

Topic :- Human Health & Disease

- 1 **(b)**
The vaccines also generate memory B and T-cells that recognize the pathogen quickly on subsequent exposure and over the invaders with a massive production of antibodies
- 2 **(b)**
Benign tumours are the non-malignant, non-cancerous tumours which remain confined to the site of origin and do not spread to the other parts of the body as these remain capsulated and are differentiated.
- 3 **(c)**
Antibodies are gamma-globulins present in blood plasma and provide immunity against a pathogen so, they are gamma-immunoglobulins. Antibodies are made up of glycoproteins.
- 4 **(a)**
An oncogene is a gene that has the potential to cause cancer. In tumour cells, they are often mutated or expressed at high levels. Tumour virus or cancer causing viruses are called oncogenic viruses
- 5 **(b)**
Teratogens are substance or chemical compounds that cross the placenta and damage the developing foetus and cause malformations in embryo, *e.g.*, thalidomide.
- 6 **(c)**
Statements I and III are correct.
- 7 **(a)**
Allergy is the hypersensitiveness of a person to some foreign substances coming in contact with or entering the body. The common allergens are dust, pollen mould, spores, fabricates, bacteria, etc. During allergic reaction, there is increased release of histamine from mast cells. Use of anti-histamines and steroids give a quick relief from allergy.
- 8 **(b)**
Hepatitis -B is a matter of great attention in India for the last 3 to 4 years. It is caused by a circular dsDNA virus HBV (Hepatitis-B virus). In India, it is generally transmitted from mother to baby and also through moist kissing, contaminated needles, syringes, nose and ear piercing instruments.
- 9 **(a)**
Auto-immunity is the failure of an organism in recognising its own constituent parts as self, which allows an immune response against its own cells and tissues
- 10 **(c)**
The primary lymphoid organs are bone marrow and thymus, where immature lymphocytes

differentiates into antigen sensitive lymphocytes. After maturation the lymphocytes migrate to secondary lymphoid organs. Production, maintenance and distribution of lymphocytes takes place in secondary lymphoid organs

11 **(b)**

In our body, cell growth and differentiation is highly controlled and regulated. In cancer cells, there is breakdown of these regulatory mechanisms. Normal cells show a property called contact inhibition by virtue of which Contact with other cells inhibits their uncontrolled growth. Cancer cells have lost this property and continue to divide giving rise to masses of cells called **tumour**.

12 **(d)**

Surgical removal of thymus of a new born shall result in failure to produce T-lymphocyte. Thymus provides the micro-environment for the development and maturation of T-lymphocytes

13 **(d)**

Antibiotics are the life saving drugs. A broad spectrum antibiotic is one which acts upon a variety of microorganisms and destroy them.

14 **(b)**

Interferons are produced in response of viral infection and measles is a viral disease.

15 **(a)**

Diplococcus pneumoniae bacterium is a causative agent of pneumonia disease in human beings. This is a spherical shaped (coccoid) bacterium. Generally, coccoid bacterium does not contain flagella, this condition is known atrichous.

16 **(b)**

To detect deficiency of antibodies, serum globulins should be look for confirmatory evidence.

17 **(d)**

IgA is predominantly found in seromucous secretions such as colostrum milk, saliva, tear etc. Breast milk contains IgA, which protects new born babies against various infections and provide him a strong defence and protection.

18 **(b)**

Cocaine in its various forms is derived from the coca plant, which is native to the high mountain ranges of South America

19 **(a)**

Globulins are soluble in salt solutions of strong acids and bases. These are coagulated by heat and insoluble in pure water and moderately concentrated salt solutions. Globulins contained in human blood plasma are primarily involved in defence mechanisms of the body. Some examples are –Rabies immune globulin, RhO(D) immune globulin, specific immune globulin, tetanus immune globulin, etc.

20 **(a)**

Schizophrenia is any of a group of severe mental disorders that have in common, symptoms are hallucinations, delusions, blunted emotions, disordered thinking and a withdrawal from reality. Schizophrenia can be caused by excessive dopamine production alteration in neuropeptides, increased ventricular brain ratios and decreased frontal lobe activity.

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	B	B	C	A	B	C	A	B	A	C
Q.	11	12	13	14	15	16	17	18	19	20
A.	B	D	D	B	A	B	D	B	A	A

PE