Roll. No. .....

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

Question Booklet Number

B.Sc. (PART-II) EXAMINATION, 2021
BIOTECHNOLOGY (OLD COURSE)
[PAPER First (BBT-201)]
(Instrumentation & Analytical Techniques)

2

Paper ID		
5	0	2

Question Booklet Series
C

Time : 1 : 30 Hours **Max. Marks : 150**

Instructions to the Examinee :

1. Do not open this Booklet untill you are told to do so.

2. Candidates should fill their roll number, subject and series of question booklet details correctly, otherwise, in case of any discrepancy in the evaluation, it will be the responsibility of the examinee himself.

3. There are 100 questions in the booklet. Examinee is required to answer only 75 questions in the OMR Answer Sheet provided. Four alternative answer to each question are given below the question, out of these four only one answer is correct. The answer which you think is correct or most appropriate, completely fill in the circle containing its letter in your answer sheet (O.M.R. Answer Sheet) with black or blue ball point pen.

परीक्षार्थियों के लिए निर्देश :

1. जब तक कहा न जाये, इस प्रश्नपुस्तिका को न खोलें।

2. परीक्षार्थी अपने अनुक्रमांक, विषय एवं प्रश्नपुस्तिका की सिरीज का विवरण यथास्थान सही-सही भरें, अन्यथा मूल्यांकन में किसी भी प्रकार की विसंगति की दशा में उसकी जिम्मेदारी स्वयं परीक्षार्थी की होगी।

3. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को केवल 75 प्रश्नों का उत्तर दी गई OMR उत्तर-पत्रक में देना है। प्रत्येक प्रश्न के चार वैकल्पिक उत्तर प्रश्न के नीचे दिये गये हैं। इन चारों में से केवल एक ही उत्तर सही है। जिस उत्तर को आप सही या सबसे उचित समझते हैं, अपने उत्तर-पत्रक (O.M.R. Answer Sheet) में उसके अक्षर वाले वृत्त को काले या नीले बॉल प्वाइंट पेन से पूरा भर दें।

(Remaining instructions on last page) *(शेष निर्देश अन्तिम पृष्ठ पर)*

ROUGH WORK

1. Chemical shifts are expressed in units of :

(A) Gauss

(B) mT/m

(C) ppm

(D) Percent (%)

2. Spectroscopy measures the change in behaviour of a molecule when it is exposed to which of the following ?

(A) A centrifugal force

(B) Electromagnetic radiation

(C) An electrical charge

(D) Acidic conditions

3. If the value of the distribution coefficient 'K' is one, then what could be inferred about the distribution of solute ?

(A) Its distribution in stationary phase is greater

(B) Its distribution in mobile phase is greater

(C) It is equally distributed in stationary and mobile phase

(D) It is distributed in random manner

4. Why standard hydrogen electrode is called as primary reference electrode ?

(A) It has a known output potential

(B) It has a constant output potential

(C) Its output potential is independent of the composition of the solution

(D) Its output potential is zero volts

5. In mass spectrometry, fragmentation of ions is achieved through :

(A) Ionization

(B) Splitting

(C) Solubilization

(D) Couplings

6. Glycerol is added to protein samples before they are added to the wells of PAGE. The function of glycerol is to :

(A) Stabilize protein structure

(B) Provide density to the sample

(C) hepls in binding SDS to protein

(D) helps to reduce disulfide bonds by β - mercaptoethanol

7. ^{1}H nuclei located near electronegative atoms tend to be ..... relative to ^{1}H nuclei.

