Grade IX

Lesson : 13 Why do we fall ill

CHAPTER AT A GLANCE

HEALTH

Health is a state of physical, mental and social well being Healthy body with a healthy mind and healthy attitude is referred as good health.

Community Health

Overall well-being or good health of the wholecommunity

Maintenance of Community Health

Personal Health

State of physical, mental and social well being of anindividual

Proper Sanitation of the Surrounding Environment

- Ensuring treatment of water to provide clean and safe drinking water.
- Employing sewage and rain water disposal system.
- Proper garbage disposal

Health Education

- Educating people regarding mode of transmission of diseases, control of communicable diseases, importance of balanced diet, effect of alcoholism and drug addiction,

Maternity and Child Care

Providing family planning devices and medical care for infants and children

Prevention and Control of Diseases

- Vaccination
- Spraying of chemicals for killing pests and insects, e.g. malathion is sprayed for killing mosquitoes.

Health Care Services

Providing primary health centres, district hospitals, community health centres, medical colleges, regional hospitals, etc.,

DISEASE

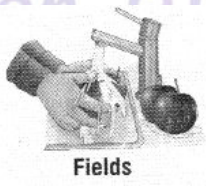
Malfunctioning of normal state of the living organism, that disturbs performance of vital functions.,

Transmission of Diseases The Five 'F's


Fluid


Fingers


Flies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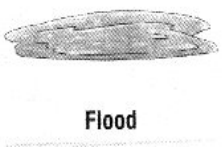

Flood

TYPES OF DISEASE

Acute Disease
Lasts for very short period of time, e.g common cold

Chronic Disease
Lasts for long time sometimes even for whole life, e.g Elephantiasis

Infections Disease/ Communicable Disease
- Microbes are the immediate cause.
- Microbes spread from one person to another. The diseases caused by them are called pathogenic diseases as these microbes enter the body to cause the harmful disease, e.g. chickenpox, polio

NON-INFECTIOUS DISEASE / NON-COMMUNICABLE DISEASE
- Diseases not caused by infectious agents.
- Causes are mostly due to internal and non-infectious causes, e.g. High Blood Pressure, Cancer.etc.,

Infectious Agents

Virus
- Utilises the metabolic system of the host cell and multiply.
- Diseases caused, e.g. mumps, polio, AIDS, influenza, dengue, fever, etc.,

Fungi
- Multicellular, eukaryotic, heterotropic,
- Diseases caused,, etc., ring worms, etc.,

Helminthes
- Multicellular worms, mostly present in intestines.
- Diseases caused, e.g. ascariasis, elephantiasis etc.,

Bacteria
- Unicellular and prokaryotic reproduces very quickly.
- Diseases caused, e.g. typhoid, tuberculosis, cholera etc.,

Protozoan
- Unicellular, eukaryotic, reproduces on their own,
- Diseases caused, e.g., malaria, kala-azar., etc.,

Means of Spread

Air
Spreads through little droplets thrown out by infected person during sneezing and coughing, e.g. pneumonia, common cold, etc.,

Water
Spreads when stool from an infected person gets mixed with the drinking water e.g. cholera,

Sexual Contact
Gets transmitted by sexual contact from one partner to another e.g. AIDS, Syphills, gonorrhea, ect.,

Vectors
Animals that carry infecting agens from a sick person to a healthy person are called vectors e.g. female anopheles mosquito is a vector for malaria

ORGAN-SPECIFIC AND TISSUE – SPECIFIC MANIFESTATION OF DISEASES

MANIFESTATION: of a disease means clear signs of existence of a pathogen in the body of an organism.

- Some microbes show their effect on the same organ in which they enter. E.g. microbes [like baqcteria] enter through nose alongwith air, pass to lungs and cause tuberculosis [infection of lungs]
- Some microbes enter through different routes into the body and show their effect in other organs or may affect the whole body e.g. Plasmodium [Malarial parasite] enters the body by mosquito bite and through the blood enters liver cells and RBCs.

PRINCIPELS OF TREATMENT

To Reduce the effect of Disease
- By taking medicine to reduce fever or pain or loose motion.
- Taking complete bed rest to conserve energy.

To kill the Cause of Disease
For example : Antibiotics Chemicals which can kill or stop the growth of some pathogenic bacteria, e.g. penicillin, tetracycline.

PRINCIPELS OF PREVENTION

PRINCIPELS OF PREVENTION

- ✓ Providing living conditions which are not overcrowded,
- ✓ Providing safe drinking water
- ✓ Providing clean environment which do not allow mosquitoes to breed
- ✓ Proper and sufficient food available everyone.

SPECIFIC WAYS OF PREVENTION

- ✓ The immune system of our body reacts against specific microbes, recognize them and kill them.
- ✓ Immunity is the ability of our body to resist the disease. It can be in-born or acquired after birth.
- ✓ Vaccination is a way of providing immunity to a healthy person by giving vaccines
- ✓ Chronic diseases like smallpox, polio, etc., have been eradicated by vaccination

