| Roll. No | Question Booklet Number | |
|-------------------|-------------------------|--|
| O.M.R. Serial No. | | |
| | | |

M.Sc. (SEM.-III) (NEP) (SUPPLE.)EXAMINATION, 2024-25 BIOTECHNOLOGY

[Cellular & Molecular Immunology (Core)]

| Paper Code | | | | | | | |
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Time: 1:30 Hours

Question Booklet Series

A

Max. Marks: 75

Instructions to the Examinee:

- Do not open the booklet unless you are asked to do so.
- 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.
- 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.
- 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:

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

- 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।
- उ. 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, उसे तुरन्त बदल लें।
- 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 उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है:

(शेष निर्देश अन्तिम पृष्ठ पर)

1. Who is often credited with the discovery of the first vaccine? Louis Pasteur (A) (B) Robert Koch (C) **Edward Jenner** (D) Elie Metchnikoff 2. Which of the following is not a physical barrier in the immune system? (A) Stomach acid (B) Skin (C) Mucous membranes (D) Cilia 3. What is the main function of neutrophils? (A) Produce antibodies (B) Engulf and digest pathogens (C) Present antigens to T cells (D) Produce cytokines 4. Which type of immunity is present at birth and provides the first line of defense? (A) Adaptive immunity **Humoral** immunity (B) (C) Innate immunity Cell-mediated immunity (D) 5. Where do T cells mature in the body? (A) Bone marrow (B) **Thymus** (C) Spleen

Lymph nodes

lymphoid organ?

Which of the following is a secondary

6.

(B) Bone marrow (C) Spleen (D) Kidney What type of cells are responsible for producing antibodies? (A) T cells (B) Macrophages (C) Neutrophils (D) B cells Which of the following cells act as antigenpresenting cells? (A) Natural Killer (NK) cells (B) Dendritic cells (C) Eosinophils (D) Basophils

(A)

7.

8.

9.

Thymus

- Which cytokine is primarily involved in the activation of macrophages?
 - (A) Interleukin-2 (IL-2)
 - (B) Interleukin-4 (IL-4)
 - (C) Interferon-gamma (IFN-γ)
 - (D) Tumor necrosis factor-alpha (TNF- α)
- 10. What is the role of the complement system in immunity?
 - (A) Engulf pathogens
 - (B) Present antigens
 - (C) Produce antibodies
 - (D) Lyse pathogens and promote inflammation

- 11. What is the primary function of cytotoxic T cells (CD8+)?
 - (A) Help other immune cells
 - (B) Produce antibodies
 - (C) Kill infected or cancerous cells
 - (D) Phagocytose pathogens
- 12. Which of the following best describes acquired immunity?
 - (A) Develops after exposure to a specific antigen
 - (B) Present at birth
 - (C) Rapid and non-specific
 - (D) Part of the innate immune system
- 13. What type of immunity is primarily involved in response to extracellular pathogens like bacteria?
 - (A) Cellular immunity
 - (B) Innate immunity
 - (C) Humoral immunity
 - (D) Autoimmunity
- 14. Which of the following is not a component of the innate immune system?
 - (A) Macrophages
 - (B) Natural Killer (NK) cells
 - (C) T cells
 - (D) Complement proteins
- 15. In which organ are old or damaged red blood cells removed from circulation?
 - (A) Spleen
 - (B) Bone marrow

- (C) Liver
- (D) Thymus
- 16. What is the primary function of phagocytosis?
 - (A) Production of antibodies
 - (B) Engulfment and digestion of pathogens
 - (C) Activation of T cells
 - (D) Inactivation of complement proteins
- 17. Which cell is most commonly associated with phagocytosis?
 - (A) B cell
 - (B) T cell
 - (C) Macrophage
 - (D) Eosinophil
- 18. After phagocytosis, what structure is formed when a phagosome fuses with a lysosome?
 - (A) Phagolysosome
 - (B) Phagocytic vacuole
 - (C) Lysophagosome
 - (D) Phagocytic endosome
- 19. What is the main function of complement proteins in the immune system?
 - (A) Inactivate antigens
 - (B) Neutralize toxins
 - (C) Opsonize pathogens and lyse infected cells
 - (D) Stimulate antibody production