(A) Shielded

(B) Deshielded

(C) Resonanced

(D) Split

8. The dipole magnetic moment (μ) is directly proportional to nuclear spin (I) connected by a constant called :

(A) Gyromagnetic ratio (γ)

(B) Planck's constant (h)

(C) Nuclear susceptibility (x)

(D) Chemical shift (λ)

9. What is Chromophore ?

(A) A coloured compound

(B) A group of atoms in compound responsible for the absorption of electromagnetic radiation

(C) A group of atoms in compound responsible for electromagnetic radiation

(D) A group of atoms in coloured compound

10. To improve a chromatographic separation, you must :

(A) increase the no. of theoretical plates on the column

(B) increase the height of the theoretical plates on the column

(C) increase both the no. and height of the theoretical plates on the column

(D) decrease both the no. and height of the theoretical plates on the column

11. IR spectroscopy exploits the change in what kind of behaviour in the molecules it is used to study ?

(A) molecular vibrations

(B) Nuclear spins

(C) Electron spins

(D) Electronic transition

12. Which of the following is not a type of radiation detector ?

(A) GM counter

(B) Proportional counter

(C) Semiconductor detector

(D) Flame emission detector

13. Liquid Chromatography can be performed in which of the following ways ?

(A) Only in columns

(B) Only in plane surfaces

(C) Either in column or on plane surface

(D) Neither in column nor on plane surface

14. Liquid scintillators are used for which of the following materials ?

(A) Low energy beta materials

(B) High energy beta materials

(C) Low energy gamma materials

(D) High energy gamma materials

15. Nuclei having either the number of protons or neutrons as odd have ..... spin.

(A) Integral Spin

(B) Half-integral Spin

(C) Zero Spin

(D) Positive Spin

16. In gas-liquid chromatography the stationary phase is composed of ..... and the mobile phase is made of ..... .

(A) solid, liquid

(B) liquid, liquid

(C) liquid, gas

(D) solid, gas

17. Which of the following is the commonly used support material for the packed column in gas chromatography ?

(A) Glass

(B) Metal

(C) Diatomaceous earth

(D) Stainless steel

18. Which of the following is the relation between hydrogen and hydroxyl ion conc. of pure water?

(A) Value of H ion conc. is greater

(B) Value of OH ion conc. is greater

(C) They both are always the same

(D) The conc. keep changing

19. In hydrogen electrode, the electrode is placed in a solution of ..... M HCl. Fill in the blank.

(A) 0.5

(B) 1

(C) 2

(D) 3

20. NMR is the study of absorption of ..... by nuclei in a magnetic field.

(A) Radioactive radiation

(B) IR radiation

(C) Radio frequency radiation

(D) Microwaves

21. Mass spectrometer separates ions on the basis of which of the following ?

(A) Mass

(B) Charge

(C) Mol. wt.

(D) Mass to charge ratio

22. For the separation of DNA by electrophoresis, which of the following method is commonly used ?

(A) Agarose - vertical

(B) Agarose - horizontal

(C) PAGE - vertical

(D) PAGE - horizontal

23. The term microscope was coined by :

(A) Janssen and Janssen

(B) Faber

(C) Robert Hook

(D) Leewenhock

24. The fluid exiting a chromatographic column is called the :

(A) eluent

(B) eluate

(C) analyte

(D) elution

25. Which of the following technique is used to study the 3-dimensional structure of a molecule ?

(A) IR spectroscopy

(B) Mass spectrometry

(C) UV - visible spectroscopy

(D) X-ray crystallography

26. Which of the following is not true about HPLC ?

(A) It requires high pressure for the separation

(B) there is no need to vaporize the sample

(C) It is performed in columns

(D) It has high sensitivity

27. Which of the following statement is not true about mass spectrometry ?

(A) Impurities of masses different from the one being analysed interferes with the result

(B) It has great sensitivity

(C) It is suitable for data storage

(D) It is suitable for library retrieval

28. ESR sensitivity increases with ..... temperature and with ..... magentic field strength.

(A) increasing, increasing

(B) increasing, decreasing

(C) decreasing, increasing

(D) decreasing, decreasing

29. In a chromatographic separation, which of the following is most appropriate for the qualitative indentification of a substance ?

