Roll No. .....

Question Booklet Number

O. M. R. Serial No. | | | | | | | | |

M. Sc. (Biochemistry) (Second Semester)

EXAMINATION, 2022-23

BIOENERGETICS AND INTERMEDIARY METABOLISM

Paper Code						
B	C	H	2	0	0	1

Questions Booklet Series
A

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)

(Only for Rough Work)

1. End product of 3-oxidation of fatty acid is :

(A) fatty acyl-CoA

(B) pyrophosphate

(C) 3-keto fatty acyl-CoA

(D) acetly-CoA

2. Formation of glucose ($C_6H_{12}O_6$) from a source other than CO_2, is known as :

(A) glycolysis

(B) hydrolysis

(C) photolysis

(D) gluconeogenesis

3. Enzyme that combines with non-protein part to form a functional enzyme is :

(A) Holoenzyme

(B) Apoenzyme

(C) Prosthetic group

(D) None of the above

4. An example of gluconeogenesis is :

(A) Krebs cycle

(B) EMP-pathway

(C) HMP-pathway

(D) Glyoxylate cycle

5. The hydrogen carrier components of electron transport chain are :

(A) FAD and UQ

(B) Cytochrome-a and c

(C) Cytochrome-a and b

(D) Cytochrome-b and a

6. Druing gloxylate cycle acetyl-CoA converts into :

(A) 3-hydroxyacyl-CoA

(B) fatty acyl-CoA

(C) keto fatty acyl-CoA

(D) citric acid

7. Enzyme that forms the peptide bond is known as :

(A) Peptidase

(B) carboxylase

(C) amidase

(D) peptidyl transferase

8. A Harden and Young's ester is :

(A) fructose-6-phosphate

(B) dihydroxyacetone phosphate

(C) fructose 1, 6-diphosphate

(D) 2-phosphogtyceric acid

9. Glucose 6-phosphate is also known as :

(A) Newberg's ester

(B) Robinson's ester

(C) Harden and Young's ester

(D) None of the above

10. Fructose 1, 6-diphosphate is converted into Fructose 6-phosphate in the presence of :

(A) aldolase

(B) phosphatase

(C) epimerase

(D) transmutase

11. Which one of the following is Pasteur's effect ?

(A) Breakdown of carbohydrates remains same both in aerobic and anaerobic conditions.

(B) Breakdown of carbohydrates is lower in anaerobic than in aerobic condition.

(C) Rate of carbohydrate breakdown is inhibited by O_2.

(D) None of the these

12. Respiratory quotient is determined by the formula :

(A) O_2 evolved/CO_2 absorbed

(B) CO_2 evolved/CO_2 absorbed

(C) C_2 absorbed × CO_2 evolved

(D) CO_2 absorbed × O_2 evolved

13. Which of the following is an inhibitor of mitochondrial electron transport system ?

(A) amytal

(B) rotenone

(C) piericidin

(D) All of the above

14. The point in cellular respiration at which a particular amino acid enters depends on the :

(A) temperature of the cell

(B) pH of the cell

(C) particular R group of the amino acid

(D) phase of cellular respiration that needs fuel

15. Fatty acids enter cellular respiration as :

(A) one-carbon fragments

(B) two-carbon fragment

(C) three-carbon fragments

(D) long chains of 20 carbon atoms

16. The electron transport chain is a group of molecules located in the :

(A) inner membrane of the mitochondria

(B) intermembrane space of the mitochondria

(C) matrix of the mitochondria

(D) outer membrane of the mitochondria

17. The inner membrane of the mitochondria is very selective about what it normally allows to enter to organelle. One molecule it regularly allows in is :