Vaccination

Inoculation of vaccine in the body of a healthy person to develop immunity

Summary of Communicable Diseases

S. No	Name of Disease	Causative organisam	Mode of infection	Main Symptoms	Prevention and control
1.	Malaria	Plasmodium [Protozoa]	Female Anopheles Mosquito	➢ High fever with specific patter of cold, Hot and sweating stage ➢ Severe bodyache.	➢ Use insect repellant, mosquito nets ➢ Spray kerosene oil on open drains ➢ Prescribed doses of quinine to control mqalaria
2.	Jaundice	Hepatitis virus	Contaminated food and water	➢ High fever, headache, nausea, vomiting, loss of appetite, dark yellow urine	➢ Good hygiene and sanitary condition, ➢ Avoid stale food.
3.	Hepatitis A-B	Hepatitis A and B-virus	Contaminated needles, Blood transfusion and through sexual contact	➢ Dark yellow urine and light yellow stools, Fever, pain in abdomen, ➢ Yellowness in eyes and skin ➢ Damage to liver	➢ Hepatitis A and B vaccination.
4.	Rabies [Hydrophobia]	Rabies Virus	Saliva of infected animal [Bite of a rabid dog, cat or monkey]	➢ Severe headache, fever, painful contraction of throat, ➢ Difficulty in taking liquid hydrophobia, Damage to central nervous system	➢ Cleaning the wound with medicated soap, ➢ Course of antirabies vaccine ➢ No treatment if disease sets in.
5.	AIDS	Retrovirus HIV [Human Immunodeficiency virus]	Through sexual contact, blood transfusion, use of contaminated needles from an infected person to a healthy person	➢ Swollen lymph glands, decreased blood platelet count, decreased immunity, fever, night sweating, weight loss	➢ Avoid use of disposable blades / razors. ➢ Avoid sexual contact with unknown person ➢ No effective treatement so far.
6.	Tuberculosis [TB]	Mycobacterium tuberculosis [Bacteria]	Inhaling infected droplets released by coughing. Sneezing or while talking to infected person	➢ Lung TB persistent cough, chest pain, blood stained sputum. ➢ Prolonged low grade fever that rises in the afternoon ➢ Swelling	➢ Good hygienic and sanitary conditions, ➢ BCG vaccination for prevention, ➢ ATT for control of TB
7.	Typhoid	Salmonella typhi [Bacteria]	Omfectopmcpi;d s[read nu cpmta,omatedjamds. Water and food contaminated with faecal matter	➢ Typical fever that rises in the afternoon and keeps increasing each day for 7-8 days. ➢ High fever in 2nd week and gradual decline in 3rd and 4th week	➢ Proper hygienic and sanitary condition ➢ TAB vaccination typhoral oral. ➢ Vaccine. ➢ Standard drugs for control
8.	Diarrhoea	E coli, Shigella [Bacteria, viruses and protozoa	Contaminated food and water.	➢ Frequent loose motions, vomiting, dehydration, fever and weight loss.	➢ Proper personal hygienic and safitary conditions ➢ ORS to be given repeatedly to check dehydration. ➢ Dose of antibiotics and Antidiarrhoeal
9.	Polio	Polio Virus	Contaminated food and water	➢ Sore throat, headache ➢ Fever, vomiting muscular pain ➢ Stiffness in neck, tingling sensation in limbs ➢ Deformity of affected limbs	➢ Complete rest, physiotherapy, exercising of legs. ➢ Maintenance of hygiene ➢ Oral polio virus [OPV] vaccine given orally ➢ Following Pulse Polio programme.

Objective Type Questions

I. Multiple choice questions

1. Identify the group among the following which contains all bacterial diseases :

   a) Typhoid, tuberculosis, cholera b) Malaria, anthrax, typhoid

   c) Kala-azar, influenza, , tuberculosis d) Tuberculosis, anthrax, dengue

2. Antibiotics do not work against viral infections because

   a) viruses live only inside host cells

   b) Viruses do not have metabolic pathways of their own

   c) viruses are resistant to antibiotics

   d) the protein coat of viruses acts as a barrier to the antibiotics.

3. Diseases affect the organs depending on the point of entry into the body. Identify the disease from the following., which enters our body through mosquito bite and reaches the brain. :

   a) Polio b) Malaria c) Dengue d) Encephalitis

4. The set of diseases which spread through sexual contact as well as through placenta to the foetus are

   a) Malaria and AIDS b) AIDS and syphilis

   c) Syphilis and Malaria d) AIDS and Cancer

5. The diseases where microbes are the immediate causes, are called

   a) Infectious diseases b) non- infectious diseases

   c) chronic diseases d) Acute diseases

6. Immunisation / Vaccination started with

   a) L. Pasteur b) A. Fleming c) E. Jenner d) J. E. Salk

7. Malarial parasite after entering the human body reaches the

   a) liver and then RBCs b) Stomach and then RBCs

   c) liver and then WBCs d) liver cells

8. Cells of our body involved in fighting against infections, are

a) red blood cells b) platelets c) white blood cells d) liver cells

9. Sleeping sickness is caused by (i) _____, which is a (ii) _____.

a) i) Leishmania, ii) protozoan

b) i) Trypanosoma, ii) protozoan

c) i) Staphylococcus, ii) bacterium

d) i) Trypanosoma, ii) bacterium

10. Ascarislumbricoides causes damage to our

a) brain b) intestine c) liver d) lower limbs

11. Sexually transmitted disease, Syphilis is a _____ disease.

a) viral b) fungal c) bacterial d) protozoan

12. Most of the skin infections are caused by _____

a) viruses b) insect bites c) bacteria d) fungi

13. When a disease lasts for a long time and damages some part of the body, it is called a / an

a) acute disease b) chronic disease

c) communicable disease d) non - communicable disease

14. The process in which the active immune system employs many cells to the affected tissue, is called.

a) infection b) infestation c) invasion d) inflammation

15. Repeated exposure to a pathogen leads to the development of

a) disease b) immunity c) cancer d) weakness

16. Antibiotics used in treatment of bacterial and fungal diseases are

a) the names of useful bacteria b) toxins produced by bacteria

c) drugs manufactured to kill viruses d) Products of metabolism in some bacteria

17. After vaccination, the body builds up

a) antibodies b) Pathogens c) weakness d) toxins

18. Providing living conditions that are not crowded, can help to prevent.

a) air – borne diseases b) water – borne diseases

c) vector – borne diseases d) sexually transmitted diseases

19. The antibiotic penicillin kills the bacteria by blocking the synthesis of

a) proteins b) cell wall c) ribosomes d) cell membrane

20. The severity of the disease manifestation depends on

a) the number of microbes causing the disease

b) the nutrition we have

c) the organ infected / affected

d) the strength of the infectious agent.

21. Which one of the following is not a viral disease?

a) Dengue b) AIDS c) Typhoid d) Influenza

22. Which one of the following is not a bacterial disease?

a) Chloera b) Tuberculosis c) Anthrax d) Influenza

23. Which one of the following disease is not transmitted by mosquito?

a) Brain fever b) Malaria c) Typhoid d) Dengue

24. Which one of the following disease is not caused by bacteria?

a) Typhoid b) Anthrax c) Tuberculosis d) Malaria

25. Which one of the following diseases is caused by protozoans?

a) Malaria b) Influenza c) AIDS d) Chloera

26. Which one of the following has a long term effect on the health of an individual?

a) Common cold b) Chicken pox c) Chewing tobacco d) Stress

27. Which of the following can make you ill if you come in contact with an infected person?

a) High blood pressure b) Genetic abnormalities

c) Sneezing d) Blood cancer

28. AIDS cannot be transmitted by

a) sexual contact b) hugs c) breast feeding d) blood transfusion

29. Making anti-viral drugs is more difficult than making anti-bacterial medicines because

a) viruses make use of host machinery

b) viruses are on the border line of living and non-living.

c) viruses have very few biochemical mechanisms of their own.

d) viruses have a protein coat

30. Which one of the following causes kala-azar?

a) Ascaris b) Trypanosoma c) Leishmania d) Bacteria

31. If you live in a overcrowded and poorly ventilated house, it is possible that you may suffer from which of the following diseases

a) Cancer b) AIDS c) Air borne diseases d) Cholera

32. Which disease id not transmitted by mosquitoes?

a) Dengue b) Malaria
c) Brain fever or encephalitis d) Pneumonia

1. a	2. b	3. d	4. b	5. a	6. c	7. a	8. c	9. b	10. b
11. c	12. d	13. b	14. d	15. b	16. d	17. a	18. a	19. b	20. a
21. c	22. d	23. c	24. d	25. a	26. c	27. c	28. b	29. c	30. c
31. c	32. d								

I. Match the column

33.

