

National Testing Agency

Question Paper Name :	Immunology 30 Sep 2020 Shift 1
Subject Name :	Immunology
Creation Date :	2020-09-30 13:30:23
Duration :	180
Number of Questions :	100
Total Marks :	100
Display Marks:	Yes

Immunology

Group Number :	1
Group Id :	89951447
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100
Is this Group for Examiner? :	No

Immunology

Section Id :	89951449
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100

Section Marks : 100
Mark As Answered Required? : Yes
Sub-Section Number : 1
Sub-Section Id : 89951471
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 8995144205 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

A transfusion reaction (ABO incompatible blood) is found to be specific manifestation of which type of hypersensitivity reaction.

1. Type I hypersensitivity
2. Type II hypersensitivity
3. Type III hypersensitivity
4. Type IV hypersensitivity

Options :

89951416755. 1
89951416756. 2
89951416757. 3
89951416758. 4

Question Number : 2 Question Id : 8995144206 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0

Which of the following does **NOT** protect body surfaces from pathogens

1. Skin
2. Mucus
3. Gastric acid
4. Salivary amylase

Options :

89951416759. 1
89951416760. 2
89951416761. 3

89951416762. 4

Question Number : 3 Question Id : 8995144207 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following constitute or are involved in secondary defense of our body?

1. Skin cells
2. Epithelial cells
3. Phagocytes
4. Mucosal cells

Options :

89951416763. 1
89951416764. 2
89951416765. 3
89951416766. 4

Question Number : 4 Question Id : 8995144208 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Adaptive immune system or acquired immune response comprises.

1. Inborn immune response
2. Humoral immune response
3. Cell mediated
4. Both 2 & 3

Options :

89951416767. 1
89951416768. 2
89951416769. 3
89951416770. 4

Question Number : 5 Question Id : 8995144209 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Who among the following put forward the clonal selection theory?

1. Merill Chase
2. Medawar & Gibson
3. Frank Macferlene Burnet
4. Breinl & Haurowitz

Options :

89951416771. 1

89951416772. 2

89951416773. 3

89951416774. 4

Question Number : 6 Question Id : 8995144210 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Who put forward the concept of cell mediated immunity?

1. Frank Macfarlane Burnet
2. Breinl and Haurowitz
3. Metchnikoff
4. Jules Bordet

Options :

89951416775. 1

89951416776. 2

89951416777. 3

89951416778. 4

Question Number : 7 Question Id : 8995144211 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following cell has no role in immune defense?

1. B cells
2. T cells
3. RBC's
4. Monocytes

Options :

89951416779. 1

89951416780. 2

89951416781. 3

89951416782. 4

Question Number : 8 Question Id : 8995144212 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The ancient practice of introducing pathogenic smallpox crusts into the host body is called as:

1. Vaccination
2. Attenuation
3. Activating immune system
4. Boosting immunity

Options :

89951416783. 1

89951416784. 2

89951416785. 3

89951416786. 4

Question Number : 9 Question Id : 8995144213 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Helper T cells arise in the bone marrow and mature in the thymus and express

1. CD3 and CD8
2. CD3 and CD4
3. Only CD3
4. CD3, CD8 and CD4

Options :

89951416787. 1

89951416788. 2

89951416789. 3

89951416790. 4

Question Number : 10 Question Id : 8995144214 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A systematic defense against antigens, initiated by lymphatic cells, is called

1. A cross-reaction
2. Inflammation
3. Septicaemia
4. An immune response

Options :

89951416791. 1

89951416792. 2

89951416793. 3

89951416794. 4

Question Number : 11 Question Id : 8995144215 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The large clusters of lymphatic nodules found in the throat are called

1. Peyer's patches
2. Tonsils
3. Lymph nodes
4. Lymph glands

Options :

89951416795. 1

89951416796. 2

89951416797. 3

89951416798. 4

Question Number : 12 Question Id : 8995144216 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The Tissue fluid in the lymphatic system is called

1. Plasma
2. Hemoplasma
3. Ringer's solution
4. Lymph

Options :

89951416799. 1

89951416800. 2

89951416801. 3

89951416802. 4

Question Number : 13 Question Id : 8995144217 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which among the following is the second line of innate defense?