(A) citric acid

(B) ATP

(C) glucose

(D) pyruvic acid

18. The Krebs citric acid cycle and terminal electron transport take place :

(A) within the nucleus

(B) in the cytoplasm but outside the organelles

(C) on the rough endoplasmic reticulum

(D) mitochondrial matrix

19. Photophoshorylation in a chloroplast is most similar to which of the following mitochondrial reactions ?

(A) oxidative phosphorylation

(B) hydrolysis

(C) oxidative decarboxylation

(D) substrate-level phosphorylation

20. Production of NADPH in a chloroplast takes place during :

(A) cyclic photophosphorylation

(B) non-cyclic photophosphorylation

(C) series photophosphorylation

(D) substrate-level photophosphory-lation

21. Some important hormones involved in carbohydrate metabolism are :

(A) insulin, glucagon, epinephrine and parathormone

(B) insullin, glucagon, epinephrine and glucocorticoids

(C) insulin, glcuagon, calcitonin and glucocorticoids, neotin, glucagon and insulin

(D) epinephrine

22. The pathway of Krebs cycle used for the synthesis of the amino acids :

(A) glutamic acid and aspartic acid

(B) alanine and glycine

(C) glutamic acid and valine

(D) arginine and tryptophan

23. In Krebs cycle FAD is the electron acceptor during the conversion of :

(A) succinyl CoA to succinic acid

(B) α-keto glutaraic acid to succinyl CoA

(C) fumaric acid to malic acid

(D) succinic acid to fumaric acid

24. With reference to the release of energy in the living cell, consider the following statements :

1. In the aerobic degradation of a mode of glucose, the conversion of malic acid into oxaloacetic acid results in the net gain of 4 ATP molecules.
2. When succinic acid is oxidized to fumaric acid, two hydrogen ions and two electrons are removed from succinic acid.
3. In muscle cell, a relatively small amount of ATP is present, but a larger supply of creatine phosphate exists.
4. Nitrogen is a constituent of creatine phosphate.

Which of the above statements are correct ?

(A) 1, 2 and 3

(B) 2, 3 and 4

(C) 1 and 4

(D) 1, 2, 3 and 4

25. Four different types of lipoproteins are present in human plasma. The correct order of lipoproteins according to their increasing density is :

(A) VLDL, Chylomicrons, LDL, HDL

(B) Chylomicrons, VLDL, LDL, HDL

(C) VLDL, LDL, Chylomicrons, HDL

(D) VLDL, LDL, HDL, Chylomicrons

26. Consider the following enzymes of glycolytic pathway :

1. glyceraldehyde-3-phosphate dehydrogenase
2. enolase
3. pyruvate kinase
4. phosphoglycerate kinase

The correct order in which they appear in the pathway is :

(A) 2, 1, 4, 3

(B) 3, 2, 1, 4

(C) 4, 3, 2, 1

(D) 1, 4, 2, 3

27. Out of the following, which is the rate limiting enzyme is glycolysis ?

(A) pyruvate kinase

(B) phosphofructokinase

(C) phosphoglucoisomerase

(D) glucokinase

28. The post-ovulatory regression of the corpus luteum is caused by :

(A) a decrease in LH secretion

(B) a decrease in FSH secretion

(C) reduction in the steroidogenic capacity of the corpus luteum

(D) an increase in HCG secretion

29. Excess of neurotransmitter causes :

(A) increase in the number of active receptors

(B) decrease in the number of active receptors

(C) inactivation of all receptors

(D) modification of receptors

30. When parathyriod gland is surgically removed from a mammal, the blood level of :

(A) calcium and phosphorus increase

(B) calcium the phosphorus decrease

(C) calcium increases while that of phosphorus decreases

(D) calcium decreases while that of phosphorus increases

31. Oxytocin does not cause :

(A) myoepithelial cell contraction

(B) myometrial contraction

(C) milk ejection

(D) lactogenesis

32. Which one of the following statements is correct ?

(A) Simple lipids are esters of fatty acids with various alcohols.

(B) Complex lipids are esters of fatty acids with various alcohols.

(C) Phospholipids contain only fatty acids and an alcohol.

(D) Neutral lipids are cholesterols and waxes.