Column I	Column II
1. Jaundice	A) Infectious diseases
2. Encephalitis	B) Malaria
3. Immune system	C) Water borne disease
4. Liver	D) Penicillin
5. Immunisation	E) Mosquito bite
	F) HIV

1.C	2. E	3. F	4. B	5. A

I. Fill in the blanks

34. Sleeping sickness is caused by _____.

35. Pneumonia is spread by the air-borne _____.

36. Liver is damaged by the virus in the disease _____.

34. Trypanosoma	35. droplets	36. Jaundice

I. True or False

37. Chronic – diseases may or may not be caused by infectious agents.

38. Acne is caused by a fungus.

39. Leishmania is spread by a vector.

40. HIV affects our respiratory system

41. Penicillin is an antiviral drug

42. Malaria is caused by virus

37. True	38.False	39. True	40. False	41. False	42. False

Directions (Q – 43 to Q – 45) : In the following Questions, the Assertion and Reason have been put forward. Read the statements carefully and choose the correct alternative from the following.

a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

c) Assertion is true but the Reason is false

d) The statement of the Assertion is false but the Reason is true.

43. Assertion : Chronic diseases affect our health

Reason : Chronic disease last for long time

a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

44. Assertion : Infectious diseases are caused by microbes.

Reason : Non – infectious diseases are caused mostly bu internal causes.

b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

45. Assertion : Communicable diseases can spread through air, water, vector etc.

Reason : Microbial diseases like AIDS transmit through causal physical contact such as handshake, hug etc.

c) Assertion is true but the Reason is false

46. Why do female mosquitoes need highly nutritions food in the form of human blood ?

Female mosquitoes need highly nutritions food in the form of human blood to be able to lay mature eggs.

47. Write any two basic conditions necessary for keeping good health.

a) Eating balanced diet

b) Keeping personal and domestic hygiene

48. Why social equality and harmony are necessary for individual health?

An individual needs to be happy in order to be healthy. So, if the people of a community fight with each other, individuals cannot be happy or healthy.

49. To which group of microbes do causative organisms of Malaria and Kala-azar belong?

Protozoa

50. How can the functioning of immune system be improved?

By providing proper and sufficient nourishment and food.

51. What is meant by an acute disease?

Acute diseases are the diseases which last for very short period of time.

Ex: Common cold

52. a) Name the organ affected in a patient showing the symptoms of persistent cough and breathlessness.

b) Name the disease in which the above mentioned organ is affected

a) Lungs are affected in a patient showing the symptoms of persistent, cough and breathlessness.

b) Tuberculosis (T.B.)

53. Give one example each of infectious and non- infectious diseases.

Infectious diseases is Chickenpox; Non - infectious diseases is Goitre.

54. Name the disease transmitted by animal bite.

Rabies

55. Name a sexually transmitted disease caused by bacteria.

Syphilis

56. Name the target organ of Japanese encephalitis and AIDS virus respectively.

Brain and lymph nodes respectively

57. Name an acute diarrhoeal disease generally leading to dehydration

Cholera

58. Why is rabies virus called neurotrophic in nature?

Because its toxins damage the motor neurons of brain.

59. Give another name for epidemic Jaundice.

Hepatitis

60. Which group of organisms causes elephantiasis?

Roundworm (Phylum Nematoda)

61. Which disease causing microbe live and remain active inside the host cells?

Virus

62. Name a disease of children that leads to dehydration

Diarrhoea

63. What is an antibiotic? Give one example.

Antibiotic is a chemical substance produced by living organisms such as bacteria, fungi etc., that can kill or stop the growth of some pathogenic microorganisms. Ex. Streptomycin.

64. Why are overcrowded and poorly ventilated areas a major factor in the spread of air borne disease?

Air borne diseases are spread through the air. In overcrowded and poorly ventilated areas, if an infected person sneezes or coughs, little droplets are thrown out and when a person standing close by breathes in these droplets, the microbes get a chance to start a new infection.

65. Write the names of any to microbial diseases that are transmitted by sexual contact.

Two microbial diseases that are transmitted by sexual contact are Syphilis and Gonorrhoea.

66. Give the causative agents of TB and typhoid

Mycobacterium tuberculosis cause TB; Salmonella typhi cause typhoid

67. Name two modes of transmission of communicable diseases.

Direct and indirect transmission

68. Why is Rabies called Hydrophobia?

As the patient develops fear from water it is called hydrophobia

69. Why does male Anopheles do not cause malaria?

Male Anopheles do not bite human beings for blood. They feed on juices of plant, so they don't cause malaria.

70. Name one medicine to control malaria

Quinine

71. What is the cause of encephalitis?

Encephalitis is caused by a virus which enters human beings through mosquito bite.

72. If we get a bacterial infection along with the viral cold then how do antibiotics help us?

Antibiotics help us but they will work only against the bacterial part of the infection and not on the viral infection.

73. What is casual physical contact?

Casual physical contact means handshakes or sports like wrestling or any other ways by which we touch each other.

74. How does female mosquito spread malaria?

Female mosquitoes feed upon the human blood and other warn blooded animals, So they transfer malaria from an infected patient to a healthy person.

75. How do children in many parts of India get immune to hepatitis A by the time they are five years old.

Because the children are exposed to hepatitis a virus through water and the body develops immunity to the virus.

76. Name any two diseases for which vaccines are available.

Two diseases for which vaccines are available are Tuberculosis (T.B.) and Typhoid.

77. Name the vaccine used to prevent typhoid

TAB vaccine

78. Write the specific way of preventing infections diseases.

By vaccinating the person

79. How does a person become immune against disease?

By the result of immunisation against a particular disease.

80. Which of the following diseases can be prevented by vaccination in children?
Tuberculosis, Diarrhoea, Diphtheria, Pneumonia, Tetanus.

By DPT vaccination, we can prevent diphtheria and tetanus. T.B. can be prevented by vaccine BCG.

81. a) Define "Health"

Health is defined as a state of being well enough to function well physically, mentally and socially.

