

Roll No. ....

Question Booklet Number

O. M. R. Serial No.

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## M. Sc. (Biotechnology) (Second Semester)

### (NEP) EXAMINATION, 2025-26

#### INTERMEDIARY METABOLISM

Paper Code							
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Questions Booklet  
Series

**D**

Time : 1:30 Hours ]

[ Maximum Marks : 75

#### Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

#### परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, तो उसे तुरन्त बदल लें।

(Remaining instructions on the last page)

(शेष निर्देश अन्तिम पृष्ठ पर)

1. A deficiency of adenosine deaminase severely impairs which cell type leading to SCID ?
  - (A) Neurons
  - (B) Hepatocytes
  - (C) Lymphocytes
  - (D) Erythrocytes
  
2. The first product formed during fatty acid synthesis is usually :
  - (A) Palmitate
  - (B) Stearate
  - (C) Oleate
  - (D) Arachidonate
  
3. The committed step of pyrimidine synthesis in mammals is catalyzed by :
  - (A) Carbamoyl phosphate synthetase II
  - (B) PRPP synthetase
  - (C) Xanthine oxidase
  - (D) Dihydrofolate reductase
  
4. The amino acid that serves as the major carrier of amino groups from muscle to liver for gluconeogenesis is :
  - (A) Alanine
  - (B) Glutamate
  - (C) Glycine
  - (D) Histidine
  
5. The primary lipoprotein responsible for reverse cholesterol transport from peripheral tissues back to the liver is :
  - (A) Chylomicron
  - (B) VLDL
  - (C) LDL
  - (D) HDL
  
6. Which nucleotide pair is correctly matched with its base ?
  - (A) AMP-adenine
  - (B) CMP-cytosine
  - (C) TMP-guanine
  - (D) GMP-thymine
  
7. Which of the following cofactor is essential for the activity of acetyl-CoA carboxylase ?
  - (A)  $\text{NAD}^+$
  - (B) Biotin
  - (C) TPP
  - (D) Vitamin B<sub>6</sub>
  
8. All of the following statements about acetyl-CoA carboxylase are correct except :
  - (A) it catalyzes the rate-limiting step of fatty acid synthesis
  - (B) it requires biotin
  - (C) it is inhibited by cAMP-mediated phosphorylation
  - (D) it is activated by palmitoyl-CoA

9. Allopurinol is a structural analog and inhibitor of :
- (A) HGPRT
  - (B) Adenosine deaminase
  - (C) Xanthine oxidase
  - (D) Ribonucleotide reductase
10. Thymidylate synthase converts dUMP to dTMP using which cofactor ?
- (A) Riboflavin
  - (B) Biotin
  - (C) Tetrahydrofolate derivative
  - (D) Niacin
11. PRPP stands for :
- (A) Phosphoribosyl pyrophosphate
  - (B) Pyruvate ribose phosphate
  - (C) Purine ribosomal phosphate
  - (D) Phosphoribose pyridoxal phosphate
12. Glycogen is the storage form of :
- (A) Glucose
  - (B) Fructose
  - (C) Galactose
  - (D) Lactose
13. Which of the following vitamins is necessary as a coenzyme in the initial steps of fatty acid synthesis ?
- (A) Riboflavin
  - (B) Thiamine
  - (C) Vitamin D
  - (D) Biotin
14. The HMP pathway is also called the :
- (A) Cori cycle
  - (B) Uronic acid pathway
  - (C) Pentose phosphate pathway
  - (D) Glyoxylate cycle
15. The main regulatory enzyme of glycogen synthesis is :
- (A) Glycogen phosphorylase
  - (B) Glycogen synthase
  - (C) Branching enzyme
  - (D) Debranching enzyme
16. Which TCA cycle enzyme is directly inhibited by fluoroacetate via fluorocitrate ?
- (A) Succinate dehydrogenase
  - (B) Aconitase
  - (C) Citrate synthase
  - (D) Malate dehydrogenase
17. The shikimate pathway is important for biosynthesis of :
- (A) Sulfur amino acids
  - (B) Branched-chain amino acids
  - (C) Aromatic amino acids
  - (D) Basic amino acids only