33. Which one of the following is not a neuropeptide hormone ?

(A) ADH

(B) Oxytocin

(C) Somatomedin

(D) TRH

34. Pantothenic acid is a constitutent of the coenzyme in :

(A) acetylation

(B) decarboxylation

(C) oxidation

(D) reduction

35. Cyclic AMP (cAMP) is degraded to AMP by an enzyme called :

(A) restriction endonculease

(B) adenyl cyclase

(C) phosphodiesterase

(D) ATPase

36. At the completion of glycolytic process the products formed are :

(A) two pyruvic acid molecules

(B) two lactic acid molecules

(C) one molecule each of lactic acid and ethanol

(D) two acetyl coenzyme molecules

37. Which one of the following glycolytic enzymes is inhibited by fluoride ?

(A) lactate dehydrogenase

(B) pyruvate kinase

(C) enolase

(D) hexokinase

38. The form of energy that is used universally by living organisms is :

(A) Solar

(B) Heat

(C) Chemical

(D) ATP

39. The addition of a phosphate group to a compound is called :

(A) Phosphorylysis

(B) Phosphorylation

(C) Phosphorogenesis

(D) Photophosphorylation

40. Epinerprine and norepinephrine function as both hormones and :

(A) fuels for cellular respiration

(B) neurotransmitters

(C) joint to promote action potentials

(D) solutes to promote osmotic flow

41. The main function of norepinephrine is to increase :

(A) blood pressure

(B) urine production

(C) cellular respiration

(D) the release of epinephrine

42. From the oxidation of one molecule of palmitic acid (fatty acid), the number of ATP molecules gained as net are :

(A) 132

(B) 129

(C) 33

(D) 102

43. Which one of the following groups of amino acid contains sulphur ?

(A) cystine, methionine and cysteine

(B) arginine, citrulline and ornithine

(C) glycine, proline and serine

(D) leucine, lysine and methionine

44. Consider the following enzymes :

1. Oxygenases
2. Oxidases
3. Dehydrogenases
4. Peroxidases

Which of these enzymes are involved in the transfer of electrons of the hydrogen atoms of the substrate to oxygen and removal of hydrogen from the substrate and passing it directly to oxygen ?

(A) 1 and 4

(B) 2 and 4

(C) 1 and 3

(D) 2 and 3

45. Carbon monoxide inhibits mitochondrial electron transport by :

(A) inhibiting the electron transfer of complex I

(B) blocking electron transport at the level of the cytochrome-b-cytochrome-c complex

(C) binding to the oxygen-binding site of cytochrome oxidase

(D) binding to haemoglobin in the erythrocytes and therefore blocking the transport of oxygen to tissues

46. The effect of insulin on glucose transport is to :

(A) permit transport against a concentration gradient

(B) enhance transport through the intestinal mucosa

(C) enhance transport into the brain

(D) enhance transport across the cell membrane

47. The hormone secretin is produced in :

(A) pancreas and influences conversion of glycogen into glucose

(B) small intestine and stimulates pancreas

(C) adrenal glands and accelerates heart beat

(D) testes and produce male secondary sexual characters

48. Biological action the estrogens include all of the following, except :

(A) decreased glucose tolerance

(B) increased serum cholesterol

(C) stimulation of follicular growth

(D) delayed bone loss at menopause

49. Consider the following processes :

1. Breakdown of creatine phosphate
2. Conversion of ATP into ADP
3. Formation of lactic acid
4. Formation of fructose diphosphate

The correct sequence of these events during muscular contraction is :

(A) 4-3-2-1

(B) 2-1-4-3

(C) 4-1-2-3

(D) 2-3-4-1

50. In the respiratory chain, the only soluble cytochrome is :

(A) cytochrome-a

(B) cytochrome-b

(C) cytochrome-c

(D) cytochrome-a_3

51. Aldosterone, a mineralocorticoid produced by the adrenal cortex acts on the renal tublues to promote :

(A) retention of Na^+ and excretion of K^+ K and H

(B) retention of Na

(C) retention of K and H^+ and excretion of Na^+

(D) excretion of Ca and retention of Mg^{++}

52. Trypsin differs from pepsin in that :

(A) trypsin digests protein in an acidic medium while pepsin does so in an alkaline medium.