- 20. Which complement protein is involved in forming the Membrane Attack Complex (MAC)?
 - (A) C3a
 - (B) C5b
 - (C) C4b
 - (D) C9
- 21. Which complement pathway is activated by antigen-antibody complexes?
 - (A) Classical pathway
 - (B) Alternative pathway
 - (C) Lectin pathway
 - (D) Coagulation pathway
- 22. The alternate complement pathway is activated by:
 - (A) Antigen-antibody complexes
 - (B) Direct binding of C3b to pathogen surfaces
 - (C) Mannose-binding lectin binding to microbial surfaces
 - (D) Interaction with plasma cells
- 23. Which protein initiates the lectin pathway of complement activation?
 - (A) C1q
 - (B) Mannose-binding lectin (MBL)
 - (C) Factor B
 - (D) Properdin
- 24. The complement system is part of which type of immunity?
 - (A) Adaptive immunity
 - (B) Passive immunity
 - (C) Innate immunity

- (D) Humoral immunity
- 25. Humoral immunity primarily involves:
 - (A) T cells
 - (B) Macrophages
 - (C) Dendritic cells
 - (D) B cells and antibodies
- 26. Which type of T cell is central to cell-mediated immunity?
 - (A) Helper T cell (CD4+)
 - (B) Cytotoxic T cell (CD8+)
 - (C) Regulatory T cell (Treg)
 - (D) Memory B cell
- 27. In humoral immunity, B cells differentiate into:
 - (A) T cells
 - (B) Natural killer cells
 - (C) Macrophages
 - (D) Plasma cells and memory cells
- 28. Which of the following is an example of natural passive immunity?
 - (A) Vaccination
 - (B) Recovery from an infection
 - (C) Transfer of maternal antibodies to a newborn
 - (D) Administration of immune globulin
- 29. Artificial active immunity is best exemplified by:
 - (A) Breastfeeding
 - (B) Administration of vaccines
 - (C) Injection of antibodies
 - (D) Transfer of immunity from mother to fetus

- 30. Passive immunity differs from active immunity in that:
 - (A) It involves the production of memory cells
 - (B) It provides long-lasting protection
 - (C) It provides immediate but temporary protection
 - (D) It requires exposure to a live pathogen
- 31. Which of the following properties is most important for a substance to be an antigen?
 - (A) Size
 - (B) Complexity
 - (C) Foreignness
 - (D) Stability
- 32. Which of the following is least likely to be immunogenic on its own?
 - (A) Large protein
 - (B) Carbohydrate
 - (C) Lipid
 - (D) Hapten
- 33. Which type of antigen originates from outside the body and is typically introduced through infection?
 - (A) Exogenous antigen
 - (B) Endogenous antigen
 - (C) Autoantigen
 - (D) Tumor antigen

- 34. Haptens are:
 - (A) Small molecules that are immunogenic by themselves
 - (B) Large molecules that provoke a strong immune response
 - (C) Small molecules that are only immunogenic when attached to a carrier protein
 - (D) Proteins that form immune complexes
- 35. Which type of antigen is involved in autoimmune diseases?
 - (A) Exogenous antigen
 - (B) Endogenous antigen
 - (C) Tumor antigen
 - (D) Autoantigen
- 36. The main purpose of an adjuvant in a vaccine is to:
 - (A) Directly kill pathogens
 - (B) Enhance the immune response to the antigen
 - (C) Provide passive immunity
 - (D) Neutralize toxins
- 37. Which of the following is a commonly used adjuvant in vaccines?
 - (A) Aluminum salts (alum)
 - (B) Formaldehyde
 - (C) Penicillin
 - (D) Saline