1. Phagocytosis
2. B cell response
3. Skin and mucous membranes
4. Inflammatory response

Options :

89951416803. 1

89951416804. 2

89951416805. 3

89951416806. 4

Question Number : 14 Question Id : 8995144218 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Innate immunity or non-specific immunity involves all except

1. Anatomical barriers
2. Phagocytic cells
3. Inflammatory mechanisms
4. Antibody production

Options :

89951416807. 1

89951416808. 2

89951416809. 3

89951416810. 4

Question Number : 15 Question Id : 8995144219 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is **NOT** the function of macrophages?

1. Phagocytosis
2. Antigen presentation
3. Cytokine production
4. Antibody production

Options :

89951416811. 1

89951416812. 2

89951416813. 3

89951416814. 4

Question Number : 16 Question Id : 8995144220 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The cells of the immune system which secrete antibodies and constitute the humoral immunity?

1. Neutrophils
2. B cells
3. Monocytes
4. T cells

Options :

89951416815. 1

89951416816. 2

89951416817. 3

89951416818. 4

Question Number : 17 Question Id : 8995144221 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Macrophages are specialized phagocytic cells and are formed from.

1. Neutrophils
2. Lymphocytes
3. Monocytes
4. Basophils

Options :

89951416819. 1
89951416820. 2
89951416821. 3
89951416822. 4

Question Number : 18 Question Id : 8995144222 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Cytotoxic T lymphocytes arise in the bone marrow and mature in thymus and after maturation they express

1. CD3 and CD8
2. CD3 and CD4
3. Only CD3
4. CD3, CD8 and CD4

Options :

89951416823. 1
89951416824. 2
89951416825. 3
89951416826. 4

Question Number : 19 Question Id : 8995144223 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The immune cells which attack cancer cells or virally infected cells are called?

1. Macrophages
2. Natural Killer cells
3. Eosinophils
4. Basophils

Options :

89951416827. 1

89951416828. 2

89951416829. 3

89951416830. 4

Question Number : 20 Question Id : 8995144224 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

All blood cells originate from a hematopoietic stem cell and the process is known as

1. Phagocytosis
2. Hematopoiesis
3. Inflammation
4. Endocytosis

Options :

89951416831. 1

89951416832. 2

89951416833. 3

89951416834. 4

Question Number : 21 Question Id : 8995144225 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Interferons belong to which class of chemical mediators.

1. Acute phase proteins
2. Complement proteins
3. Cytokines
4. Antibodies

Options :

89951416835. 1

89951416836. 2

89951416837. 3

89951416838. 4

Question Number : 22 Question Id : 8995144226 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What are the main cells of the immune system which are involved in humoral immunity?

1. T cells
2. NK cells
3. Macrophages
4. B- cells

Options :

89951416839. 1

89951416840. 2

89951416841. 3

89951416842. 4

Question Number : 23 Question Id : 8995144227 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The essential components of humoral immunity are?

1. Cytokines
2. Interferons
3. Antibodies
4. NK cells

Options :

89951416843. 1

89951416844. 2

89951416845. 3

89951416846. 4

**Question Number : 24 Question Id : 8995144228 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

What are the non-specific cells involved in cell mediated immunity?

1. B cells
2. NK cells
3. T_H cells
4. T_C cells

Options :

89951416847. 1

89951416848. 2

89951416849. 3

89951416850. 4

**Question Number : 25 Question Id : 8995144229 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Active immunity, resulting from the production of antibodies by the immune system in response to the presence of an antigen may last for.

