GENESIS

(Post Graduation Medical Orientation Centre)

Foundation Batch-1

Total Number- 60 | **Subject: Metabolism** | **Time: 30 Min**

Pass Mark: 42 | Question 16-30 is based on Single answers | **Date: 04/02/20**

1. Omega 6 fatty acids are
a) Linoleic acid
b) Linolenic acid
c) Oleic acid
d) Arachidonic acid
e) Palmitic acid
TFFTF ***[Ref: ABC Biochemistry/5th/P-63]***

2. Transfatty acids
a) Are unsaturated fatty acids
b) Are found in plants
c) Increase plasma LDL- cholesterol level
d) Are formed during hydrogenation of vegetable oils
e) Are source of arachidonic acids in the body
TFTTF

3. Following are the sources of ammonia
a) Purines
b) Phospholipids
c) Glycosaminoglycans
d) Glutamine
e) Amines
TFFTT ***[Ref: ABC Biochemistry-5th/P-220]***

4. Triacylglycerol rich lipoproteins are
a) Chylomicron
b) Low density lipoprotein (LDL)
c) Very low density lipoprotein (VLDL)
d) Intermediate density lipoprotein (IDL)
e) High density lipoprotein (HDL)
TFTTF (Explanation: TAG rich lipo proteins are chylomicron, VLDL & IDL , Cholesterol rich lipoproteins are LDL & HDL. ***[Ref. abc/4th/ 196]***

5. Reactions occurring in mitochondria are
a) Pentose phosphate pathway
b) Ketogenesis
c) Reduction of pyruvate
d) Fatty acid synthesis
e) β-oxidation of fatty acids
FTFFT

6. Respiratory chain impairment is associated with
a) Hypoxic cell injury
b) Lactic acidosis
c) Mitochondrial myopathy
d) Phenyl ketonuria
e) Essential fructosuria
TTTFF

7. Metabolic fates of pyruvate are
a)Synthesis of acetyl-CoA
b) Synthesis of lactic acid
c) Synthesis of alanine
d) Synthesis of cholesterol
e) Synthesis of ketone bodies
TTTFF ***[Ref: ABC Biochemistry-5th/P-160]***

8. Substances synthesized from acetyl CoA include
a) Ketone body
b) Pentose sugar
c) Cholesterol
d) Phosphatidylcholine
e) Fatty acid
TFTFT ***[Ref: ABC Biochemistry-5th/P-173]***

9. Hexose monophosphate shunt generates
a) NADPH
b) FADH
c) NADH
d) GTP
e) Pentose sugar
TFFFT

10. NADPH is required for
a) Reductive biosynthesis
b) Synthesis of nitric oxide
c) Glycolysis
d) TCA cycle
e) Reduction of hydrogen peroxide
TTFFT ***[Ref: ABC Biochemistry-5th/P-167]***

11. Post translational modifications are
a) Limited proteolysis
b) Hydroxylation
c) Splicing
d) Glycosylation
e) Excision of 3' poly-A tail
TTFTF ***[Ref: ABC Biochemistry-5th/P-419,425]***

12. Hormone-sensitive lipase is activated by
a) TSH
b) ACTH
c) Nicotinic acid
d) Prostaglandin E_1
e) Vasopressin
TTFFT

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13. Metabolic fuel for neuron are
a) Glucose
b) Acetoacetate
c) ß-hydroxy butyrate
d) Acetone
e) Fatty acid
TTTFF ***[Ref: ABC Biochemistry-5th/P-138]***

14. Non-functional plasma enzymes are
a) Lactate dehydrogenase
b) Alkaline phosphatase
c) Prostate specific antigen
d) Creatine kinase
e) Troponin
TTFTF

15. Type A lactic acidosis is/are found in
a) Ethanol poisoning
b) Mitochondrial dysfunction
c) Carbon monoxide poisoning
d) Severe anemia
e) Acute liver failure
FFTTF

Each question below contains five suggested answers- choose the <u>one best</u> response to each question (16-30)

New

16. Following is key intermediate in gluconeogenesis
a) Acetyl CoA
b) ∝-ketoglutarate
c) Oxaloacetate
d) Succinyl CoA
e) Glycerol 3-P
C (Ref: ABC Biochemistry/6th edition, Page-159)

17. Rate limiting enzyme for HMP shunt is
a) Glucose 6- phosphate
b) Fructose 6- phosphate
c) Glutathione peroxidase
d) G6PD
e) Superoxide dismutase
D (Ref: ABC Biochemistry/6th edition, Page-163)

18. Coenzyme needed for glycogenolysis
a) NAD
b) Pyrodoxal phosphate
c) Lipoic acid
d) FAD
e) NADP2H
B (Ref: ABC Biochemistry/6th edition, Page-171)

19. Metabolic pathway occurs in RBC is
a) Aerobic glycolysis
b) TCA cycle
c) Deamination
d) Transamination
e) HMP shunt
E (Ref: ABC Biochemistry/6th edition, Page-187)

20. Substrate for β-oxidation is
a) TAG
b) Fatty acid
c) Acetyl CoA
d) Cholesterol
e) Ketone body
B (Ref: ABC Biochemistry/6th edition, Page-193)

21. Followings are correct information about ketone body except
a) Liver is the only ketogenic organ is human body
b) Ketone bodies are not waste product
c) Normal plasma ketone body is >1 mg/dl
d) Acetone is lost via expired air
e) Ketosis means ketonemia with ketonuria
C (Ref: ABC Biochemistry/6th edition, Page-199)

22. Highest TAG containing lipoprotein is
a) VLDL
b) HDL
c) Chylomicron
d) IDL
e) LDL
C (Ref: ABC Biochemistry/6th edition, Page-211)

23. Followings are atherogenic lipoproteins except
a) CM
b) CM remnant
c) VLDL remnant
d) IDL
e) LDL
A (Ref: ABC Biochemistry/6th edition, Page-213)

24. HDL is synthesis & secreted from
a) Kidney
b) Intestine
c) Gallbladder
d) Brain
e) Adipose tissue
B (Ref: ABC Biochemistry/6th edition, Page-218)

25. During fasting condition following preferal fuel are correct except
a) Brain is glucose
b) Adipose tissue is ketone body
c) Cardiac muscle is FA & KB
d) Liver is glucose & amino acid
e) Erythrocyte is glucose
B (Ref: ABC Biochemistry/6th edition, Page-231)

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26. Followings are constituents of Lipoprotein except
a) TAG
b) Cholesterol ester
c) Phospholipid
d) Free cholesterol
e) Chylomicron
E (Ref: ABC Biochemistry/6th edition, Page-210)

27. Coenzyme needed for bile salt & bile acid metabolism
a) NADP2H
b) NAD
c) FAD
d) NADH
e) Pyridoxal phosphate
A (Ref: ABC Biochemistry/6th edition, Page-205)

28. Metabolic pathway occurs in both mitochondria & cytoplasm
a) TCA cycle
b) β- Oxidation of FA
c) HMP short
d) Heme synthesis
e) Glycogensis
D (Ref: ABC Biochemistry/6th edition, Page-186)

29. HSL is inhibited by
a) ACTH
b) TSH
c) Vasopressin
d) Glucagon
e) Insulin
E (Ref: ABC Biochemistry/6th edition, Page-132)

30. Following is low energy phosphate
a) 1,3 bisphosphoglycerate
b) GIP
c) Creatine phosphate
d) AMP
e) CAMP
D (Ref: ABC Biochemistry/6th edition, Page-143)

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