| 38. | Which of the following best describes immunogenicity? | | 42. | The first antibody produced in response to an infection is: | | |
|--------|--|--|-----|---|--|--|
| | (A) | The ability of an antigen to bind to | | (A) | IgA | |
| | | an antibody | | (B) | IgM | |
| | (B) | The ability of an antigen to induce | | (C) | lgG | |
| | | an immune response | | (D) | IgE | |
| | (C) | The structural complexity of an antigen | 43. | MHC cl | ass I molecules present antigens to: | |
| | (D) | The presence of epitopes on an | | (A) | B cells | |
| | (D) | antigen | 11 | (B) | Helper T cells (CD4+) | |
| | Antigenicity refers to: | | | (C) | Cytotoxic T cells (CD8+) | |
| | (A) The stability of an antigen | | | (D) | Natural Killer (NK) cells | |
| | (B) | The ability of an antigen to induce an immune response | 44. | Which type of cells primarily express MHC class II molecules? | | |
| | (C) | The ability of an antigen to | | (A) | All nucleated cells | |
| | | specifically bind to an antibody or | | (B) | Red blood cells | |
| | | T cell receptor | | (C) | Neurons | |
| | (D) | The size of an antigen | | (D) | Professional antigen-presenting | |
| 40. | Which class of immunoglobulin is most | | | | cells (APCs) | |
| | abundant in the blood and can cross the | | 45. | The peptide-binding groove of MHC class I | | |
| | placenta | placenta? | | | les is formed by: | |
| | (A) | IgG | | (A) | Alpha chain and β 2-microglobulin | |
| | (B) | IgA | | (B) | Alpha and beta chains | |
| | (C) | IgM | | (C) | Beta chain and β2-microglobulin | |
| | (D) | IgE | | (D) | Gamma chain and beta chain | |
| | Which immunoglobulin is primarily found in mucosal secretions such as saliva and | | 46. | designe | type of therapeutic antibody is ed to bind to two different antigens | |
| | breast milk? | | | or epitopes simultaneously? | | |
| | (A) | IgA | | (A) | Monoclonal antibody | |
| | (B) | IgM | | (B) | Polyclonal antibody | |
| | (C) | IgG | | (C) | Bispecific antibody | |
| | (D) | IgE | | (D) | Conjugated antibody | |
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38.

- 47. Trastuzumab (Herceptin) is an example of a therapeutic antibody used in the treatment of:
 - (A) Rheumatoid arthritis
 - (B) Breast cancer
 - (C) Asthma
 - (D) Diabetes
- 48. Which of the following is a key characteristic of monoclonal antibodies?
 - (A) They are produced by multiple clones of B cells
 - (B) They target multiple antigens
 - (C) They are identical and target a single epitope
 - (D) They are always used in combination with vaccines
- 49. Which diagnostic technique involves the visible clumping of particles as a result of antigen-antibody interactions?
 - (A) ELISA
 - (B) Immunodiffusion
 - (C) Western blot
 - (D) Agglutination
- 50. In an ELISA test, the presence of the target antigen is typically detected by:
 - (A) A precipitin line
 - (B) A color change
 - (C) Fluorescence
 - (D) Agglutination
- 51. Which of the following tests is used to detect specific antibodies or antigens by forming precipitin lines in a gel matrix?

- (A) Immunodiffusion
- (B) Agglutination
- (C) Western blot
- (D) Flow cytometry
- 52. What is the primary principle behind the Western blot technique?
 - (A) Agglutination of red blood cells
 - (B) Separation of proteins by size followed by antibody detection
 - (C) Precipitation of antigen-antibody complexes in a gel
 - (D) Colorimetric detection of antibodies
- 53. Which type of hypersensitivity is mediated by IgE antibodies and typically occurs within minutes of exposure to an allergen?
 - (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV
- 54. Autoimmune hemolytic anemia is an example of which type of hypersensitivity?
 - (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV
- 55. Which hypersensitivity type is associated with immune complex deposition in tissues, leading to inflammation and tissue damage?
 - (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV

- 56. Contact dermatitis, such as that caused by poison ivy, is an example of which type of hypersensitivity?(A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV
- 57. Which type of hypersensitivity involves T cell-mediated immune responses and has a delayed onset?
 - (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV
- 58. Which of the following is a key feature of Type II hypersensitivity reactions?
 - (A) IgE-mediated mast cell degranulation
 - (B) Immune complex deposition in tissues
 - (C) Cytotoxic reactions involving IgG or IgM antibodies
 - (D) Delayed T cell-mediated response
- 59. Systemic lupus erythematosus (SLE) is primarily associated with which type of hypersensitivity?
 - (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV

- 60. Anaphylaxis, a severe allergic reaction, is an example of which type of hypersensitivity?
 - (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV
- 61. Which of the following cells is primarily responsible for engulfing and digesting pathogens during innate immune response?
 - (A) Mast cells
 - (B) Neutrophils
 - (C) NK cells
 - (D) B cells
- 62. Which antibody is the first to be produced during a primary immune response?
 - (A) IgG
 - (B) IgA
 - (C) IgM
 - (D) IgE
- 63. Why is the skin considered an effective physical barrier in innate immunity?
 - (A) It secretes antibodies
 - (B) It has keratinized dead cells that are hard to penetrate
 - (C) It releases complement proteins
 - (D) It presents antigens to T cells

- 64. Helper T cells (CD4+) assist B cells in producing antibodies mainly by:
 - (A) Engulfing pathogens directly
 - (B) Secreting IgE
 - (C) Forming membrane attack complexes
 - (D) Releasing cytokines
- 65. A patient presents with recurrent bacterial infections. Laboratory results show impaired MHC class II expression. Which immune function is most directly compromised?
 - (A) Helper T cell activation
 - (B) Cytotoxic T cell killing
 - (C) NK cell-mediated apoptosis
 - (D) IgE-mediated allergy response
- 66. A child with defective IgA production is most likely to experience frequent infections in which body system?
 - (A) Blood circulation
 - (B) Skin
 - (C) Mucosal surfaces
 - (D) Nervous system
- 67. Which of the following best explains why dendritic cells are considered the most potent antigen-presenting cells (APCs)?
 - (A) They release histamine to recruit neutrophils
 - (B) They circulate in blood as the first responders
 - (C) They capture antigens and migrate to lymph nodes to activate T cells

- (D) They produce antibodies directly after antigen capture
- 68. A researcher observes that lymphocytes are unable to enter lymph nodes from blood circulation. Which structural component is most likely defective?
 - (A) Peyer's patches
 - (B) High Endothelial Venules (HEVs)
 - (C) Spleen
 - (D) Bone marrow
- 69. During an infection, which sequence of events best represents the inflammatory response?
 - (A) Pain \rightarrow Cytokine release \rightarrow Vasodilation \rightarrow Increased permeability
 - (B) Vasodilation \rightarrow Increased permeability \rightarrow Cytokine release \rightarrow Pain
 - (C) Cytokine release → Vasodilation→ Increased permeability '→ Pain
 - (D) Vasodilation \rightarrow Pain \rightarrow Cytokine release \rightarrow Increased permeability
 - A mouse model lacking LFA-1 (an integrin) shows defective lymphocyte migration to tissues. Which aspect of lymphocyte homing is most directly affected?
 - (A) Initial rolling along endothelium
 - (B) Strong adhesion to endothelial cells
 - (C) Chemokine release from infected cells
 - (D) Antibody secretion by plasma cells

70.

- 71. Which of the following is the first antibody produced during a primary immune response?
 - (A) IgG
 - (B) IgM
 - (C) IgA
 - (D) IgE
- 72. Which part of an immunoglobulin determines its effector functions such as complement activation?
 - (A) Fab region
 - (B) Hinge region
 - (C) Fc region
 - (D) Variable region
- 73. Why are larger molecules (>10,000 Da) generally more immunogenic than smaller ones?
 - (A) They are more hydrophobic
 - (B) They provide multiple epitopes
 - (C) They are degraded more slowly
 - (D) They are less foreign
- 74. Which statement best explains why haptens alone cannot elicit an immune response?
 - (A) They are hydrophobic molecules
 - (B) They are too large to be processed by APCs
 - (C) They lack carrier proteins to provide immunogenicity
 - (D) They are autoantigens
- 75. A patient develops an allergic reaction to penicillin. Which immunological principle best explains this phenomenon?
 - (A) Penicillin acts as an autoantigen