18. The most important source of reducing equivalents for fatty acid synthesis in the liver is :
- (A) oxidation of glucuronic acid
  - (B) oxidation of acetyl coenzyme A
  - (C) the tricarboxylic acid cycle
  - (D) the pentose phosphate pathway
19. The acetyl groups required for cytoplasmic fatty acid synthesis appear in the cytoplasm as a result of the activity of :
- (A) citrate synthetase
  - (B) isocitrate dehydrogenase
  - (C) citrate lyase
  - (D) thiolase
20. Which of the following statements is incorrect ?
- (A) Fatty acid synthesis occurs in cytosol of animal cell
  - (B) Fatty acid desaturation and elongation occurs in ER
  - (C) In diabetes mellitus ketone bodies production increases and results in ketoacidosis
  - (D) None of the above
21. All of the following statements describe phosphoglycerides except :
- (A) they are both amphipathic and amphoteric
  - (B) they arise from phosphatidic acid
  - (C) they are found in cell membranes
  - (D) they are a major store of metabolic energy
22. Which enzyme links glycolysis and PPP by interconverting sugars through carbon transfer reactions ?
- (A) Transketolase
  - (B) Hexokinase
  - (C) Aldolase
  - (D) Pyruvate kinase
23. Which metabolic state is characterized by increased ketone body production due to acetyl-CoA ?
- (A) Fed state
  - (B) High insulin state
  - (C) Starvation
  - (D) High glucose state
24. Asparagine is synthesized from aspartate using :
- (A) Ammonia only
  - (B) Glutamine as amide donor
  - (C) NADH only
  - (D) Biotin enzyme only
25. The functions of gluconeogenesis are described by all of the following statements except :
- (A) it maintains blood sugar levels during fasting
  - (B) it is useful during strenuous exercise
  - (C) it plays a role in countering metabolic acidosis
  - (D) it allows the use of acetyl coenzyme A for glucose production

26. Glycogen synthase is characterized by all of the following statements except :
- (A) the enzyme exists in active and inactive forms
  - (B) uridine diphosphate glucose is a substrate
  - (C) it is activated by phosphorylation
  - (D) it requires a primer strand of glycogen
27. Which of the following are common features of both glycogen synthesis and glycogen breakdown ?
- (A) Both require UDP-glucose
  - (B) Both involve glucose-1-phosphate
  - (C) Both are driven in part by the hydrolysis of pyrophosphate
  - (D) Both use the same enzyme for branching and debranching
28. Which enzyme catalyzes conversion of arginine to urea and ornithine completing cycle ?
- (A) CPS-I
  - (B) Urease
  - (C) Arginase
  - (D) Transaminase
29. Which metabolic intermediate serves as a key junction connecting carbohydrate, lipid, and amino acid metabolism ?
- (A) Acetyl-CoA
  - (B) Pyruvate
  - (C) Citrate
  - (D) Oxaloacetate
30. The immediate precursor of histidine biosynthesis is associated with :
- (A) Urea formation
  - (B) Fatty acid oxidation
  - (C) Heme degradation
  - (D) Ribose-5-phosphate metabolism
31. Acetyl CoA is formed from pyruvate by ..... reaction.
- (A) Dehydration
  - (B) Reduction
  - (C) Oxidative decarboxylation
  - (D) Dephosphorylation
32. The final electron acceptor in lactic acid fermentation is :
- (A)  $\text{NAD}^+$
  - (B) pyruvate
  - (C) oxygen
  - (D) lactic acid