(B) trypsin digests protein in an alkaline medium while pepsin does so in an acidic medium.

(C) trypsin is secreted from the gastric glands while pepsin in secreted from the pancreas.

(D) trypsin production is influenced by peptidergic neurohormones, while pepsin is influenced by steroids.

53. Which of the following statements is correct ?

(A) Thyroid gland is ectodermal in origin.

(B) Parafollicular cells of thyroid secrete thyroxine.

(C) Lower temperature, pregnancy and high altitude, all stimulate secretion of thyroxine.

(D) Secretion of thyroid gland is directly proportional to the blood level of thyroxine.

54. Lowered pH results in :

(A) increase in O_2 affinity of respiratory pigments

(B) decrease in O_2 affinity of respiratory pigments

(C) decrease in the number of red blood corpuscles

(D) increase in the number of red blood corpuscles

55. A steroid hormone typically alters the activity of target cells by :

(A) digesting holes in the cells' plasma membrane

(B) entering the cell and altering gene expression

(C) digesting holes in the cells lysosomes

(D) passing its message to an intracellular messenger

56. A decrease in the level of estrogens and progesterone causes :

(A) growth and dilation of myometrium

(B) growth of endometrium

(C) constriction of uterine blood vessels leading to sloughing of endometrium of uterine epithelium

(D) release of ovum from the ovary

57. Reduced NADPH(H^+) coenzyme produced in respiration during :

(A) Glycolysis

(B) PPP

(C) Krebs cycle

(D) Terminal oxidation

58. The enzymatic reaction for which thiamine pyrophosphate functions as a cofactor is :

(A) fixation of carbon dioxide

(B) peptide bond formation

(C) phosphate group transfer

(D) decarboxylation of α-keto acids

59. Which one of the following compounds is not a constituent of the transport system ?

(A) Carnitine

(B) Cytochrome

(C) Nicotainamide adenine dinucleotide

(D) Uniquinone

60. In glycolysis in addition to pyruvic acid ATP two molecules of ..... are made.

(A) ATP

(B) ATP and NADH

(C) $NADH_2$

(D) NADH

61. In alcoholic fermentation by yeasts the NADH, produced during glycolysis is used to reduce :

(A) acetaldehyde to ethanol

(B) NADP to NADPH

(C) pyruvic acid to lactic acid

(D) lactic acid to pyruvic acid

62. Even through most intestinal bacteria are fermentation their growth is not limited by the low efficiency of fermentation because they have :

(A) Unlimited supply of O_2

(B) Limited supply of CO_2

(C) Unlimited supply of nutrient supply

(D) None of the above

63. Which of the following is a phospholipid ?

(A) Sphingomyelin

(B) Oleic acid

(C) Prostaglandin

(D) Glycogen

64. Aldosterone helps in the :

(A) conservation of sodium, water and elimination of potassium

(B) elimination of sodium, potassium and water

(C) conservation of potassium, water and elimination of sodium

(D) conservation of sodium, potassium and water

65. What is the correct sequence of the following events ?

1. Release of beta endorphin
2. No ovulation
3. Suppression of Gonadotropin releasing hormone
4. Breast feeding

Select the correct answer using the codes given below :

(A) 1, 4, 3, 2

(B) 1,4, 2, 3

(C) 4, 1, 2, 3

(D) 4, 1, 3, 2

66. What is the correct sequence in Ornithine Cycle of urea formation ?

1. ornithine
2. arginine
3. arginosuccinic acid
4. urea
5. citrulline

Select the correct answer using the codes given below :

(A) 1, 2, 3, 5, 4

(B) 1, 5, 3, 2, 4

(C) 1, 5, 2, 3, 4

(D) 1, 3, 5, 2, 4

67. Phosphofructokinase I is inhibited only by :

(A) ATP only

(B) Hexokinase

(C) Both ATP and citrate

(D) Isocitrate dehydrogenase

68. Brown fats dissipate heat energy because :

(A) the protons inside the membrane reemain in the matrix

(B) the protons passes through FoFI complex to yield ATP

(C) oxidation process inside the Golgi complex

(D) oxidation process is fast as compared with yellow fats

69. Mutations in the mitochondrial DNA are known to cause the human disease called :

(A) UCP

(B) LHON (Leber' hereditary optic neuropathy)