- (B) Penicillin acts as a hapten and binds to host proteins
- (C) Penicillin is a T-independent antigen
- (D) Penicillin mimics IgE
- 76. A child is found to have defective MHC class I molecules. Which immune function would be most directly impaired?
 - (A) Helper T cell activation
 - (B) Cytotoxic T cell responses
 - (C) Antibody production
 - (D) Complement activation
- 77. A researcher observes that an antibody binds strongly to one epitope but also shows weak binding to a structurally similar epitope from another antigen. Which property explains this?
 - (A) Avidity
 - (B) Opsonization
 - (C) Neutralization
 - (D) Cross-reactivity
- 78. A blood sample shows high IgA levels in mucosal secretions but normal IgA in serum. Which subclass is most likely elevated?
 - (A) IgA1
 - (B) IgA2
 - (C) IgG3
 - (D) IgM
- 79. If a patient has defective hinge regions in their antibodies, which function will be most directly affected?
 - (A) Antigen binding at Fab sites
 - (B) Complement binding at Fc region
 - (C) Flexibility in binding spatially separated epitopes
 - (D) Interaction with NK cells in ADCC

- 80. During an infection, antibodies cause bacterial clumping, which enhances clearance by phagocytes. This outcome is best described as:
 - (A) Precipitation
 - (B) Neutralization
 - (C) Agglutination
 - (D) ADCC
- 81. On which chromosome is the human MHC located?
 - (A) Chromosome 14
 - (B) Chromosome 22
 - (C) Chromosome 6
 - (D) Chromosome 2
- 82. Which class of MHC molecules presents antigens to CD8+ T cells?
 - (A) MHC Class I
 - (B) MHC Class II
 - (C) MHC Class III
 - (D) Both Class I and II
- 83. Why is MHC polymorphism crucial for population-level immunity?
 - (A) It ensures uniform antigen presentation
 - (B) It prevents autoimmune diseases
 - (C) It enables presentation of diverse pathogen antigens
 - (D) It restricts immune response to one type of antigen
- 84. Which statement best explains the role of the $\lg \alpha/\lg\beta$ complex in the BCR?
 - (A) It increases antigen-binding affinity
 - (B) It anchors BCR to the plasma membrane

- (C) It prevents BCR from binding selfantigens
- (D) It provides signaling capacity via ITAMs
- 85. A patient with HLA-DQ2 and HLA-DQ8 alleles is most likely predisposed to which autoimmune disorder?
 - (A) Type 1 Diabetes
 - (B) Celiac Disease
 - (C) Multiple Sclerosis
 - (D) Rheumatoid Arthritis
- 86. A researcher develops a vaccine but notices variability in immune responses across populations. Which factor MOST likely explains this difference?
 - (A) MHC polymorphism among individuals
 - (B) Differences in innate immunity
 - (C) Variation in blood group antigens
 - (D) Differential antibody isotypes
- 87. Which of the following situations BEST illustrates the role of class switching?
 - (A) A B cell producing IgM against a viral antigen later producing IgG against the same antigen
 - (B) A B cell changing antigen specificity from viral protein to bacterial polysaccharide
 - (C) A plasma cell producing antibodies without undergoing clonal expansion
 - (D) A B cell undergoing apoptosis due to strong self-antigen recognition

- 88. Which combination explains failure of tumor immune surveillance?
 - (A) Overexpression of MHC Class I molecules and enhanced TCR recognition
 - (B) Downregulation of MHC Class I molecules preventing CD8+ T cell activation
 - (C) Increased antigen presentation by MHC Class II molecules on tumor cells
 - (D) Polymorphism in TCR genes reducing tumor recognition
- 89. A patient with mutations in the RAG-1 and RAG-2 genes will MOST likely show:
 - (A) Failure in somatic hypermutation
 - (B) Enhanced complement activation
 - (C) Excessive class switching to IgE
 - (D) Inability to undergo V(D)J recombination
- 90. During an immune response, antibodies with progressively higher affinity for an antigen are produced. Which mechanism explains this phenomenon?
 - (A) Class switching
 - (B) Somatic hypermutation followed by affinity maturation
 - (C) Junctional diversity
 - (D) Gene recombination in the constant region
- 91. Which MHC class is primarily responsible for presenting endogenous antigens to CD8+ T cells?

