

Question Bank

Multiple Choice Questions

- 1) The branch of biology, which involves the study of immune systems in all organisms is called_____.
 - a) Zoology
 - b) Microbiology
 - c) Immunology
 - d) Biotechnology
- 2) Which of the following immunity is obtained during a lifetime?
 - a) Acquired immunity
 - b) Active immunity
 - c) Passive immunity
 - d) None of the above.
- 3) How many types of antibodies are there?
 - a) Five.
 - b) Three.
 - c) Two.
 - d) Four.
- 4) Which of the following cells is involved in cell-mediated immunity?
 - a) Leukaemia
 - b) T cells
 - c) Mast cells
 - d) Thrombocytes
- 5) Which of the following protects our body against disease-causing pathogens?
 - a) Respiratory system
 - b) Immune system
 - c) Digestive system
 - d) Respiratory system
- 6) Hepatitis is an example of _____.
 - a) Subunit Vaccine
 - b) Killer Vaccine
 - c) Toxoids Vaccine
 - d) Recombinant Vaccine
- 7) Which of the following statements is true about the IgM of humans?
 - a) IgM can cross the placenta
 - b) IgM can protect the mucosal surface
 - c) IgM is produced by high-affinity plasma cells

- d) IgM is primarily restricted in the circulation
- 8) Interferons are
- a) Cytokine barriers b) Physical barriers
c) Cellular barriers d) Physiological barriers
- 9) Which of the following cells of the immune system do not perform phagocytosis?
- a) Macrophage b) Neutrophil c) Eosinophil d) Basophil
- 10) Monocytes differentiate into which kind of phagocytic cells?
- a) Neutrophil b) B cell c) Macrophage d) T cell
- 11) The ability of an organism to resist infections by the pathogens is called _____
- a) Infection b) Hypersensitivity c) Immunity d) Allergy
- 12) Which of the following compounds is NOT found in tears?
- a) Lysozyme b) Lactoferin c) IgA d) IgE
- 13) Name the cytokines which released in response to virus infection?
- a) Interferons b) Monokines c) Lymphokines d) Interleukins
- 14) Name the first cell which recruited at the place of infection.
- a) Nk cells b) Basophils c) Nutrophils d) Macrophages
- 15) Which of the following antibody gives a primary immune reaction?
- a) IgG b) IgM c) IgA d) IgE
- 16) Which of these is NOT a characteristic feature of adaptive immunity?
- a) Immunogenic memory b) Antigen no-specific
c) Self/ non-self recognition d) Diversity
- 17) Which of the fallowing cells produces Anti-bodies?
- a) macrophage. b) B-cells. c) T-cells d) plasma cells
- 18) Which of the following Antibodies cross the placenta?
- a) IgA. b) IgE. c) IgG. d) IgD.
- 19) Which of the following systems protects our body against disease-causing microbes?

- a) Immune system b) Digestive system
- c) Excretory system d) Respiratory system

20) Which of the following immunity is present from our birth?

- a) Innate Immunity b) Active immunity
- c) Passive immunity d) Acquired immunity

21) Neutrophils, basophil, lymphocytes, eosinophil and monocytes are examples of _____.

- a) Physical barrier b) Cellular barriers
- c) Cytokine barriers d) Physiological barriers

22) B-cells and T-cells are two types of cells involved in _____.

- a) Innate Immunity b) Active immunity
- c) Passive immunity d) Acquired immunity

23) The common disorders caused by a poor immune system include _____

- a) Epidemic Diseases b) Deficiency diseases
- c) Autoimmune diseases d) None of the above

24) Which of the following statements is true about Passive Immunity?

- a) This immunity causes reactions
- b) This immunity develops immediately
- c) This immunity lasts only for a few weeks or months
- d) All of the above.

25) The branch of biology involved in the study of immune systems in all organisms is called _____.

- a) Botany b) Microbiology c) Immunology d) Biotechnology

26) Which of the following cells is involved in cell-mediated immunity?

- a) T-cells b) B-cells c) Mast cells d) Both T and B cells

27) Which of the following conveys the longest-lasting immunity to an infectious agent?

- a) Active immunity b) Passive immunity
- c) Both (a) and (b) d) None of the above

28) Which of the following does not act as a protecting barrier for the body surface?

- a) Skin b) Mucus c) Gastric acid d) Salivary amylase

29) Which of the following cells is involved in humoral immunity?

- a) T-cells b) B-cells c) Mast cells d) Both T and B cells

30) Which of the following immunity is obtained during a lifetime?

- a) Innate immunity b) Active immunity
c) Passive immunity d) Both (b) and (c)

31) Skin, body hair, cilia, eyelashes, the respiratory tract and the gastrointestinal tract are examples of _____.