1. Lifelong
2. 2-3 days
3. 2-4 weeks
4. Few hours

Options :

89951416851. 1
89951416852. 2
89951416853. 3
89951416854. 4

Question Number : 26 Question Id : 8995144230 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Herpes is a common infection caused by *Herpes simplex* virus. If a person has suffered from Herpes sometime back in his life, he will show;

1. IgG positive
2. IgG negative
3. IgA positive
4. IgM positive

Options :

89951416855. 1
89951416856. 2
89951416857. 3
89951416858. 4

Question Number : 27 Question Id : 8995144231 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A highly contagious liver infection is caused by the hepatitis A virus. Which of the following vaccine is used to prevent Hepatitis A.

1. Toxoid vaccine
2. Attenuated vaccine
3. Inactivated vaccine
4. Conjugate vaccine

Options :

89951416859. 1
89951416860. 2
89951416861. 3
89951416862. 4

Question Number : 28 Question Id : 8995144232 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In which body fluid is the HIV virus **NOT** present

1. Semen
2. Breast milk
3. Sweat
4. Blood

Options :

89951416863. 1
89951416864. 2
89951416865. 3
89951416866. 4

Question Number : 29 Question Id : 8995144233 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following conditions is an immune disorder?

1. AIDS and cholera
2. SCID and AIDS
3. AIDS and cancer
4. Hepatitis and leukemia

Options :

89951416867. 1

89951416868. 2

89951416869. 3

89951416870. 4

**Question Number : 30 Question Id : 8995144234 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

The HIV virus belongs to which of the following families of virus?

1. Reovirus
2. Lentivirus
3. Togavirus
4. Adenovirus

Options :

89951416871. 1

89951416872. 2

89951416873. 3

89951416874. 4

**Question Number : 31 Question Id : 8995144235 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

The first suspected death caused by AIDS was in year

1. 1980
2. 1981
3. 1959
4. 1984

Options :

89951416875. 1

89951416876. 2

89951416877. 3

89951416878. 4

Question Number : 32 Question Id : 8995144236 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following symptoms will a person exhibit who is HIV-positive

1. Weight loss
2. Constant runny nose
3. Skin rashes
4. None at all

Options :

89951416879. 1

89951416880. 2

89951416881. 3

89951416882. 4

Question Number : 33 Question Id : 8995144237 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

HIV, which causes the disease Acquired immunodeficiency syndrome (AIDS) is

1. A fungus.
2. A bacterium.
3. A virus.
4. An environmental pollutant.

Options :

89951416883. 1

89951416884. 2

89951416885. 3

89951416886. 4

**Question Number : 34 Question Id : 8995144238 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

The process in which a weakened pathogen is introduced into human body to develop immunity is called

1. Immunization
2. Vaccination
3. Attenuation
4. None of the above

Options :

89951416887. 1

89951416888. 2

89951416889. 3

89951416890. 4

**Question Number : 35 Question Id : 8995144239 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

A vaccine is a biological preparation that provides active acquired immunity to a particular infectious disease. A vaccine can be

1. An antigen protein
2. Weakened pathogen
3. Live attenuated pathogen
4. All of the above

Options :

89951416891. 1
89951416892. 2
89951416893. 3
89951416894. 4

Question Number : 36 Question Id : 8995144240 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A molecule that reacts with specific antibody but is not immunogenic by itself is called

1. Carrier
2. Antigen
3. Hapten
4. Immunogen

Options :

89951416895. 1
89951416896. 2
89951416897. 3
89951416898. 4

Question Number : 37 Question Id : 8995144241 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following molecules is poorly immunogenic?

1. Proteins
2. Carbohydrates
3. Nucleic acids
4. Lipids

Options :

89951416899. 1

89951416900. 2

89951416901. 3

89951416902. 4

**Question Number : 38 Question Id : 8995144242 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which one among the following molecules is highly immunogenic?

1. Penicillin
2. Aspirin
3. Albumin
4. Poly- γ -D-glutamic acid

Options :

89951416903. 1

89951416904. 2

89951416905. 3

89951416906. 4

**Question Number : 39 Question Id : 8995144243 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which among the following self-molecules if injected into self will generate an immune response?

