

Department of Biochemistry GMC Surat
Second MCQ Test 25/04/2016 Duration 50 minutes

Please select the best option. *No negative marks for wrong answer.*

- Question 1** The following is purely ketogenic amino acid
- A Aspartate
 B Phenylalanine
 C Valine
 D Leucine
- Question 2** Increased $[H^+]$ decreased $[HCO_3^-]$ and decreased PCO_2 seen in
- A Respiratory alkalosis
 B Metabolic acidosis
 C Respiratory acidosis
 D Metabolic alkalosis
- Question 3** Increased concentration of Which molecular, in skeletal muscle, facilitate Cori cycle during exercise?
- A Lactic acid
 B NADH
 C Glucose
 D Pyruvate
- Question 4** The sources of nitrogen atoms in urea are ammonia and _____.
- A Alanine
 B Glutamate
 C Arginine
 D Aspartate
- Question 5** The pathway of metabolic integration is
- A Krebs cycle
 B Beta oxidation
 C HMP Shunt
 D Glycolysis
- Question 6** All of the following coenzymes participate in the transfer of hydrogen and electron EXCEPT
- A PLP
 B NAD^+
 C $NADP^+$
 D FAD
- Question 7** Lesch- Nyhan syndrome is associated deficiency of following enzyme
- A IMP dehydrogenase
 B Xanthine oxidoreductase
 C Hypoxanthine guanine phosphoribosyltransferase
 D Adenine phosphoribosyltransferase
- Question 8** Which of the following compound transport activated fatty acid from cytosol to mitochondria
- A Calathrin
 B Creatin
 C Carnitine
 D Creatinine
- Question 9** DNA polymerase I have all EXCEPT
- A 5' to 3' polymerase activity
 B 3' to 5' polymerase activity
 C 5' to 3' exonuclease activity
 D 3' to 5' exonuclease activity
- Question 10** Which of the following DNA polymerase synthesises primers in 'Eukaryotic cells'?
- A Beta
 B Gamma
 C Delta
 D Alpha

Question 11 The presence of ecosa_____ acid in diet prevents Coronary artery disease

- A tetraeonic
- B hexaeonic
- C trieonic
- D pentanoic

Question 12 Gamma glutamyl cysteinyl glycine is otherwise known as

- A Oxytocin
- B Bradykinin
- C Glutathione
- D Angiotenisin

Question 13 During starvation the main source of energy for brain is

- A Fatty acids
- B Amino acids
- C Ketone bodies
- D Glucose

Question 14 During complete beta oxidation of Palmitic acid there are

- A 7 cycles to produce 8 Acetyl CoA
- B 8 cycles to produce 7 Acetyl CoA
- C 7 cycles to produce 7 Acetyl CoA
- D 8 cycles to produce 8 Acetyl CoA

Question 15 The following enzyme is deficient in phenylketonuria .

- A Phenylalanine reductase
- B Phenylalanine transferase
- C Phenylalanine carboxylase
- D Phenylalanine hydroxylase

Question 16 Okazaki fragments join together to form

- A m-RNA
- B Lagging strand of DNA
- C t-RNA
- D Leading strand of DNA

Question 17 All of the following amino acid contribute to purine synthesis EXCEPT

- A Glutamine
- B Glycine
- C Aspartate
- D Cysteine

Question 18 Biotin takes part in one of the following types of reaction.

- A Transamination
- B Deamination
- C Decarboxylation
- D Carboxylation

Question 19 Which of the following enzyme is key regulator of cholesterol synthesis?

- A Squalene epoxidase
- B HMG coA reductase
- C Squalene synthase
- D HMG coA synthase

Question 20 Which of the following is key regulator enzyme of heme synthesis?

- A Porphobilinogen deaminase
- B PBG synthase
- C Uroporphyrinogen III synthase
- D ALA synthase

Question 21 The following phospholipid is involved in blood clotting.

- A Cephalin
- B Cardiolipin
- C Plasmalogen
- D Lecithin

Question 22 The amino acid which is associated with atherosclerosis is

- A Lysine
- B Alanine
- C Cystenine
- D Homocysteine

Question 23 Which of the following organ has an obligatory requirement for glucose as the fuel?