- a) Physical barrier b) Cellular barriers
c) Cytokine barriers d) Physiological barriers

32) Cells Involved In Innate Immunity are_____.

- a) Phagocytes b) Macrophages
c) Natural Killer Cells d) All of the above

33) Which of the following immunity is called the first line of defence?

- a) Innate Immunity b) Active immunity
c) Passive immunity d) Acquired immunity

34) Which of the following barriers does not come under innate immunity?

- a) Physical barrier b) Physiological barrier
c) Complex barrier d) Cellular barrier

35) Which of the following barriers are considered to be the first line of defence in our body?

- a) Physical and Physiological barriers
b) Physiological and Cellular barriers
c) Cellular and Cytokine barriers
d) Physical and Cellular barriers

- 36) Innate immunity is also called as _____
- a) Specific immunity b) Inborn immunity
c) Acquired immunity d) Adapted immunity
- 37) How many lines of defence are present in our body?
- a) One b) Two c) Three d) Four
- 38) Acquired Immunity is not called as _____
- a) Specific Immunity b) Adapted Immunity
c) Humoral Immunity d) Non-specific Immunity
- 39) Which of the following is not an Anatomic barrier?
- a) Skin b) Oil and sweat c) Nostril hair d) Mucus and cilia
- 40) Lysozyme is _____
- a) Antiviral b) Antiprotozoal c) Antibacterial d) Antifungal
- 41) What is the full form of PMNL?
- a) Polymorpho-nuclear leukocytes
b) Pinacocytes Mono-nuclear lymphocytes
c) Polynomial lymphocytes
d) Pinacoderm Mono-nuclear lymphocytes
- 42) Which of the following are not the Phagocytes of innate immunity?
- a) Neutrophils b) Macrophages c) RBCs d) Monocytes
- 43) Number of proteins belonging to the complementary system is _____
- a) Ten b) Sixty c) Forty-Four d) Thirty
- 44) In innate immunity, complement system functions through _____
- a) Alternate pathway b) Classical pathway
c) Heightened pathway d) Anatomical pathway
- 45) Interferons are which type of barriers?
- a) Physical barriers b) Physiological barriers
c) Cellular barriers d) Cytokine barriers

46) Which of the following response is not included in Acquired immunity?

- a) Primary Response b) Tertiary Response
- c) Secondary Response d) Anamnestic Response

47) In Acquired immunity, complement system functions through _____

- a) Classical pathway b) Alternate pathway
- c) Heightened pathway d) Anatomical pathway

48) Which of the following Cellular barriers are involved in Inflammatory reactions?

- a) Neutrophils b) Basophils c) Eosinophils d) Monocytes

49) Innate immunity is provided by

- a) Phagocytes b) Antibodies c) T-Lymphocytes d) B-Lymphocytes

50) Which one engulfs foreign materials

- a) Macrophages b) Plasma cells c) Mast cells d) Lymphocytes

51) Macrophages are derived from

- a) Neutrophils b) Lymphocytes c) Monocytes d) Basophils

52) Memory cells are formed from

- a) Erythropoietic stem cells b) Monocytes c) T-lymphocytes d) B-lymphocytes

53) Which one helps in differentiation of cells of immune system

- a) Cortisol b) Thymosin c) Steroid d) Thyroxine.

54) Progenitors formed in bone marrow but differentiating elsewhere are

- a) Pre-NK cells b) Pre-erythroblasts c) Pre-T cells d) Myeloblasts

55) Segments of antigen that are recognized by antibody are

- a) Memory regions b) Epitopes c) Nondeterminants d) Self limitation

56) Lymphocytes are of two types, they are

- a) T-cells and erythrocytes b) Erythrocytes and Platelets
- c) T-cells and Platelets d) T-cells and B-cells

57) Which of these immune cells are able to quickly respond post any subsequent encounter with the same antigen?