33. Consider the following statements regarding the Citric Acid Cycle. Which of these statements is false ?
- (A) The Citric Acid Cycle takes place in the mitochondrial matrix.
  - (B) Succinate dehydrogenase is located on the inner mitochondrial membrane.
  - (C) One molecule of GTP (or ATP equivalent) is produced per cycle turn.
  - (D) The cycle directly consumes molecular oxygen in one of its steps.
34. Consider the following statements regarding hexokinase and glucokinase. Which of these statements is false ?
- (A) Glucokinase is not inhibited by glucose-6-phosphate unlike hexokinase.
  - (B) Hexokinase is present in most tissues, whereas glucokinase is mainly found in liver and pancreatic  $\beta$ -cells.
  - (C) Hexokinase has a higher  $K_m$  (lower affinity) for glucose than glucokinase.
  - (D) Hexokinase is inhibited by its product glucose-6-phosphate.
35. Which enzyme of the Pyruvate Dehydrogenase Complex uses both FAD and  $NAD^+$  as cofactors ?
- (A) E3-Dihydrolipoyl dehydrogenase
  - (B) E2-Dihydrolipoyl transacetylase
  - (C) E1-Pyruvate dehydrogenase
  - (D) PDH kinase
36. Consider the following statements regarding the Citric Acid Cycle. Which of these statements is correct ?
- (A) Two molecules of  $FADH_2$  are produced per turn of the cycle.
  - (B)  $NADH$  is produced during the conversion of succinate to fumarate.
  - (C)  $FADH_2$  is produced during the conversion of succinate to fumarate.
  - (D)  $NADH$  is produced during the conversion of fumarate to malate.
37. Lesch-Nyhan syndrome involves deficiency of :
- (A) HGPRT
  - (B) APRT
  - (C) CPS-I
  - (D) ADA
38. During glycolysis under anaerobic conditions, the net ATP yield per molecule of glucose is limited to 2. Which of the following best explains this limitation ?
- (A) The ATP produced by substrate-level phosphorylation is consumed in maintaining pH balance.
  - (B) The oxidative phosphorylation step is bypassed due to lack of oxygen.
  - (C)  $NADH$  formed in glycolysis cannot be reoxidized to  $NAD^+$ .
  - (D) Pyruvate is converted into lactate instead of entering the TCA cycle.

39. An increase in cytosolic ATP/AMP ratio in hepatocytes will shift carbohydrate metabolism toward :
- Glycolysis
  - Glycogenolysis
  - Lactate production
  - Gluconeogenesis
40. The complete oxidation of one glucose molecule via Glycolysis + TCA cycle + Oxidative phosphorylation yields about 30-32 ATP in eukaryotic cells. The variation in yield is to :
- The shuttle systems used to transfer cytosolic NADH into mitochondria.
  - The number of protons pumped by Complex IV in the ETC
  - Whether pyruvate dehydrogenase produces NADH or FADH<sub>2</sub>.
  - The ATP cost of citrate transport across the mitochondrial membrane.
41. The c-ring of the F<sub>0</sub> rotor contains multiple c-subunits. The number of ATP molecules synthesized per full rotation of the c-ring depends on :
- The number of β subunits in F<sub>1</sub>
  - The rate of electron flow through Complex III
  - The number of c-subunits in the c-ring
  - The amount of NADH available in the matrix
42. Which of the following explains why succinate dehydrogenase is considered unique among TCA enzymes ?
- It is the only enzyme located in the cytoplasm.
  - It directly couples the TCA cycle to the electron transport chain.
  - It requires both NAD<sup>+</sup> and FAD simultaneously.
  - It catalyzes an irreversible reaction.
43. A defect in peroxisomal beta-oxidation particularly impairs breakdown of :
- Short-chain fatty acids
  - Glycerol
  - Ketone bodies
  - Very-long-chain fatty acids
44. In the absence of oxygen, pyruvate is converted into lactate in muscle cells. Which of the following best explains the metabolic significance of this reaction ?
- To generate extra ATP directly
  - To maintain the proton gradient across the mitochondrial inner membrane
  - To regenerate NAD<sup>+</sup> required for glyceraldehyde-3-phosphate dehydrogenase activity
  - To prevent accumulation of pyruvate which inhibits glycolysis

45. Which enzyme catalyzes the committed step in fatty acid synthesis by converting acetyl-CoA into malonyl-CoA ?
- (A) Fatty acid synthase
  - (B) Thiolase
  - (C) Acetyl-CoA carboxylase
  - (D) Enoyl reductase
46. Which enzyme catalyzes oxidative deamination of glutamate producing ammonia and  $\alpha$ -ketoglutarate ?
- (A) Transaminase
  - (B) Urease
  - (C) Glutamate dehydrogenase
  - (D) Carbamoyl synthetase
47. Which hormone activates adenylate cyclase leading to increased cAMP and stimulation of glycogen breakdown in liver ?
- (A) Insulin
  - (B) Glucagon
  - (C) Estrogen
  - (D) Thyroxine
48. Which enzyme in glycogen metabolism introduces  $\alpha$ -1,6 glycosidic bonds forming branched glycogen structure ?
- (A) Glycogen synthase
  - (B) Branching enzyme
  - (C) Debranching enzyme
  - (D) Phosphorylase
49. Phenylketonuria is due to deficiency of :
- (A) Tyrosinase
  - (B) Transaminase
  - (C) Dopamine oxidase
  - (D) Phenylalanine hydroxylase
50. Which enzyme of glycolysis is regulated by both energy charge and fructose-2,6-bisphosphate ?
- (A) Hexokinase
  - (B) Aldolase
  - (C) Pyruvate kinase
  - (D) Phosphofructokinase-1