1. Corneal tissue
2. Serum albumin
3. Self-liver tissue
4. Self-kidney tissue

Options :

89951416907. 1

89951416908. 2

89951416909. 3

89951416910. 4

Question Number : 40 Question Id : 8995144244 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Haptens are immunogenic upon binding covalently to

1. Carrier protein
2. Antibody
3. Paratope
4. Epitope

Options :

89951416911. 1

89951416912. 2

89951416913. 3

89951416914. 4

Question Number : 41 Question Id : 8995144245 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following will invoke an immune response?

1. Dinitrophenol
2. Urushiol
3. Hydralazine
4. Dinitrophenol with Bovine serum albumin

Options :

89951416915. 1
89951416916. 2
89951416917. 3
89951416918. 4

Question Number : 42 Question Id : 8995144246 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

When absorbed through the skin from a poison ivy Plant, Urushiol undergoes a chemical process in the skin cells and generates the actual hapten, the chemical process is known as

1. Reduction
2. Oxidation
3. Carbonation
4. Hydrogenation

Options :

89951416919. 1
89951416920. 2
89951416921. 3
89951416922. 4

Question Number : 43 Question Id : 8995144247 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A molecule that can be covalently linked to a non-immunogenic antigen to make it an immunogen is called a (n)

1. Adjuvant
2. Carrier
3. Hapten
4. Mitogen

Options :

89951416923. 1
89951416924. 2
89951416925. 3
89951416926. 4

Question Number : 44 Question Id : 8995144248 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If very low doses of antigens are introduced in the body, it may result into

1. Hypersensitivity
2. Immunological ignorance
3. Low zone tolerance
4. Low zone immunity

Options :

89951416927. 1
89951416928. 2
89951416929. 3
89951416930. 4

Question Number : 45 Question Id : 8995144249 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Lymphocytes are activated once bound by an antigen in the

1. Blood stream
2. Bone marrow
3. Liver
4. Lymph nodes

Options :

89951416931. 1

89951416932. 2

89951416933. 3

89951416934. 4

Question Number : 46 Question Id : 8995144250 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is **NOT** characteristic of B cells?

1. Mature in bone marrow
2. Secrete antibodies
3. Function as antigen presenting cells
4. Express CD4 and CD8 molecules

Options :

89951416935. 1

89951416936. 2

89951416937. 3

89951416938. 4

Question Number : 47 Question Id : 8995144251 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is expressed only in cytotoxic T cells?

1. CD4
2. CD8
3. CD3
4. TCR

Options :

89951416939. 1

89951416940. 2

89951416941. 3

89951416942. 4

Question Number : 48 Question Id : 8995144252 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following defines an epitope?

1. An antigenic determinant site which is recognized by antibodies and TCR
2. Binding site on an antibody
3. Surface molecule expressed by B cell
4. Surface molecule expressed by T cell

Options :

89951416943. 1

89951416944. 2

89951416945. 3

89951416946. 4

Question Number : 49 Question Id : 8995144253 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The class of immunoglobulins which can cross the placenta is

1. IgM
2. IgG
3. IgA
4. IgD

Options :

89951416947. 1

89951416948. 2

89951416949. 3

89951416950. 4

Question Number : 50 Question Id : 8995144254 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Simulation of which of the following will lead to appearance of first antibody to appear following stimulation by an antigen?

1. IgM
2. IgA
3. IgE
4. IgG

Options :

89951416951. 1

89951416952. 2

89951416953. 3

89951416954. 4

Question Number : 51 Question Id : 8995144255 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following is the most abundant class of immunoglobulin found in the body

1. IgD
2. IgE
3. IgG
4. IgM

Options :

89951416955. 1

89951416956. 2

89951416957. 3

89951416958. 4

Question Number : 52 Question Id : 8995144256 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In which of the following case a large lattice is formed?