- a) helper T cells b) memory cells c) plasma cells d) basophil

- 58) Basophils, eosinophils and Neutrophils are referred to as
a) Platelets b) Astocytomas c) Granulocytes d) Buffers
- 59) Cytotoxic T cells destroy the target cells
a) through injection of tumor necrosis factor
b) by phagocytosis
c) through insertion of perforins into the target's membrane
d) by releasing oxidizing agents
- 60) This is not a cardinal sign of inflammation
a) redness b) heat c) swelling and pain d) opsonization
- 61) _____ are released in the respiratory burst having the potent of cell-killing ability
a) histamines b) neutrophils
c) free radicals d) platelets-derived growth factors
- 62) The phenomena that initiates when a helper T cell binds with a class II MHC protein on a displaying cell is referred to as
a) T cell proliferation b) costimulation
c) self-antigen recognition d) antigen proliferation
- 63) The lymphocytes which can develop immunocompetence in the thymus is
a) B lymphocytes b) T lymphocytes c) NK cells d) None of these
- 64) An immune response when provoked by a nonself particle is known as
a) immunoglobulin b) antibody c) antigen d) interferon
- 65) The only blood cells which are not viewed as a part of the immune system are
a) fat cells b) glial cells c) osteocytes d) red blood cells
- 66) The lymphatic system consists of all the following except:
a) blood b) lymph nodes c) lymphatic vessels d) lymph
- 67) Which of the following applies to the thoracic duct?
a) it drains the entire body above the diaphragm
b) it empties its contents into the subclavian vein

c) it carries blood into the lymphatic system

d) it arises in the vessels of the brain

68) Lymphatic capillaries resemble blood capillaries because lymphatic capillaries

a) have the same permeability as blood capillaries

b) lead to the vena cava

c) have a lining of endothelium

d) are thick-walled tubes

69) The fluid that passes through the lymphatic vessels

a) Flows toward the lungs

b) Passes from the lymphatic vessels into the arteries

c) Enters the left ventricle of the heart through the right thoracic duct

d) Moves in a single direction toward the heart

70) The t-lymphocytes and b-lymphocytes are the major cells of the

a) Lymph nodes

b) Lymphatic vessels

c) Adrenal gland

d) Thymus

71) Lymph nodes may be located in the human body in the tissues of the

a) stomach and brain

b) groin and neck

c) Oventricle and atrium

d) thyroid gland and adrenal gland

72) The nodules of lymphoid tissue found in the wall of the intestinal tract are known as

a) Hashimoto's nodes

b) grave's region

c) di-george's nodes

d) Peyer's patches

73) The movement of fluid through the lymphatic vessels is assisted by

a) pressure from the right ventricle

b) pressure of contracting skeletal muscles

c) movement of phagocytes such as macrophages

d) movement of red blood cells

74) Those lymphatic vessels that are rich in fat

- a) are found only in the brain
- b) are known as lacteals
- c) enter the left atrium of the heart
- d) are found only within the spleen

75) Which of the following is not likely to be found in the lymph?

- a) red blood cells b) protein molecules
- c) microorganisms d) macrophages

76) All the following functions are associated with the spleen except

- a) it provides a filtration system for blood
- b) it is the site of red blood cell breakdown
- c) it is a storage depot for blood
- d) it is the major site of white blood cell formation

77) The lymphokines secreted by cytotoxic t-lymphocytes increase the activity of-----

- a) red blood cells b) brain cells c) macrophages d) b-lymphocytes

78) Where is the thymus gland located?

- a) Lower part of the mediastinum b) Upper part of the mediastinum
- c) Behind the mediastinum d) In front of the mediastinum

79) Where is the spleen situated?

- a) Abdominal cavity b) Pelvic cavity c) In the neck d) Git

80) What is the function of the lymphatic system

- a) Immunity
- b) Transports lipids from GIT to the blood
- c) Drains excess interstitial fluid
- d) All of the above

81) Why lymphatic nodules are not known as lymphatic organs?

- a) Because they are less in number b) Due to their small size
- c) Lacks the surrounding capsule d) Both b and c

82) Submandibular lymph glands are present under.....

a) Axilla b) Chin c) Chest d) Groins

83) One of the following is not a lymphatic organ

a) Pancreas b) Spleen c) Thymus d) Tonsils

84) The lymphatic fluid returning from the small intestine is rich in

a) Proteins b) Calcium c) Fats d) Phosphorus

85) Spleen is called the “graveyard” of the...

a) Erythrocytes b) Leucocytes c) Lymphocytes d) Monocyte

86) Lymphatic fluid is rich in

a) Iron b) Antibodies c) Neutrophils d) Basophils

87) The lymphatic fluid is

a) Brownish b) Pinkish c) Colourless d) Bluish

88) The thoracic duct of the lymphatic system pours its contents into the

a) Aorta b) Subclavian vein

c) Internal jugular veins d) Right auricle

89) The lymphatic fluid is

a) Alkaline b) Acidic

c) Neutral d) Partially acidic and partially alkaline

90) Trabeculae in the lymph nodes are formed of

a) Lymphocytes b) Fibrous tissue

c) Blood vessels d) Lymphatic vessels

91) The structures of the lymphatic system present in the intestine are called

a) Mucosa b) Villi c) Chyle d) Lacteals

92) For which discovery did Georges Köhler and César Milstein share the noble prize in 1984?

a) Inventing genome sequencing

b) Discovery the structure of DNA

c) Discovery of B-cell cancer myeloma

d) Discovery of the process of producing monoclonal antibodies

93) What is the clinical application of monoclonal antibodies?

