Ques. Paper : Assistant Professor - BioChemistry

Mode of Exam:	Online
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No of Questions:	100

Ques # :1

The product of tryptophan metabolism which is known to induce sleep is

1) serotonin
2) melanin
3) melotonin
4) dopamine

Ques # :2

Wernicke-korsackoff syndrome may occure due to

1) deficiency of G6PD
2) defective transketolase
3) Pyruvate kinase
4) Hexokinase

Ques # :3

Mucopolysaccharidoses are inherited lysosomal storage disease. They are caused by:

1) An increased rate of synthesis of carbohydrate component of proteoglycans
2) The synthesis of polysaccharides with an altered structure
3) An insufficient amount of proteolytic enzymes
4) Defects in the degradation of GAGs in proteoglycans

Ques # :4

Respiratory distress syndrome in premature infants is due to the deficiency of:

1) Plasmalogen
2) Dipalmitoyl lecithin
3) Cardiolipin
4) Cephalin

Ques # :5

Virilization is caused by the deficiency of which of the hydroxylase

1) 17-hydroxylase
2) 11-hydroxylase
3) 21-hydroxylase
4) 22-hydroxylase

Ques # :6

Which of the following lipoprotein particles are most likely resposible for the milky appearance of the plasma

1) Chylomicrones
2) Very-low density lipoproteins
3) intermediate density lipoproteins
4) low-density lipoproteins

Ques # :7

The following nucleoside is used in the treatment of oratic aciduria

1) Adenosine
2) Uridine
3) Guanosine
4) Thymidine

Ques # :8

which one of the following enzymes is used as an anticancer drug

1) Urokinase
2) Asparaginase
3) Streptokinase
4) papain

Ques # :9

All the following enzymes complexes of respiratory chain act as a proton pumps except

1) Complex-I
2) Complex-IV
3) Complex-II
4) Complex-III

Ques # :10

In rhodopsin, vitamin-A is in form of:

1) All-trans-retinal
2) 11-cis-retinol
3) 11-cis-retinal
4) All-trans-retinol

Ques # :11

Vitamin-C is essential for the post-translational modification of the following amino acid in collagen

1) Proline and Lysine
2) Histidine and Methionine
3) Proline and Cysteine
4) Lysine and Arginine

Ques # :12

Ingestion of sodium benzoate in man result in an increase in urinary excretion of :

1) Phenyl pyrivic acid
2) glyoxalic acid
3) Oxalic acid
4) Hippuric acid

Ques # :13

The limiting amino acid in rice and wheat protein are:

1) Cysteine,Methionine
2) Arginine,Histidine
3) Aspartate,glutamate
4) Lysine,Threonine

Ques # :14

Which of the following proteins provide tyrosine residues for iodination during thyroid hormone synthesis:

1) Thyroglobulin
2) Thyroid binding globulin
3) Thyroid binding prealbumin
4) all of the above

Ques # :15

Following staements regarding insulin are correct except:
1) induces glucokinase activity
2) inhibition of acetyl-CoA carboxylase
3) converts glycogen phosphorylase in activity form
4) stimulates fatty acid synthase activity

Ques # :16

What is untrue of steroid hormone
1) steroid receptor complex enters nucleus
2) synthesized from cholesterol
3) binds to specific receptor protein in cytosol
4) stimulates adenyl cyclase activity

Ques # :17

Many antimicrobials inhibit protein translation. Which of the following antimicrobials is correctly paired with its mechanism of action
1) Tetracyclines inhibit peptidyltransferase
2) Diptheria toxin binds to the 30S ribosomal subunit
3) Puromycin inactivates EF-2
4) Erythromycin binds to the 50S ribosomal subunit

Ques # :18

which of the following is the basis for the intestine specific expression of apoprotein B-48
1) DNA rearrangement and loss
2) RNA editing
3) RNA alternative splicing
4) DNA transposition

Ques # :19

Which of the following is best described as being trans-acting
1) CAP site
2) Operator

3) Promoter
4) Repressor

Ques # :20

The DNA polymerase used in the polymerase chain reaction is derived from the following bacteria

1) Haemophilus aegypticus
2) Thermus aquaticus
3) Escherichia coli
4) Haemophilus influenzae

Ques # :21

The first human protein produced by recombinant technology

1) Casein
2) Albumin
3) Insulin
4) Growth hormone

Ques # :22

The mechnism of action of ras protein(a product of ras gene)involves the following signal transduction molecule

1) G-protein
2) ADP
3) cyclic AMP
4) GMP

Ques # :23

All the following oncogenic virus es are DNA viruses except:

1) human papilloma virus
2) retrovirus B
3) Epstein-Barr virus
4) herpes virus type-I

Ques # :24

All the following signalling molecules are involve in mediating the action of growth hormone at subcellular level , except

1) signal transducer and activators of transcription
2) Mitogen activator protein kinase

3) insuline receptor substrate and PI kinase
4) cyclic adenosine monophosphate

Ques # :25

All of the following sugars are found in glycoprotein, except:

1) fructose
2) fucose
3) xylose
4) galactose

Ques # :26

Which one of the following is not a source of oxygen radical

1) action of superoxide dismutase
2) activation of macrophages
3) ultraviolet radiation
4) reaction of beta-carotene with oxygen

Ques # :27

Which of the following is not a component of the cell's suite of damage repair and prevention agents

1) superoxide dismutase
2) Caspase-7
3) Glutothione
4) catalase

Ques # :28

An L-isomer of monosaccharide formed in human body is

1) L-fructose
2) L-Erythrose
3) L-Xylose
4) L-Xylulose

Ques # :29

The following is omega-3 polyunsaturated fatty acid

1) Linoleic acid
2) Alpha-Linolenic acid
3) Gamma-Linolenic acid
4) Arachidonic acid

Ques # :30

Acylsphingosine is also known as:

1) Sphingomylin
2) Ceramide
3) Cerebroside
4) Sulphatide

Ques # :31

Ribozymes are:

1) Protein enzymes acting on RNA
2) Catalytic RNAs
3) not substrate specific
4) Enzymes present in viruses

Ques # :32

Following myocardial infraction, the earliest serum enzymes to rise is:

1) creatine kinase
2) glutamate oxaloacetate transaminase
3) glutamate pyruvate transaminase
4) Lactate dehydrogenase

Ques # :33

Following myocardial infraction, serum creatine kinase returns to normal in about

1) 24 hrs
2) 3 days
3) 5 days
4) 7 days

Ques # :34

Cyanide inhibits the following complex of respiratory chain:

1) Complex II
2) Complex III
3) Complex IV
4) Complex V

Ques # :35

cytochrome oxidase is poisoned by the following except

1) oligomycin
2) hydrogen sulphide
3) carbon monoxide
4) cyanide

Ques # :36

Large doses of niacin

1) Increase serum cholesterol
2) decrease serum cholesterol
3) Increase serum pyruvate
4) decrease serum pyruvate

Ques # :37

Sigmoidal oxygen dissociation curve is property of:

1) Haemoglobin
2) carboxyhaemoglobin
3) myoglobin
4) Methaemoglobin

Ques # :38

Kernicterus can occur in :

1) Crigler-Najjar syndrome type I
2) Crigler-Najjar syndrome type II
3) Rotor's syndrome
4) Gilbert's syndrome

Ques # :39

Glucose is the only source of energy for:

1) Myocardium
2) Kidneys
3) Erythrocytes
4) Thrombocytes

Ques # :40

Dipalmitoyl Lecithin acts as:

1) Platelet activating factors
2) second messenger for hormones

3) lung surfactant
4) anti ketogenic compound

Ques # :41

Synthesis of prostaglandins is inhibited by:
1) Glucocorticoids
2) Glucagon
3) Insulin
4) Progesterone

Ques # :42

Aspirin inhibits:
1) Phospholipase C
2) Phospholipase D
3) Cyclo-oxygenase
4) Lipo-oxygenase

Ques # :43

Hyperuricaemia can occur due to all the following except
1) superactive phosphoribosyl pyrophosphate synthetase
2) hypoxanthine guanine phosphoribosyl transferase deficiency
3) Glucose-6 phophatase deficiency
4) Uricase deficiency

Ques # :44

Severe combined immunodeficiency disease (SCID)can result from deficiency
1) Adenosine kinase
2) Adenosine deaminase
3) Adenine phosphorobosyl transferase
4) hypoxanthine guanine phosphorobosyl transferase

Ques # :45

All the following can occur in Lesch-Nyhan syndrome except
1) Gouty arthritis
2) Uric acid stones
3) Retarded growth
4) Self- mutilating behavior

Ques # :46

Cyclins:
1) are circular DNA double helices
2) are circular polypeptides
3) are protein that regulates cell cycle
4) can undergo phosphorylation and dephosphorylations

Ques # :47

Rifampicin inhibits:
1) Unbinding of DNA
2) Initiation of replication
3) Initiation of translation
4) Initiation of transcription

Ques # :48

Peptidyl transferase activity of 50 S ribosomal subunits is inhibited by :
1) Rifampicin
2) Cycloheximide
3) Erythromycin
4) Chloramphenicol

