

2. HEALTH AND DISEASES

Q 1) Distinguish between the following.

Infectious and non-infectious diseases.

Infectious diseases	Non –infectious diseases
1. The disease which are transmitted from one patient to other person, or caused due to infectious agent or pathogens, are called infectious diseases.	1. The disease which cannot be transmitted from one patient to other person, or which do not occur through infections and body contacts are called non-infectious diseases.
2. The causes of infectious diseases are contaminated air, water, food or carrier/vector animals or insects which spread the diseases.	2. Non-infectious diseases are not transmitted through any medium.
3. These are caused due to microbes or pathogens.	3. These are caused due to genetic abnormalities wearing out of tissues.
4. Infectious diseases are acute diseases which are caused due to infections of bacteria, virus or protozoan. Thus the symptoms are seen sooner.	4. The cause of some non-infectious diseases are hereditary causes, some are due to failure in metabolism, some due to lack of the nutrients. Their symptoms are not seen quickly but get developed gradually.
5. These type of diseases spread quickly.	5. These type of diseases are restricted to the person.
6. Antibiotics or antihelminth medicines are used to treat the infectious diseases. E.g. Tuberculosis, hepatitis, leprosy, cough and cold, influenza etc.	6. Antibiotics cannot be used for treating non-infectious diseases. These diseases have a proper treatment. E.g. Diabetes, cancer, heart diseases, Night blindness.

Q 2) Identify the odd term.

a. Malaria, Hepatitis, elephantiasis, dengue.

Ans. Hepatitis (Explanation - All other diseases are caused by the carrier mosquito.)

b. Plague, AIDS, Cholera, T.B

Ans. AIDS (Explanation- All others are bacterial - caused by bacteria diseases.)

Q 3) Answer in one to two sentences.

a. Which are various media of spreading the infectious diseases?

Ans. Infectious disease can spread from one infected person to other, by contaminated food, water, vectors such as insects, animals and man or by transfusion of blood and by sharing of needles.

b. Give the names of five non-infectious diseases other than given in the lesson.

Ans. Cataract, obesity, asthma, chronic kidney diseases such as kidney stones and renal failure, and Alzheimer which is a condition during old age, hypertension, migraine, arthritis, osteoporosis etc.

c. Which are the main reasons of diabetes and heart diseases?

Ans. 1) Reasons of diabetes: Heredity, obesity, lack of physical exercise and mental stress, wrong type of diet, improper lifestyle, imbalance in secretion of hormones, etc. are the main reasons for diabetes and heart diseases.

2) Reasons of heart disease: Hypertension, smoking, alcoholism, diabetes, heredity, obesity lack of physical exercise, mental stress, anger, anxiety.

Q 4) What can be achieved / can be prevented?

a. Drinking boiled and filtered water.

Ans. When water is boiled, all the harmful pathogens present in it get killed. Different diseases like cholera, dysentery, hepatitis, typhoid, enteritis, and diarrhea are caused by such water-borne pathogens. One can achieve good health by drinking boiled and filtered water as we are protected against all such diseases. When the water is filtered we can avoid infections from nematode *Dracunculus* which causes *Naru*. The epidemics caused by such infectious diseases can be controlled by boiling and filtering water.

b. Avoiding smoking and alcoholism.

Ans. Smoking and alcoholism are two harmful diseases. Alcoholism leads to liver disorders, malnourishment, and abnormal mental and psychological conditions. Smoking causes cancer. Nicotine in cigarettes is toxic and carcinogenic, which causes cancers of oral cavity, tongue, respiratory tract, lungs.

One should avoid smoking and alcoholism as it reduces risk of health problems like cancer, heart diseases, liver failure, and diabetes. It can reduce the frequency of illness in a person by keeping the immune system strong enough.

c. Regular balanced diet and exercise.

Ans. One will remain fit and healthy; and lead a good healthy life. He/she will be free from diseases. The disease fighting power or immunity of person is increased due to healthy diet. The frequent infections can be avoided and mental well-being of a person is

established. If high caloric junk food is not consumed then heart disease, diabetes, obesity etc. can be avoided. Regular exercise improves blood circulation. If a person has regular balanced diet and exercise then many disorders which are caused by faulty lifestyle can be prevented.

d. Proper checking of blood before blood donation.

Ans. 1) As there are definite blood groups, during blood transfusion, the donor's and recipient's blood should be well-matched with each other. If it is not matched blood gets clumped inside the body of recipient. 2) The viruses such as those causing hepatitis B or AIDS can get transmitted through infected blood to healthy person. 3) One can prevent from the fatal disease AIDS, if blood is screened before transfusion. Thus, for prevention of transmission of such diseases, blood should be checked before blood donation.

Q. 5) Read the passage and answers the question.

Master 'X' is a 3-year-old child. He is living with his family in a slum. Public toilet is present near his house. His father is a drunkard. His mother does not know the importance of balanced diet.

a. Master 'X' can suffer from which different possible diseases in above conditions?

Ans. Master 'X' lives in an area which is lacking of cleanliness. The public toilet is near his house. This indicates that he is prone to many infectious diseases. As his father is a drunkard, there will be a shortage of money in the house. He may not be able to afford enough and balanced food. Thus his diet must be scarce in vitamins and minerals. Moreover, his mother cannot afford the healthy food. This must be causing Master 'X' undernourishment and loss

of immunity power. The financial conditions and the addiction of the father must be causing stress in the house. This will further add stress on Master 'X' resulting into vulnerability to infections. Due to the slum area the germs are around and thus Master 'X' is prone to different diseases. He may suffer from digestive disorders such as anemia, weakness, stunted growth, typhoid, hepatitis, cholera, enteritis, etc.

b. How will you help him and his family in this situation?