- a) Biosensors b) Transplant rejection
- c) Infectious disease d) Purification of drugs

94) MAbs was modified for delivery of a toxin, radioisotope and _____

- a) Enzymes b) Hormones c) Drugs d) Cytokine

95) Bispecific antibodies can bind with their Fab regions both to target antigen and to _____

- a) Other antibodies b) An effector cell
- c) Proteins around d) Prostaglandins

96) Hematopoietic stem cells (HSCs) are the stem cells that give rise to other blood cells.

- a) Mesodermal cells b) Ectodermal cells
- c) Endodermal cells d) Hematopoietic stem cells (HSCs)

97) Which of the following are not myeloid cells?

- a) Macrophages b) Monocytes c) Neutrophils d) T cells

98) Which of the following are not lymphoid cells?

- a) T cells b) B cells
- c) Natural killer cells d) Megakaryocytes

99) Hematopoietic stem cells, like all adult stem cells, mostly exist in a state of _____ or reversible growth arrest.

- a) Peace b) Calmness c) Mindfulness d) Quiescence

100) _____ strand breaks accumulate in long term Hematopoietic stem cells during aging.

- a) DNA b) RNA c) Collagen d) Peptide

101) The hormone Erythropoietin is produced in_____.

- a) Liver b) Spleen c) Kidney d) Thyroid gland

102) According to the diagnostics report the normal plasma level of erythropoietin hormone ranges from _____.

- a) 10 to 22 U/L b) 10 to 25 U/L c) 10 to 50 U/L d) 10 to 75 U/L

103) Which of the following statements is true about the plasma level of the erythropoietin hormone?

- a) The plasma level of erythropoietin hormone increases with the drop in the level of haemoglobin
- b) The plasma level of erythropoietin hormone decreases with the rise in the level of haemoglobin
- c) The plasma level of erythropoietin hormone decreases with the drop in the level of haemoglobin
- d) The plasma level of erythropoietin hormone increases with the rise in the level of haemoglobin

104) What will be the hemoglobin level when the plasma level of the erythropoietin hormone increases?

- a) 4 to 6 g/dL
- b) 6 to 8 g/dL
- c) 8 to 10 g/dL
- d) 10 to 12 g/dL

105) Which of the following disorders increases the production of erythropoietin hormone?

- a) Anaemia
- b) Hypoxemia
- c) Renal artery stenosis
- d) All of the above

106) Which of the following regulates the secretion of erythropoietin hormone?

- a) Oxygen
- b) Proteins
- c) Number of Red Blood Cells
- d) The concentration of haemoglobin

107) Other than the kidney, the hormone Erythropoietin is also produced by _____.

- a) Spleen
- b) Liver
- c) Pancreas
- d) Hepatocytes

108) The excessive or the overproduction of erythropoietin hormone causes_____.

- a) Polycythemia
- b) Circulatory hypoxia
- c) Chronic loss of blood
- d) None of the above

109) The deficiency or the absence of erythropoietin hormone results in_____.

- a) Apoptosis
- b) Stunted growth

- c) Effects on the hematopoietic stem cells d) None of the above
- 110) Which of the following organs is involved with the production and release of erythropoietin hormone?
- a) Follicular cells
b) Glomerular capillaries
c) Proximal tubular cells
d) Peritubular capillary lining cells of the kidney

Long Questions

- 1) What is immunity. Describe in details Innate immunity.
- 2) What is immunity. Describe in details adaptive immunity.
- 3) Describe in details process of haematopoiesis.
- 4) Explain in brief cells of immune system.
- 5) Describe in details primary lymphoid organs of immune system.
- 6) Describe in details primary lymphoid organs of immune system.
- 7) What is antigens? Describe properties of antigens.
- 8) Describe in details structure, classes and functions of IgA and IgE.
- 9) Describe in details structure, classes and functions of IgD and IgM.
- 10) Describe in details structure, classes and functions of IgG and IgM.
- 11) Describe in details hybridoma technology.

Short Notes

- 1) Innate immunity
- 2) Adaptive immunity
- 3) Haematopoiesis
- 4) Bone marrow
- 5) Thymus gland

- 6) Spleen
- 7) Lymph nodes
- 8) Tonsils
- 9) Humoral response
- 10) Cell mediated response
- 11) B cell epitopes
- 12) T cell epitopes
- 13) IgA
- 14) IgD
- 15) IgE
- 16) IgG
- 17) IgM
- 18) Applications of monoclonal antibodies
- 19) Hybridoma technology