(A) Relative retention factor

(B) Retention factor

(C) Retention time

(D) Resolution

30. Which one of the following is necessary for mass spectrometry to occur ?

(A) Loss of an electron

(B) Change of alignment of a proton in a magnetic field

(C) A molecular vibration

(D) Excitation of an electron from the ground state to a higher energy state

31. In native-PAGE the separation of protein is influenced by :

(A) Charge of protein

(B) Size of protein

(C) PI of protein

(D) Both (A) and (B)

32. IR spectroscopy provides valuable information about :

(A) Molecular Weight

(B) Melting point

(C) Conjugation

(D) Functional groups

33. The main advantage of discontinuous buffer system in SDS and native-PAGE is :

(A) Conformation of protein is conserved

(B) Constantly maintain the charge of proteins

(C) Assist in migration of proteins

(D) Enhance resolution of separation

34. Which of the following is not a type of spectroscopy ?

(A) Gamma ray

(B) X-ray

(C) NMR

(D) Sound

35. Chromatography is a physical method that is used to separate and analyse .....

(A) Simple mixtures

(B) Complex mixtures

(C) Viscous mixtures

(D) Metals

36. Which of the following types of chromatography involves the separation of substances in a mixture over a 0.2 mm thick layer of an adsorbent ?

(A) Gas-Liquid

(B) Column

(C) Thin Layer

(D) Paper

37. Which of the following is the value of hydrogen ion concentration of pure water ?

(A) 1×10^{7} moles/liter

(B) 1×10^{5} moles/liter

(C) 1×10^{6} moles/liter

(D) 1×10^{8} moles/liter

38. In X-ray spectrometers the specimen or the sample is placed after which of the following components ?

(A) X-ray tube

(B) Monochromator

(C) Collimator

(D) Detector

39. Mass spectrometer separates ions on the basis of which of the following ?

(A) Mass

(B) Charge

(C) Molecular weight

(D) Mass to charge ratio

40. Electrophoresis is not used for the separation of ..... .

(A) Nucleic acids

(B) Proteins

(C) Amino acids

(D) Lipids

41. Father of microscopy and microbiology is :

(A) Theophrastus

(B) Janssen

(C) Leeuwenhoek

(D) Hooker

42. The pH at which a protein carries a net zero charge is termed which of the following ?

(A) pK_a

(B) pK_b

(C) pI

(D) K

43. Which is the first stage of the 2-D-PAGE ?

(A) SDS - PAGE

(B) HPLC

(C) IEF

(D) Sedimentation

44. 'When nuclear radiations pass through, gas ionization is produced' ? This is the principle of which of the following detectors ?

(A) Proportional counter

(B) Flow counter

(C) G.M. counter

(D) Scintillation counter

45. What is the unit of absorbance which can be derived from Beer-Lambert's is law ?

(A) L mol^{-1} cm^{-1}

(B) L gm^{-1} cm^{-1}

(C) cm

(D) No unit

46. Which of the following cannot be used as adsorbent in column adsorption chromatography ?

(A) Magnesium oxide

(B) Silica gel

(C) Activated alumina

(D) Potassium permanganate

47. Which of the following is the relation between conc. of H and OH ion in an acidic solution ?

(A) Value of H ion conc. is greater

(B) Value of OH ion conc. is greater

(C) They are equal

(D) The conc. keeps changing

48. Which of the following acts as ionizing gas in GM counter ?

(A) Alcohol

(B) Argon gas

(C) Krypton

(D) Hydrogen

49. In mass spectrometer, the sample that has to be analyzed is bombarded with which of the following ?

(A) Protons

(B) Electrons

(C) Neutrons

(D) Alpha particles

50. The ratio of velocity (V) of biomolecule in a medium under constant electric field (E) is called electrophoretic mobility (h). (h) is mathematically expressed as :

