

BIOLOGY

HUMAN HEALTH AND DISEASE

WORK SHEET

MCQs-OBJECTIVE TYPE QUESTIONS (1 Marks.)

1. 'Smack' is a drug obtained from the

- (a) latex of *Papaver somniferum*
- (b) leaves of *Cannabis sativa*
- (c) flowers of *Datura*
- (d) fruits of *Erythroxylon coca*

2. The substance produced by a cell in viral infection that can protect other cells from further infection is

- (a) serotonin
- (b) colostrum
- (c) interferon
- (d) histamine.

3. Antibodies present in colostrum which protect the new born from certain diseases is of

- (a) IgG type
- (b) IgA type
- (c) IgD type
- (d) IgE type.

4. Haemozoin is a

- (a) precursor of haemoglobin
- (b) toxin released from *Streptococcus* infected cells
- (c) toxin released from *Plasmodium* infected cells
- (d) toxin released from *Haemophilus* infected cell

5. A person with sickle cell anaemia is

- (a) more prone to malaria
- (b) more prone to typhoid

- (c) less prone to malaria
- (d) less prone to typhoid.

6. Typhoid fever in human beings is caused by

- (a) Plasmodium vivax
- (b) Trichophyton
- (c) Salmonella typhi
- (d) Rhinoviruses.

7. Which one of the following sets includes bacterial diseases?

- (a) Tetanus, tuberculosis, Cholera
- (b) Diphtheria, leprosy, plague
- (c) Typhoid, mumps, measles
- (d) Malaria, mumps, poliomyelitis

8. The common cold is caused by

- (a) Rhino viruses
- (b) Streptococcus pneumoniae
- (c) Salmonella typhimurium
- (d) Plasmodium vivax.

9. Injection of antitoxin in tetanus confers which type of immunisation?

- (a) Active immunisation
- (b) Passive immunisation
- (c) Auto-immunisation
- (d) Humoral immunisation

10. Vaccine against polio viruses is an example of

- (a) auto-immunisation
- (b) passive immunisation
- (c) active immunisation
- (d) simple immunisation

11. During the life cycle of Plasmodium, sexual reproduction takes place in which of the following hosts ?

- (a) Human
- (b) Female Anopheles mosquito
- (c) Male Anopheles mosquito
- (d) Both (a) and (b)

12. An intestinal parasite which causes blockage of the intestinal passage and whose eggs are excreted along with the faeces of infected person is _____.

- (a) Wuchereria bancrofti
- (b) Ascaris
- (c) Epidermophyton
- (d) Microsporum

13. Appearance of dry, scaly lesions with itching on various parts of the body are the symptoms of _____.

- (a) elephantiasis
- (b) ringworm
- (c) ascariasis
- (d) amoebiasis

14. Heroin is commonly called as

- (a) coke
- (b) crack
- (c) smack
- (d) charas.

15. Marijuana is extracted from .

- (a) dried leaves and flowers of hemp plant .
- (b) ergot fungus
- (c) roots of hemp plant
- (d) cocoa plant.

16. Hepatitis B vaccine is produced from

- (a) inactivated viruses
- (b) yeast
- (c) Haemophilus influenzae
- (d) Salmonella typhimurium.

17. **Assertion:** Lymph nodes serve to trap the micro-organisms or other antigens, which happen to get into the lymph and tissue fluid.

Reason: Antigens trapped in the lymph nodes are responsible for the activation of lymphocytes present there and cause the immune response

- a. Both assertion and reason are true, and the reason is the correct explanation of the assertion.
- b. Both assertion and reason are true, but the reason is not the correct explanation of the assertion.
- c. Assertion is true but reason is false.
- d. Both assertion and reason are false

18. **Assertion:** Metastasis is the most feared property of malignant tumors.

Reason: As the cells actively divide and grow they also starve the normal cells by competing for vital nutrients.