51. Which central metabolite integrates carbohydrate, lipid, and protein metabolism by acting as a substrate for multiple pathways ?
- (A) Citrate
  - (B) Pyruvate
  - (C) Oxaloacetate
  - (D) Acetyl-CoA
52. Ketone bodies are synthesized predominantly in the :
- (A) Liver mitochondria
  - (B) Adipocyte cytosol
  - (C) Skeletal muscle
  - (D) Brain
53. Which metabolite serves as a direct precursor for synthesis of heme from TCA cycle intermediate ?
- (A) Oxaloacetate
  - (B) Citrate
  - (C) Malate
  - (D) Succinyl-CoA
54. The urea cycle converts toxic ammonia mainly in the :
- (A) Brain
  - (B) Liver
  - (C) Kidney medulla
  - (D) Intestine
55. Which enzyme deficiency leads to accumulation of glycogen in muscle causing exercise intolerance in McArdle disease ?
- (A) Branching enzyme
  - (B) Liver phosphorylase
  - (C) Muscle glycogen phosphorylase
  - (D) Synthase
56. Which regulatory effect does ATP have on phosphofructokinase-1 in glycolysis ?
- (A) Allosteric activation
  - (B) Allosteric inhibition
  - (C) Covalent activation
  - (D) No effect
57. Which pathway produces glycerol backbone required for triglyceride synthesis from glucose metabolism ?
- (A) Glycolysis
  - (B) PPP
  - (C) TCA
  - (D) Urea cycle
58. Which of the following lipids have a net negative charge ?
- (A) Phosphatidylcholine
  - (B) Cholesterol
  - (C) Phosphatidylserine
  - (D) Phosphatidylethanolamine

59. Which of the following statements is CORRECT ?
- (A) Glycolysis occurs in mitochondria
  - (B) TCA cycle occurs in cytosol
  - (C)  $\beta$ -oxidation occurs in mitochondria
  - (D) HMP pathway occurs in mitochondria
60. Which metabolic process converts excess glucose into fatty acids in liver under high insulin conditions ?
- (A)  $\beta$ -oxidation
  - (B) Lipogenesis
  - (C) Ketogenesis
  - (D) Gluconeogenesis
61. Which enzyme catalyzes reversible conversion of pyruvate to oxaloacetate depending metabolic state ?
- (A) Pyruvate kinase
  - (B) PEPCCK
  - (C) Pyruvate carboxylase
  - (D) Dehydrogenase
62. Which cofactor is essential for decarboxylation of certain amino acids ?
- (A) Pyridoxal phosphate
  - (B) Biotin
  - (C) Niacin
  - (D) Thiamine pyrophosphate
63. The Cori cycle links active muscle with which organ for lactate utilization ?
- (A) Heart
  - (B) Kidney
  - (C) Liver
  - (D) Adipose tissue
64. Which enzyme converts dihydroorotate to orotate in pyrimidine biosynthesis in mitochondria ?
- (A) Dihydroorotate dehydrogenase
  - (B) CPS-II
  - (C) Transferase
  - (D) Kinase
65. Which shuttle transports cytosolic NADH into mitochondria in liver for oxidative phosphorylation ?
- (A) Glycerol-3-phosphate shuttle
  - (B) Malate-aspartate shuttle
  - (C) Citrate shuttle
  - (D) Carnitine shuttle
66. Which enzyme catalyzes the irreversible step converting fructose-6-phosphate to fructose-1,6-bisphosphate in glycolysis ?
- (A) Phosphofructokinase-1
  - (B) Aldolase
  - (C) Hexokinase
  - (D) Enolase