(A) $\mu = E / V$

(B) $\mu = V / E$

(C) $\mu = 1 / EV$

(D) $\mu = VE$

51. The particle sedimentation velocity increases with :

(A) increasing viscosity

(B) decreasing difference in density between the 2 phases

(C) increasing diameter

(D) all of the above

52. Which of the following is the distance that the solute moves while undergoing one partition ?

(A) Retention distance

(B) Distribution constant

(C) Plate height

(D) Column packing length

53. What happens during the 'elution from the column' phase chromatography ?

(A) Components with the greatest affinity elute first

(B) Components with least affinity elute first

(C) Components elute in a random manner

(D) Components elute according to their conc. in the mixture

54. In liquid scintillation counter, which of the following is used to convert light into electrical signals ?

(A) Photomultiplier tube

(B) Photoemissive tube

(C) Photovoltaic cell

(D) Photoreflector

55. The procedure for mass spectroscopy starts with which of the following processes ?

(A) Sample is bombarded by electron beam

(B) Ions are separating by passing them into electric and magnetic field

(C) Sample is converted into gaseous state

(D) Ions are detected

56. What is the use of density gradient centrifugation ?

(A) To purify viruses, ribosomes, membranes

(B) To remove dirt

(C) To remove the particles

(D) To remove large particles

57. The base peak in mass spectrum is :

(A) the lowest mass peak

(B) the peak corresponding to the parent ion

(C) the highest mass peak

(D) the peak set to 100% relative intensity

58. Which of the following is not a column-type liquid chromatography ?

(A) Gel permeation

(B) Ion exchange

(C) Liquid - Solid

(D) Paper

59. Electron spin resonance is also known as which of the following ?

(A) Electron paramagnetic resonance

(B) Electron diamagnetic resonance

(C) Electron paramagnetic reoccurrence

(D) Electron diamagnetic reoccurrence

60. Which of the following types of liquid chromatography uses immobilized biochemical as stationary phase ?

(A) Ion-exchange chromatography

(B) Exclusion chromatography

(C) Affinity chromatography

(D) Gel permeation chromatography

61. The k_d values of 4 proteins are given below :

Protein : A = 0, B = 1, C = 1.5, D = 0.5

If the mixture of these protein is loaded on the gel filtration column, which protein will come out last from column ?

(A) Protein A

(B) Protein B

(C) Protein C

(D) Protein D

62. Water in biological samples diffract electron rays and create noise in SEM or TEM images. Water is removed by treating the sample with :

(A) Air dried in a desiccated environment

(B) Overnight with 1% osmium tetraoxide

(C) Graded series of ethanol

(D) 2 – 5% Glutaraldehyde

63. The most appropriate use of detergents in the process of differential centrifugation of cell is :

(A) to separate the cells based on size and density

(B) to lyse the cellular organelles

(C) to lyse the plasma membrane and extract cellular organelles

(D) to keep the contents of the cell contamincant free

64. In hydrophobic interaction chromatography :

(A) the salt conc. of the equilibration buffer should be above the salting out effect

(B) Specific interaction between substrate and enzyme occurs

(C) the hydrophobic patches on the analyte interact with hydrophobic groups on the matrix

(D) the hydrophobic groups present on matrix interact with charged groups on the target proteins

65. In TEM, the electron beam is focused on the specimen with the help of :

(A) Column

(B) Stage

(C) Condenser lens

(D) Projection lens

66. If the length of a gel-filtration column is reduced by half, the k_d of a particular analyte would :

(A) increase by a factor of 2

(B) decrease by a factor of 2

(C) decrease by a factor of 0.5

(D) remain unchanged

67. Strong cation exchanger chromatographic column is based on which of the following ?

(A) Electrostatic attraction between negative sulfonic acid of stationary phase with positive charge on analyte

(B) Analyte molecules with sizes bigger than the pore of the beads of the stationary phase will elute earlier

(C) Hydrophobic interactions between long aliphatic chains of stationary phase and the analyte

(D) A charged battery that gives unique charge to each analyte depending on their molecular weight

