

Human Health and Diseases



TRY YOURSELF

ANSWERS

- (i) Fasciolopsiasis, Taeniasis
(ii) Anthrax is a bacterial disease that can be transmitted from animals to humans. It is caused by *Bacillus anthracis*.
- X is elephantiasis disease caused by a worm *Wuchereria bancrofti*. The disease is characterised by the swelling of the legs and scrotum.
- Antibiotics only fight bacteria and not viruses because both bacteria and viruses have different mechanisms and machinery to survive and replicate. As cold and flu are caused by viruses so antibiotics are usually ineffective against cold. However, antiviral medications and vaccines are specific for viruses.
- (i) Frequent urination, (ii) Excessive thirst (Polydipsia), (iii) Unexplained weight loss.
- Differences between rheumatoid and gouty arthritis :

	Rheumatoid arthritis	Gouty arthritis
(i)	It is an autoimmune inflammatory disease.	It is an inflammatory disorder but not an auto immune condition.
(ii)	Can affect any joint of the body and is usually symmetrical on either side of body.	Occurs in foot, most commonly at the base of big toe.
(iii)	Synovial membrane inflamed causing pain and swelling.	Accumulation of uric acid crystals in joints.

- Preventive measures of infectious diseases are (i) Close contact with infected person or their belongings should be avoided, (ii) The use of vaccines and immunisation programmes have enabled to completely eradicate a deadly disease like small pox.
- Inflammatory response occurs due to release of chemicals, particularly histamine by the damaged mast cells.
- A fever can help immune system to fight infections in two ways (i) When enough pyrogens (fever producing substance) reach the brain, the body's thermostat is reset to a higher temperature, allowing the temperature of the entire body to rise. (ii) Mild fever strengthens the defence

mechanism by activating the phagocytes and by inhibiting the growth of microbes.

- A complete antigen is able to induce antibody formation and produce specific and observable reaction with antibody.
- Differences between primary and secondary immune responses are:

	Primary immune response	Secondary immune response
(i)	This immune response occurs as a result of first contact with antigen.	This immune response occurs at the second and subsequent exposure to the same antigen.
(ii)	It takes longer time to establish immunity.	It is more rapid.
(iii)	It declines rapidly.	It lasts for longer period.

- Characteristic features of active immunity:
 - It is developed when the person's own cell produce antibodies in response to infection or vaccine.
 - It provides relief after long period.
 - It has no side effects.
 - It is long-lasting.
- (i) Allergy is the hypersensitivity of a person to some foreign substances coming in contact with or entering the body.
(ii) Addison's disease, diabetes mellitus (type I), multiple sclerosis.
- BCG (Bacille Calmette-Guerin) and OPV (Oral Poliovirus Vaccine).
- AIDS virus is transmitted by:
 - transfusion of infected blood or blood products.
 - use of contaminated needles, syringes and razors.
 - sexual intercourse with an infected partner without protection.
 - from infected mother to child through placenta.
- The following steps may help in preventing AIDS:
 - Blood test must be done in blood donors, donors of semen, donors of organs and pregnant women.
 - Disposable needles and syringes should be used.

16. Three properties of cancer cells are : (i) Uncontrolled proliferative ability; (ii) ability to invade new sites (*i.e.*, metastasis) and (iii) irregular nucleus with abundant granules.

17. Possible symptoms of cancer are:

- (i) Persistent cough;
- (ii) Persistent change in digestive and bowel habits;
- (iii) Loss of appetite;
- (iv) Unexplained low grade fever;
- (v) Weight loss;
- (vi) Non-injury bleeding from skin surface, etc.

18. Some effects of drug abuse are:

(i) Nervousness and psychosis; (ii) Diseases like AIDS and hepatitis; (iii) Impairment and permanent damage to kidneys; (iv) Hormonal changes include an increase in cortisol levels, inhibition of vasopressin, reversible decrease in serum thyroxine and a more marked decrease in serum triiodothyronine; (v) Impotency, chromosomal aberrations and production of abnormal babies.

19. Cannabinoids are group of chemicals obtained from leaves, resin and inflorescence of hemp plant, *Cannabis sativa*. They are of four types : Bhang, Ganja, Charas and Marijuana.