(C) MERRF (myoclonicepilepsy and regged-red fiber disease)

(D) PKU

70. A molecule that loses a hydrogen atom is said to have been oxidized, because a hydrogen atom contains :

(A) an electron

(B) a proton

(C) an ion

(D) a nucleus

71. The first pentose sugar formed in PPP of respiration in :

(A) Ribulose 5-phosphate

(B) Ribose 5-phosphate

(C) Xylulose 5-phosphate

(D) Deoxyribose 5-phosphate

72. Floating respiration utilizes ..... as substrate.

(A) Proteins

(B) Fats

(C) Carbohydrates

(D) Starch

73. Which of the following statements is wrong ?

(A) RQ = Volume of O_2 absorbed/ Volume of CO_2 evolved

(B) RQ = $CO_2/O_2 = 1$ (Carbohydrates)

(C) RQ = $CO_2/O_1 < 1$ (Carbohydrates)

(D) RQ = $CO_2/O_2 > 1$ (Organic acids)

74. Protoplasmic respiration utilizes ..... as substrate.

(A) Proteins

(B) Fats

(C) Carbohydrates

(D) Organic acid

75. One molecule of glucose contains about ..... calories on energy in the form of bands.

(A) 690,000

(B) 690,00

(C) 690,0000

(D) 690.0

76. Alcoholic fermentation differs from other anaerobic respiration in being :

(A) intercellular

(B) intracellular

(C) extracellular

(D) internucleolar

77. In anaerobic respiration Krebs cycle is replaced by :

(A) Photorespiration

(B) Hexose monophosphate shunt

(C) Floating respiration

(D) Entner-Duodrof pathway

78. The inhibition of sugar breakdown due to the presence of oxygen under aerobic conditions is called :

(A) Dixon's effect

(B) Hill's effect

(C) Horecker's effect

(D) Pasteur's effect

79. Which can respire in the absence of oxygen ?

(A) Chlorella

(B) Yeast

(C) Fish

(D) Mammal

80. Two compounds required for CO_2 fixation are :

(A) Hydrogen sulphide and oxygen

(B) Fumaric acid and ATP

(C) NADPH and ATP

(D) Cytochrome and ATP

81. Which of the following is an example of an energized nucleotide ?

(A) GMP

(B) dCMP

(C) UMP

(D) dCTP

82. Biosynthesis of both RNA and proteins is dependent upon the nucleotide sequence of :

(A) mRNA

(B) DNA

(C) tRNA

(D) rRAN

83. The most active form of Vitamin D is :

(A) 25-hydroxyergocalciferol

(B) 24, 25-dihydroxycholecalciferol

(C) 21, 25-dihydroxycholecalciferol

(D) 1, 25-dihydroxycholecalciferol

84. During chemical transmission, the following events occur at synaptic junction :

1. Transmitters cross synaptic cleft and attach to receptors on the post-synaptic neurons.
2. Post-synaptic membranes are depolarized, initiating the impulse.
3. Chemical excitation at the pre-synaptic terminal and release of neurotransmitters.
4. Immediately after the impulse is triggered, the recovery of pre- and post-synaptic membranes follows and neurotransmitter is destroyed.