68. Electron spin resonance involves detecting of a physical phenomenon of ..... of electromagnetic radiation.

(A) adsorption

(B) absorption

(C) radiation

(D) reflection

69. Function of β-mercaptoethanol in SDS-PAGE is :

(A) to give negative charges to amino acids in the proteins

(B) for the oxidation of disulfide bonds in the proteins

(C) for the reduction of disulfide bonds in the proteins

(D) for breaking H bonds in the proteins

70. Centrifugation is based on :

(A) Patrick's law

(B) McLaren's law

(C) Stoke's law

(D) Stain's law

71. Which of the following is used as a carrier gas in Gas chromatography ?

(A) Carbon dioxide

(B) Oxygen

(C) Helium

(D) Methane

72. Column efficiency is measured in terms of number of theoretical plates, which is :

(A) Inversely related to height equivalent to theoretical plates

(B) Directly related to the peak width

(C) Directly related to height equivalent to theoretical plates

(D) Inversely related to the peak width

73. Which of the following techniques would be most useful to identify and quantify the presence of a known impurity in a drug substance ?

(A) NMR

(B) MS

(C) IR

(D) HPLC

74. The pore size of polyacrylamide gels can be modified according to the protein sizes to be analyzed, how ?

(A) By adjusting the pH of the employed buffer

(B) By using a marker ladder containing higher mol. wt.

(C) By adjusting the ratio of acrylamide to bisacrylamide

(D) By adjusting the temp. during gel preparation

75. What is shielding in NMR ?

(A) Using a curved piece of metal to block an opponent's attack

(B) Putting metal around an R_f source

(C) When the magnetic moment of an atom blocks the full induced magnetic field from surrounding nuclei

(D) Blocking parts of a molecule from R_f radiation

76. In chromatogram, the area under the peak can be used to determine which of the following ?

(A) Component of sample

(B) Amount of component in sample

(C) Column efficiency

(D) Column resolution

77. The reflector of a classroom microscope is :

(A) Convex lens

(B) Concave lens

(C) Concavo-convex lens

(D) Plano-concave lens

78. The tracking dye used in SDS-PAGE will be :

(A) Anionic

(B) Cationic

(C) Non-ionic

(D) Amphipathic

79. A protein 'X' has a molecular weight of 80kDa and it is a heterodimer. How many bands you will observe on gel, if you resolve the protein on SDS-PAGE and native-PAGE ?

(A) 1, 1

(B) 1, 2

(C) 2, 1

(D) 2, 2

80. The type of lenses in a compound microscope are :

(A) 3

(B) 4

(C) 2

(D) 1

81. In sandwich ELISA, the capture antibody :

(A) recognize the avidin/streptavidin HRP complex

(B) act as secondary antibody

(C) binds to primary antibody

(D) binds to antigen in sample

82. In a certain study performed by a group of students on an unknown cell type yielded the following fractions A, B, C and D on 4 steps of centrifugation at 600g, 1000g, 100,000g and 3,20,000g. The different organelles present in A, B, C and D fraction is :

(A) Mitochondria, nucleus, ribosomes, plasma membrane

(B) Plasma membrane, mitochondria, ribosomes, nucleus

(C) Nucleus, mitochondria, ribosomes,plasma membrane

(D) Ribosomes, mitochondria, plasma membrane, nucleus

83. A research fellow is facing problem of a Crylamide polymerization even when he is allowing polymerization reaction for 30 min. at room temperature. Which of the following component is most likely to be missing from the cocktail ?

(A) Glycine

(B) SDS

(C) Tris-HCl

(D) TEMED

84. Beer's law states that the intensity of light decreases with respect to :

(A) Concentration

(B) Distance

(C) Composition

(D) Volume

85. Which of the following is the function of flame or emission system in Atomic Absorption Spectroscopy ?

(A) To split the beam into 2

(B) To break the steady light into a pulsating light

(C) To filter unwanted components

(D) To reduce the sample into atomic state

86. In which type of chromatography the stationary phase is held in a narrow tube and the mobile phase is forced through it under pressure ?