1. Antibody is in excess
2. Antigens and antibodies are in optimal proportion
3. Antigen is in excess.
4. None of these

Options :

89951416959. 1

89951416960. 2

89951416961. 3

89951416962. 4

Question Number : 53 Question Id : 8995144257 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Monoclonal antibodies are antibodies that are made by identical immune cells that are all clones of a unique parent cell and recognize a single

1. Antigen
2. Bacterium
3. Epitope
4. B cells

Options :

89951416963. 1
89951416964. 2
89951416965. 3
89951416966. 4

Question Number : 54 Question Id : 8995144258 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following substances will **NOT** stimulate an immune response unless they are bound to a larger molecule?

1. Antigen
2. Virus
3. Hapten
4. Antibody

Options :

89951416967. 1
89951416968. 2
89951416969. 3
89951416970. 4

Question Number : 55 Question Id : 8995144259 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following radioactive molecule is used to end label in oligonucleotide?

1. (alpha)-³²P-ATP
2. (alpha)-³²p-dUTP
3. (gamma)-³²P-ATP
4. Any of these

Options :

89951416971. 1
89951416972. 2
89951416973. 3
89951416974. 4

Question Number : 56 Question Id : 8995144260 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

An enzyme-linked immunosorbent assay, also called ELISA a test used for the detection of HIV.
What is the ELISA Test intended to measure?

1. Antibody to HIV only
2. Antigen to HIV only
3. Presence of free circulating virus in the patients
4. Antibody directed against HLA molecules

Options :

89951416975. 1
89951416976. 2
89951416977. 3
89951416978. 4

Question Number : 57 Question Id : 8995144261 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What reagent is quantified when performing an indirect ELISA?

1. Antigen
2. Antibody in patient's serum
3. Complement
4. Titter

Options :

89951416979. 1

89951416980. 2

89951416981. 3

89951416982. 4

Question Number : 58 Question Id : 8995144262 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Hybridoma technology is a new biotechnological approach for commercial production of:

1. Monoclonal antibodies
2. Interferons
3. Alcohol
4. Antibiotics

Options :

89951416983. 1

89951416984. 2

89951416985. 3

89951416986. 4

Question Number : 59 Question Id : 8995144263 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Allergies can best be described as:

1. Sneezing, itching, watery eyes, scratchy throat
2. An overreaction from the immune system to a foreign substance
3. The onset of a cold during spring months
4. A reaction to the influenza virus during spring months

Options :

89951416987. 1

89951416988. 2

89951416989. 3

89951416990. 4

Question Number : 60 Question Id : 8995144264 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In monoclonal antibody technology, tumour cells that can replicate endlessly are fused, with mammalian cells, which produce an antibody. The result of this cell fusion is a

1. Hybridoma
2. Myeloma
3. Natural killer cell
4. Lymphoblast

Options :

89951416991. 1

89951416992. 2

89951416993. 3

89951416994. 4

Question Number : 61 Question Id : 8995144265 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The cross linkage of antigens by antibodies is known as

1. Agglutination
2. Complement fixation
3. A cross reaction
4. All of these

Options :

89951416995. 1

89951416996. 2

89951416997. 3

89951416998. 4

Question Number : 62 Question Id : 8995144266 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following is secreted by T lymphocytes?

1. Interleukin
2. Interferon
3. Lymph toxin
4. All of these

Options :

89951416999. 1

89951417000. 2

89951417001. 3

89951417002. 4

Question Number : 63 Question Id : 8995144267 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is useful to STIMULATE antibody production?

1. An adjuvant
2. A hapten
3. Antiserum
4. Purified antigen

Options :

89951417003. 1

89951417004. 2

89951417005. 3

89951417006. 4

Question Number : 64 Question Id : 8995144268 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A weak colour signal in competitive ELISA represents what?