Ans. First of all, we shall help Master 'X' to procure healthy and balanced diet which can be achieved by eating fruits, vegetables, milk and nutritious food etc. We can direct them to medical institutions; give them training about clean healthy habits. An awareness program highlighting the importance of healthy nutritious food can be arranged. Disinfectants should be used in the house to keep off the germs, houseflies and cockroaches etc His father can be taken to de-addiction centers such as 'Alcoholics Anonymous'. He will be convinced to leave alcoholism.

c. Which disease can occur to the father of master 'X'?

Ans. Father of Master 'X' can develop diseases of kidney, cancer, heart attack, liver failure.

Q. 6) Give the preventive measures of following diseases.

a. Dengue

Ans. Dengue is transmitted through bite of mosquito of *Aedes aegypti*. DEN-1, 2 virus belonging to the type – flavivirus is the causative pathogen for dengue. In the containers and in clean water, the Aedes mosquito prefers to breed, so it should be decanted or covered. The water logged areas should be fumigated or sprayed by D.D.T., stagnant water should be drained. As water

can get collected in plants pots having dishes below it should be checked. Boiled water should be consumed. Another way to keep off from dengue is to increase our immunity to fight against the virus. There is vaccine called CYD-TDV or Dengvaxia which is synthesized in 2017. But it is still not considered to be completely safe.

b. Cancer

Ans. The nicotine present in Tobacco chewing, gutkha, cigarette, bidi etc. cause cancers of oral cavity and of respiratory system. We should not expose ourselves to hazardous radiations. Controlled and healthy diet, physical exercise helps to prevent some types of cancers. Only for few types of cancer like cervical cancer in women, vaccine has been developed.

c. AIDS

Ans. The blood should be checked before blood transfusion for the presence of HIV. The sterilized syringes, needles, etc. should be used. HIV easily transmits in the body through blood, blood products and body fluids. To avoid sexual contact with the infected person. People should be educated about transmission of AIDS. Before transfusion one must be sure that it has been screened for HIV. There is no cure but prevention is the only way to stop it.

Q. 7) Explain the importance.

a. Balanced diet

Ans. A diet which contains all the constituents in the proper proportion, i.e. Carbohydrates, proteins, Vitamins, Fats, Vitamins and Minerals, is termed as balanced diet. Malnutrition can be avoided by taking balanced diet. Balanced diet depends on age, kind of work and gender. In childhood, children grow fast; they

need more proteins than the adults. Every food group is essential for our body some diseases can be avoided due to raised immunity. Wrong lifestyle and wrong diet leads to hypertension, diabetes or heart diseases.

b. Physical exercise / Yogasanas.

Ans. If a person regularly do exercise and yoga, the blood circulation improves, stress free mind, increases immunity. It also aims to maintain a healthy life. There is flexibility in body and joints. Insomnia (inability to fall asleep), arthritis, indigestion, and some other disorders can be avoided. The person, who performs exercise, always remains away from the addictions. Yoga makes levels of hormones, enzymes etc. in equilibrium. Breathing exercises as pranayama helps to avoid respiratory and circulatory disorders.

Q 8) Make a list.

a. Viral diseases

Ans. Rabies, Mumps, Chicken pox, Measles, AIDS, Hepatitis, Polio, Chikunguniya, Herpes, Encephalitis, Dengue, Influenza.

b. Bacterial diseases.

Ans. Diarrhoea, Typhoid, Gonorrhoea, Tetanus, Food poisoning, Anthrax, Leprosy , Meningitis, Woophing cough, Tuberculosis, Plague, Diphtheria, Cholera.

c. Diseases spread through insects.

Ans. Malaria, Chikunguniya, Dengue, Filaria, Kala azar, Elephantiasis.

d. Hereditary diseases.

Ans. Heart diseases, Huntington's disease, Gigantism, cystic fibrosis, Cancer, Dwarfism, Sickle cell anaemia, Muscular strophy, Diabetes, Haemophilia, Phenyl ketonuria, Down's syndrome, Colourblindness.

Q 9) Write the information on modern diagnostics and treatments of cancer.

Ans. 1) Following methods are used as diagnostic methods to detect the cancer.

Techniques such as CT scan, MRI scan, mammography, biopsy.

2) Treatment of the cancer is done by the following methods.

Some conventional methods are used for treatment of cancer. Along with these methods, chemotherapy, radiation therapy and surgery are commonly used to treat cancerous growth and tumours. Nowadays new techniques of robotic laparoscopic surgery are also used for treatment.

Pat scan which helps to detect how far the disease has spread.

Q 10) Enlist the names and composition of the medicines present at your home.

Name of Medicine	Composition
Paracetamol 500 mg tablet	Paracetamol
Crocin 650mg	Paracetamol IP 650 Mg
Wymox 500mg	Amoxycilin
Gelusil	Aluminium hydroxide, Magnesium hydroxide, Simethicone
Cyclopam tablet	Dicyclomine, Paracetamol
Saridon	Propyphynazene, Paracetamol.