82. Write any two possible reasons for transmission of AIDS.

The possible reasons for transmission of AIDS from an infected person to a healthy person are : a) sexual contact b) blood transmission.

83. Distinguish between healthy and disease – free Differences:

Healthy	Disease – free
a) Well – being and healthy attitude b) It is a state of complete physical, mental and social well – being	a) May not be suck but have mental or social worry b) We may be free from disease but not have complete well – being from mind and soul.

84. Name the organ into which malarial parasite enter after mosquito bite.

Liver cells

85. Give two examples of airborne diseases

Common cold and Tuberculosis

86. How do bacteria protect themselves?

Bacteria protect themselves by making a cell wall

87. How Is Rabies Virus Spread?

Rabies Virus Spreads by the bite of infected dogs and other animals

88. Why a person suffering from HIV – AIDS dies, even due to a small infections?

When a person is infected by HIV, his / her immune system fails and cannot fight any infection. Hence, a small infection kills an HIV / AIDS patient.

89. Write four main symptoms of Jaundice.

Symptoms of Jaundice: High temperature, headache, joint pain, loss of appetite, dark yellow urine and irritating rashes

90. What are non – infectious diseases? Give two examples of non- infectious diseases.

Diseases which are not caused by infectious agents are called non - infectious diseases. Their causes very but they are not due to external causes like microbe.

91. What are the two ways to treat an infectious disease?

The two ways to treat an infectious disease are:

a) To reduce the effects of the disease

b) To kill the cause of the disease.

92. How are antibiotics beneficial to us? Name any two groups of organisms from which they are obtained.

Antibiotics are used for the treatment of bacterial infections. They kill or stop the growth of bacteria. Antibiotics are obtained from bacteria and fungi. For example, penicillin, tetracycline.

93. What is immunity?

The natural defence of the body to fight infection and resist certain diseases is called immunity.

Diseases : Diphtheria, polio and tetanus

94. What are the public health programmes of childhood immunisation for preventing infectious diseases?

The vaccines against tetanus, diphtheria, whooping cough, measles, polio, etc, are the public health programmes of childhood immunisation for preventing infectious diseases.

95. What is the importance of vaccination?

The importance of vaccination is that it helps a person to acquire immunity against a certain disease. Vaccination protects us from diseases like small pox, rabies, polio, diphtheria, chicken pox and hepatitis.

I. Short answer questions

96. a) The signs and symptoms of a disease depend on the tissue or organ which the microbe targets. Explain with examples.

b) Identify infectious and non-infectious diseases from the following:

a) Incase of tuberculosis, lungs are affected and hence the symptoms are cough and breathless. In case of jaundice, liver is targeted and hence the symptoms are loss of appetite and yellow urine. In case of Japanese encephalitis, brain is targeted and hence the symptoms are headache, vomiting and unconsciousness.

b) Tuberculosis - Infectious disease

Goitre - Non - infectious disease

Marasmus - Non - infectious disease

Typhoid - Infectious disease

97. a) Which system of our body is activated in response to infection and how it responds?

b) A mother who had suffered from chicken pox in her childhood, is not taking care of her child who is suffering from the same disease. What are the chances of her mother having chicken pox? Explain

a) The immune system of the body is activated in response to an infection, when a microbe enters our body, the body, the body's immune system gets activated and kills the microbe

b) The mother will not have chicken pox. When the mother was infected by chicken pox, her immune system responded against it and remembered it specifically. Now while taking care of her child when the chicken pox microbe enters mothers body, the immune system responds with great force and kills the microbes.

98. What is meant by community? How our personal health is related to the community issues?Explain in brief.

Community is defined as a group of people who live in a certain locality and interact with one another having a common goal.

Personal health is the state of physical, mental and associate well being of an individual, Community health is the maintenance, protection and improvement or overall well being of health of the whole community.

Health of a person depends on his personal habits as well as physical environment. Social equality and harmony in the community are also important to maintain individual's health. So our social environment is an important factor in our individual health. Therefore our social environment is an important factor in our individual health. Therefore our social environment is an important factor in our individual health. Similarly, the health of the whole community depends on the personal habits of various individuals who constitute the community.

99. Classify the following under fungus / protozoan / viral / bacterial diseases :

Disease	Type of agent
Tuberculosis	Bacteria
Malaria	Protozoan
Skin infection	Bacteria
Typhoid	Bacteria
Hepatitis	Viral

100. a) Which disease is more harmful : Acute or Chronic disease ? Why?

b) Why are we advised to take bland and nourishing food when we are sick?

a) Chronic diseases are more harmful because they have prolonged longterm effect on people's health.

b) We are advised to take bland and nourishing food when we are sick to improve our immune system. Which will help us to fight against diseases.

101. Write the symptoms when following organs are targeted by microbes.

a) Lungs **b) Liver** **c) Brain**

a) If the lungs are infected, the symptom are cough and breathlessness.

b) If liver is infected, the symptoms are fever, vomiting, loss of appetite and yellowish urine.

c) If brain is affected by a microbe, the symptoms are headache, vomiting and unconsciousness.

102. Name diseases which are caused by – (two for each)

a) virus **b) bacteria** **c) protozoa**

a) Virus : AIDS and Polio are caused by virus

b) Bacteria : Typhoid and Tuberculosis are caused by bacteria

c) Protozoa : Malaria and Diarrhoea are caused by Protozoa.

103. a) Define disease

b) Explain briefly the two groups of causes of diseases.

a) Disease means being uncomfortable and not at ease.

b) The two groups which cause diseases are infectious causes and non – infectious causes :

Diseases caused by infectious microbes are called infectious diseases. There are some diseases which are not caused by infectious agents. Causes of such diseases are mostly internal non – infectious causes.

104. It is diagnosed that Seema suffers from malaria. Which organ of Seema is affected? Write.

a) the causal organism of malaria

b) the symptoms of malaria

Spleen and liver are affected by malaria

a) Malaria is caused by protozoan Plasmodium

b) High fever with alternate feeling of hot and cold are the symptoms of malaria.

105. Differentiate between

a) Acute and chronic disease

b) Congenital and acquired disease

c) Infectious and non-infectious disease.

Differences :

a) Acute and chronic disease

Acute disease	Chronic disease
It is short duration disease	It is long duration disease

b) Congenital and acquired disease

Congenital disease	Acquired disease
It is passed on genetically from parent to offspring	It is not passed on from parent to off spring

c) Infectious and non- infectious disease

Infectious disease	Non - infectious disease
It can spread from one person to another	It does not spread from one person to another

106. Give an account of malaria giving its causative agent, symptoms and control measures

Malaria is a caused by the protozoan parasite, Plasmodium which gets injected into the blood of a healthy person when bitten by an infected female Anopheles mosquito.