1. More antigens in the sample
2. Less antigen in the sample
3. Less antigen retained on the well
4. Both 1 and 2.

Options :

89951417007. 1

89951417008. 2

89951417009. 3

89951417010. 4

Question Number : 65 Question Id : 8995144269 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The major advantage of ELISA in comparison to other biological quantification technique is:

1. Detection of a molecule at low concentration
2. Expensive
3. Low specificity
4. Easily available.

Options :

- 89951417011. 1
- 89951417012. 2
- 89951417013. 3
- 89951417014. 4

Question Number : 66 Question Id : 8995144270 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which serological techniques utilize competition between radioisotope labelled antigen and test antigen for detection?

1. Flow cytometry
2. Immunoelectrophoresis
3. Radioimmunoassay
4. ELISA.

Options :

- 89951417015. 1
- 89951417016. 2
- 89951417017. 3
- 89951417018. 4

Question Number : 67 Question Id : 8995144271 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Flow cytometry (FCM) is a technique used to detect and measure physical and chemical characteristics of a population of cells or particles. Flow cytometry uses:

1. Heavy isotope
2. Radioactive elements
3. Immunological techniques
4. Energy content

Options :

89951417019. 1

89951417020. 2

89951417021. 3

89951417022. 4

Question Number : 68 Question Id : 8995144272 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In flow cytometry technique how are the cells sorted?

1. By dilution plating until there are only single cell in each well of microtiter plate
2. By the differential weight
3. By electrostatic force
4. By magnetic force

Options :

89951417023. 1

89951417024. 2

89951417025. 3

89951417026. 4

Question Number : 69 Question Id : 8995144273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which fluorescent dye can be used for red fluorescence?

1. Rhodamine
2. Fluorescein
3. Carmine
4. DAPI

Options :

89951417027. 1

89951417028. 2

89951417029. 3

89951417030. 4

Question Number : 70 Question Id : 8995144274 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

On surface of every B cell, T cell and pancreatic cell which among the following is present?

1. MHC class II molecules.
2. Immunoglobulin.
3. CD19
4. MHC class I molecules.

Options :

89951417031. 1

89951417032. 2

89951417033. 3

89951417034. 4

Question Number : 71 Question Id : 8995144275 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

CD4⁺ T cells are generally restricted by:

1. CD-1
2. MHC class -I
3. MHC class-II
4. β 2-microglobulin

Options :

89951417035. 1

89951417036. 2

89951417037. 3

89951417038. 4

Question Number : 72 Question Id : 8995144276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is **NOT** the structural component of MHC class II molecule?

1. α_1
2. α_2
3. α_3
4. β_1

Options :

89951417039. 1

89951417040. 2

89951417041. 3

89951417042. 4

Question Number : 73 Question Id : 8995144277 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is/are the examples of the chaperone proteins?

1. Calnexin
2. Calreticulin
3. Tapasin
4. All of the above

Options :

89951417043. 1

89951417044. 2

89951417045. 3

89951417046. 4

Question Number : 74 Question Id : 8995144278 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Class II MHC molecules present processed exogenous antigens to

1. CD4 T_H cells
2. CD8 T_C cells
3. Both A and B
4. None of the above

Options :

89951417047. 1

89951417048. 2

89951417049. 3

89951417050. 4

Question Number : 75 Question Id : 8995144279 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which scientist among the following pioneered the use of synthetic haptens to study immunochemical phenomena?

1. Edward Calvin Kendall
2. Otto Loewi
3. Alexander Fleming
4. Karl Landsteiner

Options :

89951417051. 1
89951417052. 2
89951417053. 3
89951417054. 4

Question Number : 76 Question Id : 8995144280 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The currently approach (s), which is/are followed to produce human monoclonal antibodies, is/are known as

1. Transformation of antigen specific B lymphocytes (EBV)
2. Hybridization of 6-thioguanine-resistant human plasmacytoma with immune human lymphocytes
3. Combination of EBV and hybridoma techniques
4. All of these

Options :

89951417055. 1
89951417056. 2
89951417057. 3
89951417058. 4

Question Number : 77 Question Id : 8995144281 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Activation of naïve T lymphocytes is best achieved by which antigen presenting cells?

