

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0124]

JANUARY 2024

Sub. Code : 6055

M.B.B.S. DEGREE EXAMINATION  
(For the candidates admitted from the Academic Year 2019-2020)

FIRST YEAR – SUPPLEMENTARY (CBME)

PAPER I – BIOCHEMISTRY

*Q.P. Code: 526055*

Time: 30 Minutes

Maximum : 20 Marks

Answer All Questions

Choose one correct answer in the box provided in the Answer Script.  
No overwriting should be done. Choice should be given in Capital Letters.

III. Multiple Choice Questions:

(20 x 1 = 20)

- All of the following are trioses except:  
A) Maltotriose    B) Glycerose    C) Dihydroxyacetone    D) Glyceraldehyde
- The storage form of vitamin A in mammals is  
A) Retinol    B) Retinoic acid    C) Retinal    D) Beta carotene
- Marilyn Manroe, the famous American model, actress and singer was suffering from insomnia. Her friend introduced her to a street drug “Lilly 33s.”, which is amobarbital!! She died at the age of 36, following intake of few “Lillies”!! Amobarbital acts by inhibiting electron transport from  
A) Complex I to Q    B) Complex II to Q  
C) Complex III to Q    D) Complex IV to Oxygen
- CPTI is activated by all, EXCEPT:  
A) Acyl CoA    B) Malonyl CoA  
C) High ADP/ATP ratio    D) Glucagon
- Liver cannot utilize ketone bodies because of lack of:  
A) Thiolase    B) Thioesterase  
C) Thiophorase    D) Aconitase
- All of the following cells are dependent on glycolysis except  
A) Neurons    B) RBC    C) Renal medulla    D) Red muscle fibres
- A neonate presented with hemolytic anemia. Peripheral smear revealed that it's case of non-spherocytic hemolytic anemia. Pyruvate kinase activity was remarkably low (0.675 U/g Hb). Which of the following explains haemolytic anaemia in this condition?  
A) Low 2,3 BPG production    B) High 2,3 BPG production  
C) High ATP production    D) Failure of Sodium Potassium ATPase pump
- Coenzymes of PDH complex are all except  
A) TPP    B) Biotin    C) FAD    D) NAD
- ALA synthase is an example of  
A) Lyase    B) Ligase    C) Transferase    D) Hydrolase

10. A breast fed infant begins to vomit frequently and lose weight. Several days later she is jaundiced, her liver is enlarged and cataracts are noticed in her lenses. She is diagnosed with classical galactosemia. The enzyme responsible for cataract in this condition is?  
A) Galactose 1 phosphate uridyl transferase      B) Lactase  
C) Aldose reductase      D) Aldolase B
11. The mucopolysaccharide with galactose instead of uronic acid is  
A) Hyaluronic acid      B) Heparin      C) Heparan sulphate      D) Keratan sulphate
12. A premature child presents with Infant Respiratory Distress Syndrome. The neonatologist says the neonate is yet to produce lecithin adequately. All of the following are components of lecithin except  
A) Glycerol      B) Choline      C) Phosphatidate      D) Ceramide
13. The inner non polar lipid core of Chylomicron is made up of  
A) Phospholipid      B) Monoacyl glycerol  
C) Diacyl glycerol      D) Cholesterol ester
14. Arachidonic acid is a fatty acid of which type?  
A) 20:ω6      B) 20:ω3      C) 18:ω6      D) 22:ω3
15. Glucagon stimulates:  
A) Liver glycogen phosphorylase      B) Muscle glycogen phosphorylase  
C) Glucokinase      D) Hexokinase
16. Which of the following is true about uncompetitive inhibition of an enzyme?  
A) Increases  $K_m$       B) Low  $V_{max}$   
C) High  $V_{max}$       D) Normal  $K_m$
17. Thiamine deficiency is diagnosed by the estimation of  
A) RBC transketolase      B) RBC NAD concentration  
C) RBC Glutathione peroxidase      D) RBC Glutathione reductase
18. The enzyme marker for peroxisome is  
A) Catalase      B) Peroxidase  
C) Glucose 6 phosphatase      D) Hexokinase
19. Number of ATPs produced by complete oxidation of stearic acid is  
A) 102      B) 120      C) 106      D) 160
20. Fatty acid oxidation happens in:  
A) Cytoplasm      B) Mitochondria  
C) Endoplasmic reticulum      D) Nucleus

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