Symptoms ;

i) Headache, nausea and muscular pain.

ii) High fever with shivering – this occurs periodically

Control measures : Malaria can be controlled by a drug called quinine and its variations. Efforts are being made for antimalarial vaccine.

107. It was diagnosed that the body of a patient has lost his power of fighting any infection. Name the disease the patient was suffering from which microbe is responsible for this disease? Give two ways by which it spreads from one person to the other.

AIDS (Acquired Immune Deficiency Syndrome)

The infection travels by the following ways:

a) Sexual contact with infected person b) Through infected needles

c) Through infected blood transfusion d) From mother to foetus.

108. What are acute and chronic diseases? Which one of two are more harmful and why?

Give an example is support of your answer

Acute diseases are the diseases which last for only very short period of time

Chronic diseases are the diseases which last for a longtime, even as much as life time.

Chronic diseases is more harmful because acute diseases do not cause major effects on health while chronic diseases will do so. A chronic disease is likely to have prolonged general poor health with very drastic long-term effects on peoples' health.

Example of chronic disease is tuberculosis of lungs, which causes illness for a longer period and makes a person to lose weight and feel tired all the time.

109. A person is suffering from loss of appetite with a feeling of nausea and he is passing dark yellow urine. Identify the disease and suggest any two methods of preventing it and twomethods of controlling it.

The person is suffering from he disease 'Jaundice'.

Two methods of preventing it are:

a) Water should be chlorinated, boiled and ozonised

b) Maintaining proper personal hygiene and sanitation.

Two methods of controlling it are :

a) Interferon injection should be administered after consulting the doctor.

b) Minimum amount of protein and fat should be taken.

110. Name the causal organism of diarrhoea. Write two symptoms of it. How will you prepare oral rehydration solution ?

Diarrhoea is caused by certain bacteria (E.coli, etc.) protozoans (Entamoebahistolytica, etc.) some viruses (Rota virus, etc.) and nematodes (Ascaris)

Two symptoms :

a) Frequent loose motions and vomiting.

b) Becomes irritable, sunken eyes, sudden weight loss, deep breathing and fever.

Preparation of Oral Rehydration Solutions (ORS)

One teaspoon of sugar and a pinch of salt is added to 200 ml of water. This is called ORS, which prevents dehydration.

111. Give the scientific name of the causative agent of tuberculosis. Give two symptoms of the disease. How can this disease be prevented?

Tuberculosis is caused by a bacterium Mycobacterium tuberculosis.

Two symptoms are severe chest pain and the bloody sputum.

BCG vaccine is used to prevent this disease.

112. Name one disease caused by bacteria and one by protozoa. Mention the symptoms and preventive measures for each one of these diseases.

Diseases caused by bacteria : Cholera

Symptoms : Vomiting

Preventive measures : Stale, exposed food and polluted water should not be taken.

Disease caused by protozoans : Malaria

Symptom : High fever preceded by shivering

Preventive measures : Mosquitoes should be kept away from the house.

113. A doctor found that the tongue and gums of his patient were swollen and he was also suffering from diarrhoea and skin eczema. Name the disease. Write its cause. Suggest any two items that may help to cure him.

He is suffering from Pellagra disease. It is caused due to deficiency of vitamin B_3 (Niacin). Two food items for cure of disease are milk and groundnut.

114. What does "immunity" mean? Write four factors responsible

Immunity is the natural defence of the body to fight infection and resist certain diseases.

The factors which weaken the immunity of the body are :

a) Inherited metabolic disorders. B) Exposure to pathogenic microorganisms

c) Malnutrition due to poverty d) Exposure to radiations

115. Name any two categories of organisms that cause parasitic infection. Name a few diseases caused by any one of these causative organisms. State the symptoms of these diseases.

Two categories of organisms that cause parasitic infection are :

a) Protozoans b) Worms

The diseases caused by infection from protozoans are amoebiasis, giardiasis and malaria.

Symptoms :

Abdominal pain, weight loss, vomiting, etc
Amoebiasis causes dysentery.
Giardiasis causes diarrhoea
Whereas malaria causes sudden fever, shivering, intense headache and nausea.

116. Write the full form of AIDS. List four modes of transmission of virus of this disease. Full form of AIDS is Acquired Immune Deficiency Syndrome..

Modes of transmission of AIDS virus

a) Sexual contact with an infected person.

b) Transfusion of blood from an infected person to a healthy person.

c) Sharing one needle

d) From an infected mother to the foetus.

117. a) Write the principles of treatment that are generally followed by a doctor to treat infectious diseases.

b) Write two ways by which HIV (AIDS virus) may get transmitted from one person to the other.

a) Basically two approaches are adopted to treat an infectious disease :

i) To reduce the effect of the disease . In this approach the doctor prescribes medicines to reduce the effect, i.e. fever or pain or loose motion and advice rest to conserve energy.

ii) To kill the cause of the disease : In this approach, the doctor prescribes medicines to reduce the effect, i.e. fever or pain or loose motion and advice rest to conserve energy.

b) HIV may get transmitted from one person to another by

i) Sexual contact with infected person

ii) By sharing of needle.

118. In a slum area, people are reported to be suffering from malaria. Mention the unhygienicconditions that must be prevailing there. Name the causative organism. List various preventive measures.

There must be stagnant water in the slum which became breeding place for mosquitoes. Malaria is caused by a protozoan called plasmodium.

Preventive Measures :

a) Mosquito net to be used at night while sleeping

b) Water should not be allowed to become stagnant. If at ll there is stagnant water, kerosene should be sprayed on it to kill the mosquito eggs.

119. a) Why is making of anti- viral medicines harder than anti- bacterial medicines?

b) How can we prevent exposure to infections microbes?

a) Viruses have few biochemical mechanisms of their own. They enter our cells and use our machinery for their life process. This means that there are a few virus specific targets to aim But bacteria have their own specific metabolic pathways that can be easily blocked at some stage. Therefore making of anti viral medicine is harder than making anti-bacterial medicine.

b) We can prevent exposure to airborne microbes by providing living conditions that are not overcrowded. Exposure to water-borne microbes can be prevented by providing safe drinking water. This can be done by treating the water to kill any microbial contamination. Exposure to vector – borne infections can be prevented providing clean environments.

120. Why is a particular medicine effective against diseases caused by a particular group of organisms and not the others?