1. Macrophages
2. Neutrophils
3. Mast cells
4. Dendritic cells

Options :

89951417059. 1

89951417060. 2

89951417061. 3

89951417062. 4

Question Number : 78 Question Id : 8995144282 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following cell types is **NOT** considered a professional antigen-presenting cell?

1. Macrophage
2. Neutrophil
3. B cell
4. All are APCs

Options :

89951417063. 1

89951417064. 2

89951417065. 3

89951417066. 4

Question Number : 79 Question Id : 8995144283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Processing of endogenous antigens occurs in

1. Cytoplasm
2. Acid vesicles
3. Both 1 and 2
4. None of the above

Options :

89951417067. 1

89951417068. 2

89951417069. 3

89951417070. 4

**Question Number : 80 Question Id : 8995144284 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Processing and presentation of Endogenous antigens occurs by

1. Endocytic Pathway
2. Cytosolic Pathway
3. Lectic Pathway
4. None of the above

Options :

89951417071. 1

89951417072. 2

89951417073. 3

89951417074. 4

**Question Number : 81 Question Id : 8995144285 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

What cells work closely with macrophages to provide the elegance and complexity of immune function

1. Neutrophils
2. Lymphocytes
3. Monocytes
4. Granulocytes

Options :

89951417075. 1
89951417076. 2
89951417077. 3
89951417078. 4

Question Number : 82 Question Id : 8995144286 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

MHC class I molecule are primarily involved in

1. Activation of neutrophils
2. Recognition of glycolipid antigen
3. Resistance to fungi
4. Resistance to viruses

Options :

89951417079. 1
89951417080. 2
89951417081. 3
89951417082. 4

Question Number : 83 Question Id : 8995144287 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The antigen-specific lymphocytes can be immortalized by which of the following method?

1. Transfection with tumour derived DNA
2. Hybridization with a suitable lymphoid tumour cell
3. Transformation following infection by Epstein-Barr virus (EB V)
4. All of the above

Options :

89951417083. 1

89951417084. 2

89951417085. 3

89951417086. 4

Question Number : 84 Question Id : 8995144288 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

First chaperone involved in the assembly of MHC class I

1. Calreticulin
2. Calnexin
3. ERp57
4. Tapasin

Options :

89951417087. 1

89951417088. 2

89951417089. 3

89951417090. 4

Question Number : 85 Question Id : 8995144289 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

T cells that secrete cytokines that help antibody responses are called

1. T_H1
2. T_H2
3. Regulatory T cells
4. Thymocytes

Options :

89951417091. 1
89951417092. 2
89951417093. 3
89951417094. 4

Question Number : 86 Question Id : 8995144290 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which type of T cell is most effective against viruses

1. Cytotoxic T cell
2. T_H1
3. T_H2
4. Regulatory T cells

Options :

89951417095. 1
89951417096. 2
89951417097. 3
89951417098. 4

Question Number : 87 Question Id : 8995144291 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following molecules are produced by T_H1 cells

1. IFN- γ & IL-2
2. IL-4 & IL-13
3. IFN- γ & IL-5
4. IL-17 & IL-22

Options :

89951417099. 1

89951417100. 2

89951417101. 3

89951417102. 4

**Question Number : 88 Question Id : 8995144292 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Which of the following is **NOT** a costimulatory molecule?

1. CD80
2. CD86
3. CD40
4. MHC II

Options :

89951417103. 1

89951417104. 2

89951417105. 3

89951417106. 4

**Question Number : 89 Question Id : 8995144293 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No
Correct Marks : 1 Wrong Marks : 0**

Costimulatory molecules help T cell responses by

1. Increasing T cell activation in an antigen specific manner
2. Increasing T cell activation regardless of the specificity of the T cell
3. Degrading antigen so it can bind in the MHC groove
4. Binding to the MHC molecules containing immunogenic peptides

Options :

89951417107. 1

89951417108. 2

89951417109. 3

89951417110. 4

Question Number : 90 Question Id : 8995144294 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following statements about CD86 is **INCORRECT**?