- a. Both assertion and reason are true, and the reason is the correct explanation of the assertion.
- b. Both assertion and reason are true, but the reason is not the correct explanation of the assertion.
- c. Assertion is true but reason is false.
- d. Both assertion and reason are false

CASE STUDY- There are two case studies provided in this section, answer the questions related to them

1.Allergies

When you have gone to a new place and suddenly you started sneezing, wheezing for no explained reason, and when you went away, your symptoms disappeared. The above-mentioned reaction could be because of allergy to pollen, mites, etc., which are different in different places, the exaggerated response of the immune system to certain antigens present in the environment is called allergy. Somehow, modern-day life style has resulted in lowering of immunity and more sensitivity to allergens – more and more children in metro cities suffer from allergies and asthma due to sensitivity to the environment.

1.The most abundant antibody produced against allergens is

- (a) IgE
- (b) IgA
- (c) IgG
- (d) IgM.

2.Which of the following cells actively participate during allergy?

- (a) B-lymphocytes
- (b) Liver cells
- (c) Mast cells
- (d) Red blood cells

3.The drugs used to quickly reduce the symptoms of allergy are

- (a) anti-histamine and adrenaline
- (b) histamine and thyroxine
- (c) adrenaline and a-interferon

(d) all of these

4. Assertion: Allergy is due to the release of chemicals like histamine and serotonin from the mast cells.

Reason: Modern-day life style has resulted in lowering of immunity and more sensitivity to allergens

a. Both A and Reason are true, and the R is the correct explanation of the A

b. Both A and R are true, but the R is not the correct explanation of the A

c. A is true but R is false.

d. Both A and R are false

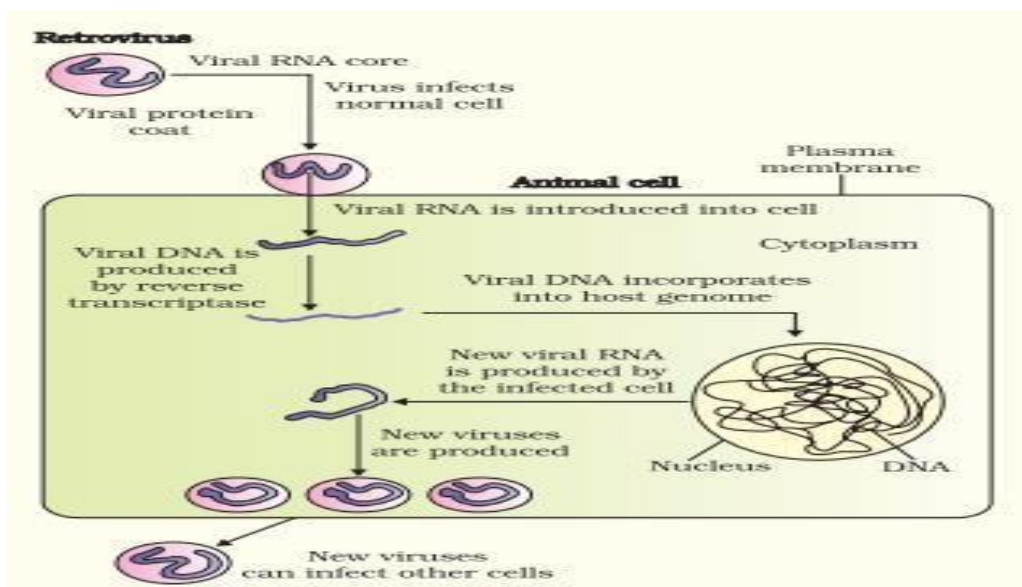
5. The substances to which an immune response is produced are called allergens

a) True

b) False

2. AIDS (Replication of a retrovirus)

Observe the diagram and answer the questions that follow



1. AIDS stands for Acquired Immuno Deficiency Syndrome, this means

a) Congenital disease

b) Deficiency of immune system

c) Heredity disease

d) Lifestyle disease

2. AIDS is caused by the Human Immuno deficiency Virus (HIV), a member of a group of viruses called retrovirus

a) which have an envelope enclosing the DNA genome

b) which have an envelope enclosing the both DNA and RNA genome

c) which have an envelope enclosing without any genome

d) Which have an envelope enclosing the RNA genome

3. **Assertion:** The person suffering from HIV starts suffering from infections that could have been otherwise overcome