- A Brain
- B Kidney
- C Adipose tissue
- D Heart

Question 24 The ammonium ions excreted into urine are derived from

- A Glutamine
- B Glutamate
- C Asparagine
- D Aspartate

Question 25 Substrate level phosphorylation is seen in conversion of

- A Acetoacetate to alpha ketoglutarate
- B Fumarate to malate
- C Succinate to fumarate
- D Succinyl CoA to succinate

Question 26 Accumulation of which of the following metabolite in lense of eye causes cataract

- A Sorbitol
- B Xylitol
- C Mannitol
- D Dulcitol

Question 27 The topological stress produced by the separation of DNA strands by

- A DNA ligase
- B DNA helicase
- C DNA polymerase
- D DNA gyrase

Question 28 All of the following enzyme complexes of electron transport acts as proton pump EXCEPT

- A Complex IV
- B Complex III
- C Complex I
- D Complex II

Question 29 Which of the following is key regulatory enzyme of glycolysis?

- A Phosphoglycerate kinase
- B Phosphofructo kinase
- C Hexokinase
- D Pyruvate kinase

Question 30 Hereditary nonpolyposis colon cancer occur due to defect in

- A Nucleotide excision repair
- B Double stranded break repair
- C Base excision repair
- D Mismatch repair

Question 31 Which of the following is not a mechanism for mutation of DNA

- A Substitution of nucleotide.
- B Dimerization of nucleotide.
- C Insertion of nucleotide.
- D Deletion of nucleotide.

Question 32 Hyperventilation is a compensatory respiratory response to

- A Metabolic alkalosis
- B Metabolic acidosis
- C Respiratory alkalosis
- D Respiratory acidosis

Question 33 Which of the following enzyme is related with salvage pathway of purine nucleotide synthesis?

- A PRPP synthase
- B Ribonucleotide reductase
- C HGPRT
- D PRPP reductase

Question 34 The concentration of 24,25 dihydrocholecalciferol (DHCC) is reciprocally related to the concentration of

- A 25(OH)D3
- B 7-dehydrocholesterol
- C 7 hydroxy cholesterol
- D 1,25 DHCC

Question 35 The type of hemoglobin that has least affinity for 2,3 BPG is :

- HbF
- HbA 1C
- HbA
- HbA2

Question 36 The carbon skeleton of the following amino acid is not converted to acetyl CoA.

- Leucine
- Isolucine
- Glycine
- Tryptophan

Question 37 The following glycosaminoglycans is/are responsible for corneal transparency.

- Heparin and heparan sulphate
- Chondroitin sulphate
- Keratan sulphate and dermatan sulphate
- Hyaluronic acid and heparin

Question 38 Which of the following activates lipoprotein lipase ?

- apo A-I
- apo C-II
- apo B-48
- apo B-100

Question 39 Hyperkalemia can occur in case of Diabetic Ketoacidosis due to,

- Decreased of Na⁺
- Increase internalization of H⁺
- Increase production of K⁺
- Increase excretion of HCO₃⁻

Question 40 All of the following are Phase I reactions EXCEPT

- Conjugation
- Oxidation
- Hydrolysis
- Reduction

Question 41 The defect in muscle glycogen phosphorylase causes

- Cori's disease
- Her's disease
- Pompe's disease
- McArdle's disease

Question 42 All of the following are mutant hemoglobin EXCEPT

- HbS
- HbE
- HbC
- HbF

Question 43 LDL receptor recognises the following apoprotein

- apo A-1
- apo B-48
- apo CII
- apo B-100

Question 44 Acetyl CoA is derived from all of the following pathways EXCEPT

- HMP shunt
- Ketolysis
- Beta oxidation
- Glycolysis

Question 45 Which of the following enzyme catalyzes reversible reaction in glycolysis?

- Aldolase
- Phosphofructokinase
- Hexokinase
- Pyruvate kinase

Question 46 Pyruvate dehydrogenase complex contains all EXCEPT

- Thiamine
- Lipoic acid
- Biotin
- FAD & NAD

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Question 47 All of the following are the components of 'Pre initiation complex' EXCEPT

- A Enhancers
- B TF II D
- C TATA box
- D RNAP II

Question 48 All of the following statement about cyt P450 are true EXCEPT

- A It contains heme as prosthetic group
- B It catalyses hydroxylation reaction of xenobiotics
- C All forms of cyt P450 are coded by same gene family
- D Takes part in steroid hormone synthesis

Question 49 The region - 10 bp (upstream) to the transcription initiation site in bacterial cell is called

- A Pribnow box
- B HRE
- C Hongnes box
- D CAAT box

Question 50 Which of the following enzyme is NOT a protein

- A Reverse transcriptase
- B RNA polymerase
- C Peptidyl transferase
- D Restriction endonuclease

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← Please code your student number opposite, and write your name in the box below.

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Answers are to be given on this sheet only

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| Question 2: <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D | Question 19: <input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D | Question 36: <input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D |
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