Each medicine acts only upon a specific microbial species, so the particular group of organisms will be killed or countered by a particular drug (medicine). For example, there are two types of microbes gram positive (+ve) and gram negative (-ve), Some medicine acts on both microbial species, but some medicines act on both microbial species, but some medicines act only on either gram positive (+ve) or gram negative (-ve) microbes. So, the particular group of microbes become vulnerable and defenceless by the action of the particular medicine meant for it.

121. Write full form of AIDs. What is its causative agent? How does AIDS spread? How can it be prevented?

AIDS stands for acquired Immune Deficiency Syndrome.

Causative agent : AIDS is caused by a retro-virus HIV [Human Immunodeficiency Virus]

Mode of transmission : AIDS is transmitted from an infected person to a healthy person through sexual contact, blood transfusion, use of contaminated needles, infected mother to the foetus.

Prevention AIDS can be prevented by adopting the following precautions:

a) Sexual contact with unknown person should be avoided

b) Transfusion of infected blood should be avoided. The blood donor should be tested HIV negative.

c) Disposable syringes and needles should be used.

d) Common razor at the barber shop should be avoided.

122. What are antibiotics? How do they work? How penicillin is effective to control bacterial disease?

Antibiotics : They are the chemical substances produced by living organisms such a bacteria and fungi, which can kill or stop the growth of some pathogenic microorganisms.

Examples areas Penicillin, Tetracycline, Streptomycin, Chloromycetin, etc.

Antibiotics commonly block biochemical pathways important for bacteria. Many bacteria for example make a cell to protect themselves. The antibiotic penicillin blocks the bacterial processes that build the cell wall. As a result, the growing bacteria become unable to make cell wall and die easily. Human cells do not make a cell wall so penicillin cannot have such an effect on. It will have this effect on any species of bacteria that use such processes for making cell walls. Many antibiotics work against many species of bacteria that use such processes for making cell walls. Many antibiotics work against many species of bacteria rather than simply working against one.

123. State the conditions responsible for the spread of malaria and measures to prevent and control it.

Malaria is a fatal disease of human being. It is caused by a protozoan parasite Plasmodium. This disease spreads through the bite of an insect vector – the female Anopheles mosquito which feeds on human blood.

Prevention : The only way to prevent malaria is to prevent mosquitoes from breeding.

Control : A drug, quinine is used to treat a person suffering frommalaria.

124. How is the disease AIDS caused? State any two modes of transmission of this disease from a patent to other persons. What symptom is found in the body of a person suffering from AIDS?

The disease AIDS is caused by retrovirus (A RNA virus) known as Human Immunodeficiency Virus (HIV).

Two modes of transmission of AIDS.

a) Sexual contact b) Blood transfusion

Symptoms : Swollen lymph nodes, regular fever, sweating at night and weight loss. It may cause sever damage to brain leading to loss of memory, ability to speak and clear thinking.

125. How principle of immunisation is implemented for eliminating polio?

When our immune system first notices as infectious microbe enters the body for the next time, the immune system responds quickly with a greater vigour. This eliminates the infection more quickly than the first time. In polio vaccine, non harming ultra low dose of polio virus is injected into our body which activated our immune system against polio virus.

126. a) Which disease is the leading cause of infant mortality? What is its main cause?

b) Name the diseases that can be prevented by DPT immunisation.

c) In what way does breast-feeding of infants protect them from infectious diseases?

a) Diarrhoea is the leading cause of infant mortality. It causes dehydration of the child's body through faces and vomi*ting* and leads to his / her death. A child suffering from diarrhoea should be given a mixture of sugar and salt in water five to six times a day.

b) The diseases that can be prevented by DPT immunisation are diphtheria, whooping cough and tetanus.

c) Breast –feeding provides the child with essential nutrients and natural antibodies

The antibodies present in the mother's milk develop immunity in the child's body which saves in from any common infections anddiseases.

127. 'Public cleanliness is important for individual health' Comment

Public cleanliness is important for individual health because diseases may spread in the community, thus affecting individual health. Garbage thrown in open spaces, overflowing drains and accumulation of stagnant water in ditches, etc. cause spread of disease. These are places where disease causing microbes multiply ; mosquitoes and flies breed.

128. How does personal health relate to community health?

Both community and personal health are important in making a good health of a person. We maintain personal health by keeping ourselves and our buses clean and by taking a balanced diet. But to keep personal health, we need healthy environment to interact. Healthy environment concerning to a community is essential to maintain physical, mental biological and social viability in favour of personal health.

129. What are the differences between communicable and non – communicable diseases?

Communicable Diseases	Non - Communicable Diseases
a) They are infectious diseases and are transferred from a patient to the healthy person	a. They are non - infectious diseases and cannot be transferred from a patient to a healthy person.
b) They are caused by a pathogen	b) They are not caused by a pathogen
c) They are spread through some agency, such as air, water, food, contact, insects, etc.,	c) They are not spread through any agency
d) They are caused due to infection	d) They are not caused by infection bur caused by nutritional deficiency ir genetic causes.

130. Write two symptoms of (i) R.B. and (ii) Typhoid

a) Symptoms of Tuberculosis (T.B.) : The symptoms vary depending on the site of the disease in the body. Specifically, There are two site of T.B. infection.

i) Lung or pulmonary T.B. Person has continuous fever, persistent cough and produces blood stained sputum, loss of weight and weakness, chest-pain and breathlessness.

ii) Lymph Gland T.B. : Swelling and tenderness of lymph glands, often in the leg which may discharge secretion through the skin.

Symptoms of Typhoid : Headache, typhoid fever or continuous high fever.

131. List three ways of spreading communicable diseases.

Communicable diseases spread from an infected person to a healthy person by the following ways :

a) Through little droplets thrown out by an infected person during sneezing or coughing

b) Water borne diseases through contaminated water

c) STDs through sexual contact

d) Vectors carry diseases from an infected person to a healthy person. (any three)

132. Explain why antibiotic do not work against viruses but work against many group of bacteria.

Antibiotics block the bacterial process that build cell wall in bacteria. As a result, the growing bacteria become unable to make cell wall and die easily. But viruses do not have their own pathways and hence antibiotics do not work against virus.

133. Health workers are exposed to more sick people than others in the community. Write any three preventive measures they take to avoid sickness.