(A) Column chromatography

(B) Planar chromatography

(C) Liquid chromatography

(D) Gas chromatography

87. The time taken by the analyte after sample injection to reach the detector is called :

(A) Dead time

(B) Solute migrate rate

(C) Adjusted retention time

(D) Retention time

88. Which of the following is the formula for pH calculation ?

(A) log10 (H^+)

(B) -log10 (H^+)

(C) log2 (H^+)

(D) -log2 (H^+)

89. Which of these particles are highly penetrating?

(A) Alpha particles

(B) Beta particles

(C) Gamma particles

(D) X-ray particles

90. Which of the following formulae gives the expression for half-life of a radioactive isotope when ' λ ' is the decay constant ?

(A) 0.762/ λ

(B) 0.693/ λ

(C) 0.973/ λ

(D) 0.258/ λ

91. Mass spectrometers are used to determine which of the following ?

(A) Composition in sample

(B) Concentration of elements in sample

(C) Relative mass of atoms

(D) Properties of sample

92. The reduction in counting efficiency of the scintillation detector is called as ..... .

(A) Disintegration

(B) Decay

(C) Quenching

(D) Reduction

93. Which of the following is the operating frequency of the ESR spectrophotometer ?

(A) 1.7 to 3.4 GHz

(B) 1.5 to 4.2 GHz

(C) 3.2 to 5.4 GHz

(D) 8.8 to 9.6 GHz

94. In SDS-PAGE of protein separation, one SDS molecule will bind to :

(A) every amino acid

(B) every two amino acids

(C) every three amino acids

(D) every four amino acids

95. What is the principle of centrifugation ?

(A) Size reduction principle

(B) Filtration principle

(C) Evaporation principle

(D) Sedimentation principle

96. Which of the following is an example of bulk property or general detector in HPLC ?

(A) Fluorescence detector

(B) Refractive Index detector

(C) Electrochemical detector

(D) UV-visible detector

97. In SDS-PAGE, migration of protein is effected by :

(A) Charge of protein

(B) Size of protein

(C) Net charge of protein

(D) All of the above

98. Signal splitting in NMR arises from :

(A) Shielding effect

(B) Spin-Spin decoupling

(C) Spin-Spin coupling

(D) Deshielding effect

99. The basis of the technique of chromatography for separating components of a mixture is the :

(A) differing movement of particle of different mass in an electric field

(B) interaction of components with a stationary and a mobile phase

(C) the absorption of infrared radiation by the components

(D) the deflection of charged particles in a magnetic field

100. Which of the following is not a limitation of Beer-Lambert's law, which gives the relation between absorption, thickness and conc. ?

(A) Conc. must be lower

(B) Radiation must have higher bandwidth

(C) Radiation source must be monochromatic

(D) Does not consider factors other than thickness and conc. that affects absorbance

ROUGH WORK

Example :

Question :

Q.1 Ⓐ ● Ⓒ Ⓓ
Q.2 Ⓐ Ⓑ ● Ⓓ
Q.3 Ⓐ ● Ⓒ Ⓓ

If more than 75 questions are attempted by candidate, then the first attempted 75 questions will be considered for evaluation.

4. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
5. 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.
6. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
7. After the completion of the examination, candidates should leave the examination hall only after providing their question booklet and OMR Answer Sheet separately to the invigilator.
8. There will be no negative marking.
9. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
10. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.
11. 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.

उदाहरण :

प्रश्न :

प्रश्न 1 Ⓐ ● Ⓒ Ⓓ
प्रश्न 2 Ⓐ Ⓑ ● Ⓓ
प्रश्न 3 Ⓐ ● Ⓒ Ⓓ

यदि परीक्षार्थी द्वारा 75 से अधिक प्रश्नों को हल किया जाता है तो प्रारम्भिक हल किये हुए 75 उत्तरों को ही मूल्यांकन हेतु सम्मिलित किया जाएगा।

4. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
5. सभी उत्तर केवल ओ०एम०आर० 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।
6. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
7. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी प्रश्नपुस्तिका बुकलेट एवं ओ०एम०आर० शीट पृथक-पृथक उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें।
8. निगेटिव मार्किंग नहीं है।
9. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
10. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
11. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

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