Liver D) Muscles	B
69.	The following enzyme of urea cycle is present in cytosol:…….. A) Argininosuccinic acid synthetase B) Argininosuccinase C) Arginase **D) All of these**	D

70.	ATP is required in following reactions are of Urea Cycle…….. A) Synthesis of carbamyle phosphate and citrulline B) Synthesis of citrulline and argininosuccinate **C) Synthesis of argininosuccinate and arginine** D) Synthesis of carbamoyl phosphate and Argininosuccinate	C
71.	Daily excretion of nitrogen by an adult man is about…… A) 15–20 mg B) 1.5–2 gm **C) 5–10 gm** D) 15–20 gm	C
72.	Amino acid synthesis is a process in which….....are produced. **A) Amino acids** B) Protein C. Fat D) Acids	A
73.	Transfer of an amino group from amino acid to kito acid is called as …….. A) Amination **B) Trans amination** C) Deamination D) Proteolysis	B
74.	All enzymes are Proteins except ..... **A) RNAs** B) DNAs C) Chymotrypsin D) Protease	A
75.	The term enzyme is coined by……. A) Pasteur B) Buchner C) Urey Miller **D) Kuhne**	D
76.	The fastest enzyme is…….. A) Pepsin **B) Carbonic unhydrase** C) DNA gyrase D) DNA polymerase	B
77.	Fat is hydrolyzed by the enzyme known as……. A) Trypsin **B) Lipase** C) pepsin D) Amylase	B
78.	The term apoenzyme is applicable to…….. A) Simple enzyme **B) Protein part of conjugate enzyme** C) Organic cofactor of a conjugate enzyme D) Inorganic cofactor of a conjugate enzyme	B
79.	Coenzymes combines with …….. A) Proenzymes B) Holoenzymes C) Antienzymes **D) Apoenzymes**	D
80.	Zymogen is……..	C

	A) Enzyme poison B) Enzyme Modulator **C) Enzyme precursor** D) Enzyme Inhibitor	
81.	Allosteric enzyme possesses…… A) Active site and an allosteric site **B) Active site and two types of allosteric sites** C) Active site and three types of allosteric sites D) Three types of allosteric sites	B
82.	"Lock and key" theory of enzyme action was proposed by …… A**) Fischer** B) Koshland C) Kurhe D Arrinus	A
83.	Trypsin are active in…… A) Acidic **B) Alkaline** C) neutral D) None of these	B
84.	Koshland's theory of enzyme action is known as……. A) Reduced fit theory B) Lock and key theory **C) Induced fit theory** D) Enzyme coenzyme theory	C
85.	The enzymes involved in feedback inhibition are called…….. **A) Allosteric enzymes** B) Holoenzymes C) Apoenzymes D) Coenzymes	A
86.	Any molecule which acts directly on an enzyme to lower its catalytic rate is called…… A) Regulator B) Repressor **C) Inhibitor** D) Moderator	C
87.	Enzymes are chemically……. A) Proteins B) Proteins and nucleic acids **C) Proteins and rarely ribonucleic** D) Protein and rarely carbohydrates	C
88.	Most industrial enzymes are obtained from….. A) plants **B) microbes** C) insects D) animal tissues	B
89.	Enzymes, vitamins and hormones can be classified into a single category of biological chemicals because all of them…… A) aid in regulating metabolism B) are synthesised in organism C) **are proteins** D) enhance the oxidation metabolism	C

90.	A Holoenzyme is…… A) Functional unit B) Apo enzyme C) Coenzyme **D) All of these**	D
91.	Neimann-Pick disease is due to the deficiency of the enzyme: A) Hexosaminidase B) Ceramidase C) A and B D) None	C
92.	Which of the following statement true regarding enzyme inhibition? A) It may be reversible or irreversible B) Reversible can be competitive or non-competitive **C) both (A) and (B)** D) it is always reversible	C
93.	The compound which has the lowest density is……. **A) Chylomicron** B) β-Lipoprotein C) α-Lipoprotein D) pre β-Lipoprotein	A
94.	Non steroidal anti inflammatory drugs, such as aspirin act by inhibiting the activity of the enzyme:…….. A) Lipoxygenase **B) Cyclooxygenase** C) Phospholipase A2 D) Lipoprotein lipase	B
95.	From arachidonate, synthesis of prostaglandins is catalyzed by……. **A) Cyclooxygenase** B) Lipoxygenase C) Thromboxane synthetase D) Isomerase	A
96.	Which of the statement is true regarding Km. A) It is the measure of the stability of the Ex complex. B) It is the measure of the stability of the affinity of an enzyme for its substrate C) A high Km indicates weak substrate binding **D) all of these**	D
97.	Gaucher's disease is due to the deficiency of the enzyme:…….. A) α-Fucosidase B) β-Galactosidase **C) β-Glucosidase** D) Sphingomyelinase	C
98.	Any molecule which acts directly on an enzyme to lower its catalytic rate is called…… A) Regulator B) Repressor **C) Inhibitor** D) Moderator	C

99.	Activation or inactivation of certain key regulatory enzymes is accomplished by covalent modification of the amino acid:……. A) Tyrosine B) Phenylalanine C) Lysine **D) Serine**	D
100.	Example of an extracellular enzyme is…….. A) Lactate dehydrogenase B) Cytochrome oxidase **C) Pancreatic lipase** D) Hexokinase	C

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