67. Which salvage enzyme converts guanine into GMP using PRPP ?
- (A) HGPRT
  - (B) ADA
  - (C) Kinase
  - (D) Dehydrogenase
68. Malonyl-CoA inhibits :
- (A) Fatty acid synthase
  - (B) Carnitine acyltransferase I
  - (C) Acetyl-CoA carboxylase
  - (D) Hormone-sensitive lipase
69. Which nucleotide intermediate is common precursor for both AMP and GMP synthesis ?
- (A) IMP
  - (B) PRPP
  - (C) XMP
  - (D) CMP
70. Which enzyme catalyzes the rate-limiting step in cholesterol biosynthesis ?
- (A) HMG-CoA reductase
  - (B) HMG-CoA lyase
  - (C) Squalene synthase
  - (D) Acetyl-CoA carboxylase
71. The rate-limiting enzyme of fatty acid synthesis is :
- (A) Hormone-sensitive lipase
  - (B) Acetyl-CoA carboxylase
  - (C) Lipoprotein lipase
  - (D) Thiokinase
72. Assuming they all had the same number of carbon atoms, which of the following has the maximum number of C-H bonds ?
- (A) An unsaturated fat
  - (B) A polyunsaturated fat
  - (C) A polysaccharide
  - (D) A saturated fat
73. The transport of long-chain fatty acyl-CoA into mitochondria requires :
- (A) Carnitine
  - (B) Biotin
  - (C) Lipoic acid
  - (D) Creatine
74. Which enzyme deficiency leads to accumulation of citrulline due to impaired argininosuccinate formation ?
- (A) Arginase
  - (B) Argininosuccinate synthetase
  - (C) CPS-I
  - (D) Transaminase
75. Deficiency of lipoprotein lipase leads to accumulation of :
- (A) Chylomicrons and VLDL
  - (B) LDL only
  - (C) HDL only
  - (D) Free fatty acids

76. Which enzyme is inhibited by phosphorylation under glucagon signaling to suppress glycolysis in liver ?
- (A) Enolase
  - (B) Hexokinase
  - (C) Aldolase
  - (D) Pyruvate kinase
77. Which enzyme catalyzes conversion of glycerol into glycerol-3-phosphate in liver but is absent in adipose tissue ?
- (A) Dehydrogenase
  - (B) Lipase
  - (C) Glycerol kinase
  - (D) Transaminase
78. Which amino acid serves as a major transporter of ammonia from muscle to liver ?
- (A) Alanine
  - (B) Glycine
  - (C) Serine
  - (D) Proline
79. Which enzyme is uniquely activated by  $\text{Ca}^{2+}$  in muscle to increase ATP production during contraction by stimulating TCA cycle ?
- (A) Citrate synthase
  - (B) Malate dehydrogenase
  - (C) Isocitrate dehydrogenase
  - (D) Aconitase
80. Which TCA intermediate accumulation inhibits pyruvate dehydrogenase complex via feedback regulation under high-energy conditions ?
- (A) Citrate
  - (B) Acetyl-CoA
  - (C) Malate
  - (D) Succinate
81. During  $\beta$ -oxidation of a saturated even-chain fatty acid, each cycle produces reducing equivalents and acetyl-CoA; how many NADH and  $\text{FADH}_2$  are produced per cycle ?
- (A) 2 NADH, 1  $\text{FADH}_2$
  - (B) 1 NADH, 1  $\text{FADH}_2$
  - (C) 1 NADH, 2  $\text{FADH}_2$
  - (D) 2 NADH, 2  $\text{FADH}_2$
82. Which metabolite acts as both an allosteric activator of acetyl-CoA carboxylase and inhibitor of phosphofructokinase-1 coordinating lipid synthesis with glycolysis ?
- (A) ATP
  - (B) NADPH
  - (C) Citrate
  - (D) Malonyl-CoA
83. Carbamoyl phosphate synthetase I is allosterically activated by (variant) :
- (A) N-acetylglutamate
  - (B) Ornithine
  - (C) Citrulline
  - (D) Arginine