1. CD86 is a 70-kDa glycoprotein
2. CD86 is constitutively expressed on APCs
3. Combination of anti-CD80 and anti-CD86 Abs can induce anergy
4. Cross-linking of CD86 on LPS activated B cells decreases the proliferation and production of IgG1 and IgG2a antibodies

Options :

89951417111. 1

89951417112. 2

89951417113. 3

89951417114. 4

Question Number : 91 Question Id : 8995144295 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following is **NOT** a type 2 cytokine?

1. $\text{TNF}\alpha$
2. $\text{TGF-}\beta$
3. IL-4
4. IL-10

Options :

89951417115. 1

89951417116. 2

89951417117. 3

89951417118. 4

Question Number : 92 Question Id : 8995144296 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

A particular cytokine may bind to receptors on the membrane of the same cell that secreted it is known as

1. Paracrine action
2. Autocrine action
3. Endocrine action
4. Cascade induction

Options :

89951417119. 1

89951417120. 2

89951417121. 3

89951417122. 4

Question Number : 93 Question Id : 8995144297 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What among the following, are cytokines secreted by Th2 cells?

1. IL-4
2. IL-1
3. IL-2
4. IL10

Options :

89951417123. 1

89951417124. 2

89951417125. 3

89951417126. 4

Question Number : 94 Question Id : 8995144298 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The activity of cytokines was first observed in the year

1. 1950
2. 1940
3. Mid 1960
4. 1970

Options :

89951417127. 1

89951417128. 2

89951417129. 3

89951417130. 4

Question Number : 95 Question Id : 8995144299 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The cytokine IL-5 is secreted predominantly by which type of cell.

1. B cells
2. DC cells
3. Th2 cells
4. Th1 cells

Options :

89951417131. 1
89951417132. 2
89951417133. 3
89951417134. 4

Question Number : 96 Question Id : 8995144300 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following statements is **NOT CORRECT** for IL-2?

1. Produced by regulatory T cells.
2. Necessary for the activation of T cells.
3. Induces T cell proliferation and differentiation.
4. Produced by macrophages.

Options :

89951417135. 1
89951417136. 2
89951417137. 3
89951417138. 4

Question Number : 97 Question Id : 8995144301 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The Cytotoxic T cells, mature in the thymus and kill their targets. Which among the following is the characteristics of Cytotoxic T cells.

1. Are mostly CD4+
2. Act via perforin and granzyme B
3. Recognize glycolipids in the context of MHC Class-I molecules
4. Also secrete IL-4 and IL-5

Options :

89951417139. 1

89951417140. 2

89951417141. 3

89951417142. 4

Question Number : 98 Question Id : 8995144302 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following statements regarding the functional properties of cytokines is **FALSE**?

1. They typically have pleiotropic properties.
2. They often exhibit functional redundancy.
3. They often display antigen specificity.
4. They exhibit synergistic or antagonistic properties.

Options :

89951417143. 1

89951417144. 2

89951417145. 3

89951417146. 4

Question Number : 99 Question Id : 8995144303 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following statements regarding the Tumor necrosis factor alpha (TNF- α) is **CORRECT**?

1. It is a cell signaling protein involved in systemic inflammation.
2. Activates T-cells, causing proliferation.
3. Activates vascular endothelium and increases vascular permeability.
4. Differentiates CD4 cells.

Options :

- 89951417147. 1
- 89951417148. 2
- 89951417149. 3
- 89951417150. 4

Question Number : 100 Question Id : 8995144304 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Following a skin abrasion and local minor infection, scar tissue is normally formed. This is due to proliferation of fibroblasts and deposition of extracellular material and is stimulated by which of the following?

1. Granulocyte-colony stimulating factor (G-CSF).
2. IL-1.
3. TGF- β .
4. IL-17.

Options :

- 89951417151. 1
- 89951417152. 2
- 89951417153. 3
- 89951417154. 4