Preventive measures taken by health workers:

a) Nourishing food and medicines to improve immune system.

b) Immunisation

c) Wearing msks to protect themselves from air borne diseases

d) Wearing gloves (any three)

I. Long answer questions

Group of microbe	Pathogen	Disease
a) _____	**_____**	**Acne**
b) _____	**Trypanosoma**	**_____**
c) _____	**_____**	**Kala Azar**
d) _____	**Hepatitis virus**	**_____**
e) _____	**HIV**	**_____**

Group of microbe	Pathogen	Disease
a) Bacteria	Propionibacteriumacens	Acne
b) Protozoan	Trypanosoma	Sleeping sickness
c) Protozona	Leishnania	Kala Azar
d) Virus	Hepatitis virus	Jaundice
e) Virus	HIV	AIDS

135. Rabies virus is spread by the bite of infected dogs and other animals.

a) What happens to the person who is biten by the rabid dog?

b) Write any two symptoms and two signs of rabies infected person

c) Mention any two preventive measures given to the patient after a rabid animal bite

a) If a person is bitten by a rabid dog, the person gets infected by rabies virus

b) Symptoms of rabies infected person :

i) pain or itching in the bitten site

ii) fever

signs of rabies infected person

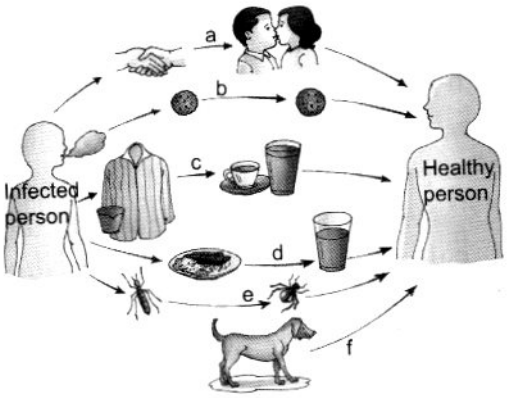
i) Seizure

ii) Hydrophobia

c) i) Washing of the wound with soap and water for at least 15 minutes

ii) Rabies immunization to start within 48hours.

136. Label the following picture (a) to (f) to show the common mode of disease transmission.



a) Direct contact b) By air c) Indirect contact d) By food

e) Mosquito / insect f) Rabid animal

137. A person is suffering from chest pain, breathlessness , loss of body weight, persistent cough and produces blood stained sputum.

a) Name the disease and its causative agent

b) Mention two means of its transmission

c) Name the vaccine used to prevent this disease

d) Who discovered the causative agent of disease?

a. The person is suffering from lung or pulmonary tuberculosis (T.B.)

It is caused by a bacterium called Mycobacterium tuberculosis

b. It is an infectious disease which is communicated from one human being to another directly or indirectly . T.B. may also be contracted from animals.

c. Immunisation with BCG or Bacillus-Calmette-Guerin vaccine can prevent T.B.

d. The causative agent of T.B. was first discovered by Robert Koch in 1882.

138. Define infections agent. Classify diseases on the basis of infectious agents.

Infectious agents are the organisms that can cause disease. These are classified into a wide range of categories. Some of term are viruses, bacteria, fungi, single-celled animals or protozoan and multicellular organisms or helminthes (worms).

a) Viruses : They are submicroscopic organism. They cannot reproduce by themselves. They utilise the metabolic system of the host cell and multiply.

Some common diseases caused by viruses are common cold, influenza, dengue fever, AIDS, measles, mumps, polio, small pox, chicken pox, etc.

b) Bacteria : They are unicellular, prokaryotic microscopic organisms. They reproduce very quickly.

Some common diseases caused by bacteria aretyphoid, cholera, tuberculosis, anthrax, diphtheria, tetanus etc.

d) Fungi : They are multicellular, eukaryotic, heterotrophic organisms

They cause ringworms, athlete's foot and other skin infections

d) Protozoans : They are microscopic unicellular, eukaryotic organisms. They can reproduce on their own.

Some common diseases caused by Protozoa are Malaria (caused by Plasmodium) and Kala-azar elephantiasis (caused by Leishmania

e) Helminthes :They are multicellular worms which are mostly present in intestine.

They cause taeniasis(caused by tapeworm), ascariasis (caused by roundworm), elephantiasis (caused by filarial worm so also called filariasis).

139. What are the causes, symptoms and the methods of prevention and control of jaundice or hepatitis?

Cause : Jaundice is caused by viral infection. Jaundice is spread mostly by food and water contaminated with Hepatitis virus.

Symptoms :

a) High temperature headache and joint pains

b) Loss of appetite with a feeling of nausea and vomiting

c) Irritating rashes

d) Dark yellow urine and light – coloured stool after 3 to 10 days.

Prevention :

a) Water should be chlorinated, boiled and ozonized.

b) Maintaining personal hygiene and sanitation.

c) Hepatitis – B vaccine should be taken to prevent the disease.

Control :

a) Interferon injection should be administered after consulting the doctor.

b) Adequate rest should be taken

c) High calorie diet such as juice of sugar can, raddish with gur should be taken.

d) Minimum amount of protein and fat should be taken.

140. What are the causes, symptom and the methods of prevention and control of (hydrophobia) rabies?

Cause : Rabies is a viral disease caused by the rabies virus, present in the saliva of the infected animal, particularly dog.

Symptoms:

a) Sever headache

b) Painful contraction of muscles of throat and chest

c) High fever and restlessness.

d) Difficulty in taking even liquid food.

Prevention :

a) Wound caused after the bite should be immediately washed with carbolic soap and clean water, and antiseptic medicine should be applied. Then a doctor should be soon consulted

b) All dogs, cats and pet dogs in the neighbourhood should be immunised.

c) The rabies animal showing excessive salivation and seeking isolation must be killed.

Control : A course of five anti-rabies vaccines are prescribed at an interval of 0 – 3 – 7 – 14 – 30 days of dog bite. This is called Pasteur's treatment.

141. What are the causes, symptoms and methods of prevention and cure of tuberculosis (TB) ?

Cause : Tuberculosis is caused by a bacterium called Mycobacterium tuberculosis. The bacterium releases a toxin called tuberculin.

Symptoms : The person suffering from T.B. shows the following symptoms

a) Feels sick and weak

b) Loss of appetite and body weight

c) Night sweats and typical periodic fever. The fever rises in the afternoon and falls om the morning.

d) In case of lung T.B. the patient has persistent cough and blood – stained sputum. Chest pain and breathlessness are common.

e) In case of lymph gland T.B. , the lymph glands show swelling, often in the leg and secretions through the skin.

Prevention:

a) Hygienic living condition should be maintained and nutritious food should be taken.

b) Immunisation with BCG or Bacillus Calmette Guerin vaccination.

Control : Anti- tubercular therapy (ATT) is used.

142. Write the causes, symptoms and the methods of prevention and control of diarrhoea.

Cause : Diarrhoea is caused by certain bacteria (E.coli, etc), protozoans (Entamoebahistolytica, etc.) some viruses (Rotavirus, etc.) and nematodes (Ascaris).