Ques # :49

Inhibitors of mono amine oxidase prolong the life of :
1) gamma-aminobutyric acid
2) Melanin
3) Melatonin
4) Serotonin

Ques # :50

An extracellular fluid having a higher concentration of chloride than serum is
1) Bile
2) Sweat
3) Cerebrospinal fluid
4) Pancreatic juice

Ques # :51

Zinc deficiency occurs commonly in:

1) Acrodermatitis enteropathica
2) Wilson's disease
3) Xeroderma pigmentosum
4) Menkes' disease

Ques # :52

Autoimmune disease occurs due to

1) impairment of humoral immunity
2) Impairment of cell-mediated immunity
3) Adaptive immune response against self molecules
4) innate immune response against self molecules

Ques # :53

The antibody that acts against helminths is

1) IgA
2) IgE
3) IgG
4) IgM

Ques # :54

The limiting amino acid in pulses is:

1) Leucine
2) Lysine
3) Tryptophan
4) Methionine

Ques # :55

Protein kinase C is activated by:

1) Diacyl glycerol
2) Inositol triphosphate
3) cyclic AMP
4) cyclic GMP

Ques # :56

Ames' assay is a rapid method for detection of

1) Oncoviruses
2) retroviruses
3) Chemical carcinogens

4) typhoid

Ques # :57

Conversion of procarcinogen into a carcinogen ofter requires

1) Proteolysis
2) Cytochrome p-450
3) Exposure to ultra-violet radiation
4) Exposure to X-rays

Ques # :58

Isoelectric pH of Albumin is:

1) 4.7
2) 5.7
3) 6.7
4) 7.7

Ques # :59

Donor of methyl group for the conversion of norepinephrine to epinephrine is:

1) cAMP
2) GTP
3) CoASH
4) SAM

Ques # :60

Squalene is a compound having carbon atoms :

1) 20
2) 27
3) 30
4) 37

Ques # :61

How many amino acids are present in the structure of glucagon hormone?

1) 29
2) 39
3) 49
4) 59

Ques # :62

Major Constituent of honey is:

1) Glucose
2) Galactose
3) Fructose
4) Mannose

Ques # :63

Acetyl-CoA is oxidized in the TCA cycle and is used in liver and which one more organ/tissue for the biosynthesis of fatty acids and triacylglycerol :

1) Kidneys
2) Muscles
3) Adipose tissue
4) Large intestine

Ques # :64

LDL-receptor was discovered by Nobel Laureate :

1) Goldstein
2) Linus Pauling
3) Lipman
4) Krbs, Sir Hans Adolf

Ques # :65

Storage form of iron is :

1) Ferritin
2) Hemoglobin
3) Protoporphyrin IX
4) Heme

Ques # :66

Insulin receptor is a transmembrane:

1) Heteromonomer
2) Heterodimer
3) Heterotrimer
4) Heterotetramer

Ques # :67

The human insulin gene is located on the short arm of chromosome No :

1) 7
2) 11
3) 16
4) 24

Ques # :68

Tendon is composed almost exclusively of :

1) Mucopolysaccharides
2) Prostaglandins
3) Collagen
4) Phospholipids

Ques # :69

Cushing's syndrome is caused due to the excessive secretion of hormone :

1) Glucocorticoids
2) Androgens
3) Catecholamines
4) ACTH

Ques # :70

Ubiquinone is known as :

1) Coenzyme A
2) Coenzyme Q
3) Plastoquinone
4) none of the above

Ques # :71

Tripeptide glutathione is made up of one of the following combination of three amino acids :

1) Glycine, cysteine and glutamic acid
2) Cysteine, alanine and serine
3) Proline, alanine and glycine
4) Threonine, glycine and cystine

Ques # :72

Rennin is also called as :

1) Chymosin

2) Trypsin
3) Chymotrypsin
4) Carboxypeptidase

Ques # :73

In childhood, an idiopathic hypoglycaemia due to the sensitivity of one of the following amino acids has been reported :

1) Leucine
2) Alanine
3) Glycine
4) Cysteine

Ques # :74

Disease associated with HLA gene is :

1) Myasthenia gravis
2) Peptic ulcer
3) Pulmonary tuberculosis
4) Jaundice

Ques # :75

Wernicke - Korsakoff syndrome is found in :

1) Chronic alcoholic cases
2) Chronic banana eaters
3) Chronic smokers
4) Chronic cancer patients

Ques # :76

Human bile contains:

1) Chenodeoxycholic acid
2) 7- dehydrocholesterol
3) Coprostanol
4) Dihydrocholesterol

Ques # :77

Peri-mitochondrial space consists of the enzyme:

1) Adenylate cyclase
2) Pyruvate dehydrogenase complex
3) Citrate synthetase

4) Monoamine Oxidase

Ques # :78

Matrix of mitochondria consists of the enzyme(s) :

1) Enzymes of TCA cycle
2) Enzymes of Glycolytic pathway
3) Nucleoside diphosphokinase
4) HMG CoA synthetase

Ques # :79

Dextrans are highly branched homopolymers of :

1) Glucose units
2) Fructose units.
3) Mannose units
4) Galactose units

Ques # :80

Pancreatic amylase is :

1) alpha amylase
2) beta amylase
3) gamma amylase
4) delta amylase

Ques # :81

Iodine number of butter is :

1) 08
2) 18
3) 28
4) 38

Ques # :82

One of the following is an enzyme activator :

1) Tryptophan
2) Cysteine
3) Arginine
4) Threonine

Ques # :83

Kussmaul breathing is found in :

1) Diabetic coma
2) Severe Heart Attack
3) Malignancy (Cancer)
4) Nephrosis

Ques # :84

Which compound inhibits the activity of enzyme aconitase in TCA cycle

1) Arsenite
2) Malonate
3) AMP
4) Fluoroacetate

Ques # :85

Enzyme pyruvate carboxylase converts pyruvate to :

1) Lactic acid
2) Malate
3) Fumarate
4) Oxaloacetate

Ques # :86

Which of the following reagents would be most useful in determining the N-terminal amino acid of a polypeptide

1) Trypsin
2) Carboxypeptidase
3) Phenylisothiocyanate
4) Cyanogens bromide

Ques # :87

An uncoupler of oxidative phosphorylation such as dinitrophenol :

1) Inhibits electron transport and ATP synthesis
2) Allow electron transport to proceed without ATP systhesis.
3) Inhibits electron transport without impairment of ATP synthesis
4) Specifically inhibits cyt b

Ques # :88

Which one of the following reactions in unique to gluconeogenesis ?

1) Lactate → pyruvate
2) Phosphoenolpyruvate → pyruvate
3) Oxaloacetate → phosphoenlpyruvate
4) Glucose 6-phosphate →fructose 6-phosphate

Ques # :89

Mucopolysaccharidoses are inherited storage diseases caused by :

1) An increased rate of synthesis of proteoglycans
2) The synthesis of polysaccharides with an altered structure
3) Defects in the degradation of proteoglycans
4) The synthesis of abnormally small amounts of protein cores

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Ques # :90

In the absence of the bile selts, glycocholic and taurocholic acid, the intestinal absorption of all of the following would be impeded EXCEPT :

1) Riboflavin
2) Oleic acid
3) Cholesterol
4) Vitamin A

Ques # :91

A patient has a genetic defect resulting in a deficiency of lipoprotein lipase. After eating a meal containing a large amount of fat, one would expect to see a plasma elevation of :

1) Chylomicrons
2) VLDLs
3) LDLs
4) HDLs

Ques # :92

In which one of the following tissues is glucose transport into the cell enhanced by insulin?

1) Brain
2) Lens
3) Red blood cells
4) Adipose tissue

Ques # :93

Which one of the following is elevated in plasma during the absorptive period (compared

to the post absorptive state)

1) Glucagon
2) Acetoacetate
3) Chylomicrons
4) Free fatty acids

Ques # :94

Zona glomerulosa secretes

1) Cortisol
2) Corticosterone
3) Mineralocorticoid
4) Testosterone

Ques # :95

Treatment by introducing enzyme into somatic cells by gene therapy is given in all of the following except :

1) Adenosine deaminase deficiency
2) Phenylketonuria
3) Cystic fibrosis
4) Familial hypercholesterolemia

Ques # :96

Phenyl pyruvic acid in urine is detected by :

1) Guaic acid test
2) Benzidine test
3) Ferric chloride test
4) Guthrie's test

Ques # :97

Dietary changes are not required in :

1) Hemochromatosis
2) Lactose intolerance
3) Wilsons disease
4) Phenylketonuria

Ques # :98

In 100 ml of blood having normal albumin concentration, the maximum quantity of bilirubin that can be bound to high affinity site of albumin is about :

1) 1 mg
2) 10 mg
3) 15 mg
4) 25 mg

Ques # :99

The following is a harmless condition :

1) Gilbert’s syndrome
2) Crigler- Najjar syndrome
3) Rotor syndrome
4) Dubin- Johnson syndrome

Ques # :100

Okazaki pieces are made up of :

1) RNA
2) DNA
3) RNA and DNA
4) RNA and Proteins