84. Which metabolic intermediate serves as precursor for both glucose synthesis and amino acid transamination reactions ?
- Pyruvate
  - Acetyl-CoA
  - Citrate
  - Oxaloacetate
85. Maple syrup urine disease affects metabolism of :
- Aromatic amino acids
  - Branched-chain amino acids
  - Sulfur amino acids
  - Acidic amino acids
86. Which mitochondrial carrier transports ADP into matrix in exchange for ATP ?
- Carnitine transporter
  - Pyruvate transporter
  - Phosphate carrier
  - Adenine nucleotide translocase
87. Which step of TCA cycle generates GTP that can be converted into ATP ?
- $\alpha$ -Ketoglutarate  $\rightarrow$  Succinyl-CoA
  - Succinyl-CoA  $\rightarrow$  Succinate
  - Succinate  $\rightarrow$  Fumarate
  - Malate  $\rightarrow$  Oxaloacetate
88. Salvage pathways of purine synthesis are important because they :
- Consume more ATP
  - Destroy uric acid
  - Recycle free bases efficiently
  - Block DNA replication
89. The initial step of bile acid synthesis begins from (variant) :
- Cholesterol
  - Acetyl-CoA
  - Palmitoyl-CoA
  - Glycerol
90. Gout is caused by :
- Uric acid accumulation
  - Ammonia accumulation
  - Lactate accumulation
  - Pyruvate accumulation
91. Pyruvate dehydrogenase complex requires all of the following coenzymes except :
- Thiamine pyrophosphate
  - Lipoic acid
  - Biotin
  - FAD
92. Which enzyme converts glucose-1-phosphate to UDP-glucose in glycogen synthesis ?
- Glycogen synthase
  - UDP-glucose pyrophosphorylase
  - Branching enzyme
  - Phosphorylase
93. FMN and FAD are coenzymes derived from :
- Niacin
  - Pantothenic acid
  - Riboflavin
  - Folic acid

94. Which glycolytic enzyme catalyzes substrate-level phosphorylation producing ATP from ADP using 1,3-bisphosphoglycerate ?
- (A) Hexokinase  
 (B) Phosphoglycerate kinase  
 (C) Pyruvate kinase  
 (D) Enolase
95. Which enzyme is inhibited by glucose-6-phosphate to prevent excessive glucose phosphorylation in hepatocytes ?
- (A) Glucokinase  
 (B) Hexokinase  
 (C) PFK-1  
 (D) Aldolase
96. The removal of two-carbon units from a fatty acyl coenzyme A involves four sequential reactions. Which of the following best describes the reaction sequence ?
- (A) Oxidation, dehydration, oxidation, cleavage  
 (B) Reduction, dehydration, oxidation, cleavage  
 (C) Dehydrogenation, hydration, dehydrogenation, cleavage  
 (D) Dehydrogenation, hydration, hydrogenation, cleavage.
97. Inhibition of dihydrofolate reductase primarily impairs synthesis of :
- (A) Purine and thymidylate nucleotides  
 (B) Aminoacyl-tRNA  
 (C) Ribosomal RNA only  
 (D) Carnitine
98. The first pyrimidine nucleotide formed in de novo pyrimidine synthesis is :
- (A) UMP  
 (B) CMP  
 (C) TMP  
 (D) GMP
99. A defect in peroxisomal beta-oxidation particularly impairs breakdown of :
- (A) Short-chain fatty acids  
 (B) Very-long-chain fatty acids  
 (C) Ketone bodies  
 (D) Glycero
100. Cerebrosides belong to the class of :
- (A) Sphingolipids  
 (B) Steroids  
 (C) Eicosanoids  
 (D) Waxes

***(Only for Rough Work)***

4. Four alternative answers are mentioned for each question as—A, B, C & D in the booklet. The candidate has to choose the correct answer and mark the same in the OMR Answer-Sheet as per the direction :

**Example :**

**Question :**

Q. 1 (A) ● (C) (D)

Q. 2 (A) (B) ● (D)

Q. 3 (A) ● (C) (D)

Illegible answers with cutting and over-writing or half filled circle will be cancelled.

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.
7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
8. After the completion of the examination candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.
9. There will be no negative marking.
10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
11. To bring and use of log-book, calculator, pager and cellular phone in examination hall is prohibited.
12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

**Impt. :** On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर—A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छँटना है। उत्तर को OMR आन्सर-शीट में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

**उदाहरण :**

**प्रश्न :**

प्रश्न 1 (A) ● (C) (D)

प्रश्न 2 (A) (B) ● (D)

प्रश्न 3 (A) ● (C) (D)

अपठनीय उत्तर या ऐसे उत्तर जिन्हें काटा या बदला गया है, या गोले में आधा भरकर दिया गया, उन्हें निरस्त कर दिया जाएगा।

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
7. ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।
9. निगेटिव मार्किंग नहीं है।
10. कोई भी रफ कार्य, प्रश्न-पुस्तिका के अन्त में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैलकुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

**महत्वपूर्ण :** प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्न-पुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्न-पुस्तिका प्राप्त कर लें।