The correct sequence of these events is :

(A) 1, 3, 4, 2

(B) 3, 1, 2, 4

(C) 3, 1, 4, 2

(D) 1, 3, 2, 4

85. The testis exerts its negative feedback influence on the pituitary gonadotropins through :

(A) Progesterone, inhibin and dopamine

(B) progesterone and inhibin

(C) inhibin and testosterone

(D) porgesterone, testosterone and dopamine

86. Consider the following hormones :

1. Antidiuretic hormone
2. Aldosterone
3. Parathormone
4. Oxytocin

In the vertebrate animals, the hormones involved the control of osmoregulation would include :

(A) 1, 2, 3 and 4

(B) 1, 2 and 3

(C) 1 and 2

(D) 2 and 4

87. Which one of the following cells secrete testosterone ?

(A) Spermatogoniam

(B) Leydig cell

(C) Sertoli cells

(D) Spermatocyte

88. If an aqueous homogenate of the gastric mucosa of rabbit is heated to 70ºC and cooled down to room temperature and if this sample is then allowed to react with egg white, the enzyme substrate reaction will not take place because the :

(A) pH of the medium has been altered.

(B) protein is denatured on heating to a higher temperature.

(C) conenzymes are absent.

(D) concentration of hydrochloric acid has been altered during heating.

89. Uncoupling agents like 2, 4-dinitrophenol influence mitochondrial function by :

(A) inhibiting phosphorylaion

(B) stimulating phosphorylation and inhibiting respiration

(C) stimulating both respiration and phosphorylation

(D) inhibiting both respiration and phosphorylation

90. Which of the following substances function as neurotransmitters ?

1. Catecholamine
2. Acetylcholine
3. Physostigmine
4 Pilocarpine

Codes :

(A) 1 and 3

(B) 1 and 2

(C) 3 and 4

(D) 2 and 3

91. Triosephosphate dehydrogenases in glycolysis and Calvin's cycle are not exactly identical enzyme because :

(A) these are separated compartementally.

(B) glycol sis takes place both in light and darkness while Calvin's cycle does not require light.

(C) in glycolysis, it is NAD-linked, while in Calvin's cycle, it is NADP-linked.

(D) in glycolysis it is associated with catabolic reactions, while in Calvin's cycle, it is associated with anabolism.

92. During the glyoxylate cycle, four-carbon oxaloacetate is generated from two-carbon acetate. The correct sequence in which the intermediate compounds appear from citrate is :

(A) citrate, succinate, fumarate, glyoxylate

(B) citrate, fumarate, glyoxylate, malate

(C) citrate, isocitrate, glyoxylate, malate

(D) citrate, isocitrate, malate, glyoxylate

93. Which of the following enzymes are located in the cytoplasm ?

1. enzymes of glycolysis
2. enzymes of hexose monophosphate shunt
3. enzymes of oxidative phosphorylation

Select the correct answer using the codes given below.

Codes :

(A) 1, 2 and 3

(B) 1 and 3

(C) 2 and 3

(D) 1 and 2

94. Which one of the following is the correct set of components required to fulfil the respiratory needs of the animal ?

(A) Source of oxygen, a respiratory surface, respiratory pigment and respiratory medium

(B) Source of CO_2, a respiratory surface, respiratory pigment and respiratory medium

(C) Source of oxygen, source of CO_2, a respiratory surface and respiratory pigment

(D) Water, source of oxygen, respiratory pigment and respiratory medium

95. Entner-Doudoroff pathway is found in :

(A) Gram–negative becateria

(B) Fungi only

(C) Eukaryotes only

(D) Both prokaryotes and eukaryotes

96. Which one produces more energy per glucose molecule ?

(A) Alcoholic fermentation

(B) Glycolysis

(C) Pentose-phosphate pathway

(D) Lactic acid fermentation

97. Enzymes of PPP of aerobic respiration are found in :

(A) Mitochondria

(B) Mitochondria and cytosol

(C) Cytosol

(D) Cytosol and E.R.

98. Phosphogluconate shunt occurs in :

(A) Mitochondria

(B) Chloroplasts

(C) Cytoplasm

(D) Both (A) and (B)

99. Pentose-phosphate pathway is a mode of :

(A) Amphibolic pathway

(B) Anabolic pathway

(C) Aerobic respiration

(D) Anaerobic respiration

100. Which one undergoes decarboxylation in hexose monophosphate shunt :

(A) Glucose 6-phosphate

(B) 6-glucono y-lactone

(C) 6-phosphogluconate

(D) Fructose 6-phosphate

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 ny 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 छाँटना 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।