Reason: Due to increase in the number of helper T lymphocytes

a. Both assertion and reason are true, and the reason is the correct explanation of the assertion.

b. Both assertion and reason are true, but the reason is not the correct explanation of the assertion.

c. Assertion is true but reason is false.

d. Both assertion and reason are false

4. Transmission of HIV-infection generally occurs by

a) sexual contact with infected person

b) by transfusion of contaminated blood and blood products

c) by sharing infected needles as in the case of intravenous drug abusers

d) from all the above

5. The----- continue to produce virus and in this way acts like a HIV factory.

a) RBCs

b) Macrophages

c) Helper T-lymphocytes

d) Liver cells

SHORT ANSWER TYPE QUESTION (2 Marks) Previous years Board Questions

1. What is the reason of shivering in malarial patient?
2. Why does an AIDS patient suffer from many infections?
3. Where are B-cells and T-cells formed? How do they differ from each other?
4. What would happen to the immune system, if thymus gland is removed from the body of a person?
5. Differentiate between two different types of tumours?
6. Differentiate between active & passive immunity?
7. Enumerate the two properties of cancer cells that distinguish them from normal cell.
8. What are autoimmune diseases? Give two examples?

LONG ANSWER TYPE QUESTIONS (3 Marks)-Previous years Board Questions

1. What are Cannabinoids? From which plant Cannabinoids are obtained? Which part of the body is affected by consuming these substances?
2. Mention any three causes of drug abuse. Suggest some measures for the prevention and control of drug abuse.
3. What is innate immunity? List the four types of barriers which protect the body from the entry of the foreign agents.

LONG ANSWER TYPE QUESTIONS (5 Marks)-Previous years Board Questions

1. With the help of a diagrammatic representation depict the life cycle of the HIV.

2.a) With the help of a diagrammatic representation depict the life cycle of the Plasmodium in the Primary host.

b) Why does the symptoms of malaria not appear immediately after the plasmodium enters our body.

3 a) How is cancer caused and what is its most feared property

b) Mention any two techniques of its diagnosis and its treatment.

c) How are oncoviruses different from oncogenes,

HINTS

ANSWERS (1-18) MCQs

1-a	2-c	3-b	4-c	5-c	6-c	7-a
8-a	9-b	10-c	11-b	12-b	13-b	14-a
15-a	16-b	17-a	18-a			

2 MKS.

1. After sporozoite infection, when RBC ruptures, a toxic substance haemozoin is released which cause chilling and high fever.

2. Because in AIDS patient, immune system greatly weakens & cannot fight against any infection

3. B-cells and T-cells are formed in bone marrow. B-cells produce antibodies but T-cells do not produce antibodies but help B-cells to produce them, B-cells form the humoral system and T-cells the CMI.

4. T-lymphocytes are developed and matured in thymus gland, Immune system will become weak on removal of thymus gland.

7.i) uncontrolled proliferation of cells without any differentiation

ii) Ability of these cells to invade other tissues called metastasis.

8. Immunity is based on ability to differentiate foreign organism from self-cells. Sometimes immune system may go off the track & turns against self-antigen and elicit immunity. Such conditions are called auto – immune diseases eg. Rheumatoid arthritis, Myasthenia gravis.

3MKS

1. -Cannabinoids are a group of chemicals which interact with Cannabinoid receptors present

- Principally in the brain Cannabinoids are obtained from the inflorescences of the plant *Cannabis sativa*.

– The substances affect the cardiovascular system adversely