- (A) MHC Class I
- (B) MHC Class II
- (C) CD1 molecules
- (D) Both Class I and Class II
- 92. Why do superantigens cause a massive cytokine storm compared to conventional antigens?
 - (A) They are degraded into many small peptides.
 - (B) They bypass antigen processing and directly link MHC II with TCRs.
 - (C) They present lipid antigens via CD1 molecules.
 - (D) They stimulate only memory T cells.
- 93. A patient infected with Mycobacterium tuberculosis mounts an immune response involving CD1 molecules. Which type of T cell is most likely activated?
 - (A) CD4+ helper T cells
 - (B) CD8+ cytotoxic T cells
 - (C) Natural Killer T (NKT) cells
 - (D) Plasma cells
- 94. During an infection with an intracellular virus, cytotoxic T cells are activated. Which immune mechanism is most directly responsible for destroying the infected host cells?
 - (A) Opsonization and complement activation
 - (B) Release of perforin and granzymes by CD8+ T cells
 - (C) Secretion of antibodies by plasma cells
 - (D) Presentation of antigens via CD1 molecules

- 95. A patient develops autoimmune disease due to failure of peripheral tolerance. Which mechanism is MOST likely defective?
 - (A) Antigen presentation by MHC Class
 - (B) Negative selection of T cells in the thymus
 - (C) IL-10 and TGF-β production by regulatory T cells
 - (D) Activation of B cells by helper T cells
- 96. Which molecules are released by cytotoxic T lymphocytes (CTLs) to induce apoptosis in target cells?
 - (A) Histamine and serotonin
 - (B) Perforin and granzymes
 - (C) IL-4 and IL-5
 - (D) IgE and IgD
- 97. How do Natural Killer (NK) cells distinguish between normal and abnormal (virus-infected or tumor) cells?
 - (A) By recognizing antigen-MHC II complexes
 - (B) By binding to IgA in mucosal surfaces
 - (C) By secreting antibodies against abnormal cells
 - (D) By detecting the absence of MHC I molecules on target cells
- 98. A patient's blood smear shows antibodycoated tumor cells being destroyed by

immune cells through binding of Fc receptors. Which mechanism best explains this?

- (A) Classical complement activation
- (B) Antibody-dependent cellular cytotoxicity (ADCC)
- (C) Type II hypersensitivity
- (D) Phagocytosis by macrophages
- 99. A patient infected with Mycobacterium tuberculosis has chronic inflammation. Which immune cells and cytokines are primarily responsible for controlling the infection?
 - (A) B cells producing IgA
 - (B) Th2 cells producing IL-4 and IL-5
 - (C) Th1 cells producing IFN-γ to activate macrophages
 - (D) NK cells producing perforin
- 100. A patient develops immune complex deposition in the kidneys leading to glomerulonephritis. This is an example of which type of hypersensitivity, and what is the underlying mechanism?
 - (A) Type I IgE-mediated mast cell degranulation
 - (B) Type II Antibody binding directly to host cell surface
 - (C) Type III Deposition of antigen– antibody complexes in tissues
 - (D) Type IV Delayed T-cell mediated inflammation

Rough Work

Example:

Question:

- Q.1 **A © D**
- Q.2 **A B O**
- Q.3 (A) (C) (D)
- Each question carries equal marks.
 Marks will be awarded according to the number of correct answers you have.
- 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 & 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.

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ● (C) (D)

प्रश्न 2 (A) (B) ■ (D)

प्रश्न 3 **A ● C D**

- प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
- 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।
- 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 में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
- परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, 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।

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।