Symptoms : The main symptoms of diarrhoea are :

a) Frequent loose motions and vomiting

b) Becomes irritable, sunken eyes, sudden weight loss, weak, pulse, deep breathing and fever or fits.

Prevention :

a) Food and other eatables must be kept covered

b) Fruits and vegetables should be thoroughly washed before eating.

c) Proper personal hygine should be maintained. Hands should be washed with soap before eating food.

d) Community hygine is also important

e) Stale or exposed food should not be eaten.

Control :

a) The patient must have complete bed rest.

b) Antimicrobial drugs and anti – diarrhoeal agents should be used.

c) ORS in small quantity must be given to the patient

d) Husk of isabgol seed is taken with water or curd.

e) Pulp of boiled unripe banana added with required amount of salt, turmeric powder and lime provide relief to the patient.

143. Write and explain the five 'F' s related to transmission of diseases.

The five 'F' s are :

Fluid, fingers, files, fields and floods

a) Fluid : Water is a vital resources for life. All plants and animals requires water to eat, grow and reproduce. Water get contaminated when infected by bacteria or other microorganism from sewage, garbage or excreta. Such water when mixed with clean water can cause sickness and water borne diseases such as cholera, Hepatitis A food poisoning etc.

b) Fingers : Fingers and long nails collect dirt which may go inside our body with food. Our hands get dirty when we play or work. These dirty may carry pathogens which causes diseases.

c) Flies : Flies are the common carriers of disease causing germs, i.e.pathogens. Files are attached to open food, sewage wastes, etc. When they sit to such trash the pathogens stick to the sticky part of the flies and flies transferred these pathogens to food, eyes, skin of a person and thus it makes the person infected.

d) Fields : Everyday a lot of waste is produced in our houses, schools, offices and factories. Waste is also produced by animals. If these waste do not dispose properly it can be very harmful for our health. Wastes can be solid or liquid. Wastes attracts flies which will carry germs of diseases to food items. These germs can cause cholera, jaundice, typhoid, etc.

e) Floods : People at times are habitual of dumping garbage in open surrounding, disposing sewage water and other faecal matter (excreta of humans and animals) in the open which leads to development of unhygienic surrounding which breed pathogens. No matter how much an individual maintains a clean and healthy surrounding, a person cannot remain healthy if the neighbourhood is not clean.

144. a) List some ways safe storage and handling of drinking water.

b) Why a proper method of disposing the waste is necessary?

a) The ways for safe storage and handling of drinking water are as follows:

i) One should drink filtered or boil water.

ii) Water should be stored in clean and covered utensils.

iii) One should use clean hands and clean utensils to take out water from the containers.

iv) Water which has been stored for many days should not be used for drinking.

b) Thousands of tonnes of waste material is thrown out by residential areas, offices and industries. If this waster is left around, it makes the environment dirty. Therefore, it is necessary to have a proper method of disposing the waste material.

145. Write the measured to ensure environmental sanitation.

Measures to ensure Environmental Sanitation :

a) The drains of houses and streets should be cleaned regularly. They should be covered.

b)All leaking taps and pipes should be repaired immediately. There should be no pits, broken boxes or old types left around the house. They can collect water and become breeding places for mosquitoes and flies.

c) There should be proper outlets for rain water.

d) We should not allow our pets to dirty the neighbourhood.

e) We should never burn the house waste or dried leaves. The smoke pollutes the environment. We should use them to make manure.

f) We should keep the garbage in a covered dustbin to keep the flies, mosquitoes and germs away as they can spread many diseases.

g) We should use cloth and jute bags and say 'No to Plastics'.

h) We should never throw fruits and vegetable peels in a plastic bag as the cows can swallow it and die.

i) All the sewers should be covered and should be cleaned on regular basis.

j) There should be a proper drainage system for the rain water.

NCERT EXEMPLER PROBLEMS

I. Short answer questions

1. Give two examples for each of the following :

a) Acute diseases **b) Chronic diseases**

c) Infectious diseases **d) Non - Infectious diseases**

a) Influenza, Viral fever b) Tuberculosis (T.B.)Elephantiasis

c) Chicken pox, small pox d) Goitre, Diabetes

2. Name two diseases caused by Protozoans. What are their causal organisms?

a) Sleeping sickness caused by Trypanosomagambiense

b) Kala – azar caused by Leishmaniadonovani

3. Which bacterium causes peptic ulcers?

Helicobacter pylori bacterium causes peptic ulcers

Barry Marshall and Robin Warren discovered the pathogen for the first time.

4. Fill in the blanks :

a) Pneumonia is an example of _____ .

b) Many skin diseases are caused by _____ .

c) Antibiotics commonly block biochemical pathways important for the growth of _____ .

d) Living organisms carrying the infecting agents from one person to another are called _____ .

a) communicable	b. fungi	c. bacteria	d. vectors

5. Name the target organs for the following diseases

a) Hepatitis target _____ .

b) Fits or unconsciousness targets _____ .

c) Pneumonia targets _____ .

d) Fungal disease targets _____ .

a) liver	b. brain	c. lungs	d. skin

6. Who discovered 'vaccine' for the first time?Name two diseases which can be prevented by using vaccines.

Edward Jenner discovered 'vaccine' for the first time

The diseases can be prevented by using vaccines are – Diphtheria and folio.

7. Fill in the blanks :

a) _____ diseases continues for many days and causes _____ on body.

b) _____ diseases continues for many days and causes

c) _____ is defined as physical, mental and social well – being and comfort.

d) Common cold is _____ disease

e) Many skin diseases are caused by _____.

a) Chronic, long – term effect	b) Acute	c) Health	d) infectious (communicable)	e. fungi

8. Classify the following diseases as infectious or non – infectious.

a) AIDS b) Tuberculosis c) Cholera d) High blood pressure

e) Heart disease f) Pneumonia g) cancer

a) infectious b) infectious c) infectious d) non - infectious

e) non – infectious f) infectious f) non – infectious

9. Name any two groups of microorganisms from which antibiotics could be extracted.

Bacteria and fungi

10. Name any three diseases transmitted through vectors.

a) Malaria (vector – Anopheles), Dengue (vector – Aedes) and Kala –azar (vector – Sandfly)

I. Long answer questions

11. Explain giving reasons:

a) Balanced diet is necessary for maintaining healthy body.

b) Health of an organism depends upon the surrounding environmental conditions.

c) Our surrounding area should be free of stagnant water.

d) Social harmony and good economic conditions are necessary for good health.

a) Balanced diet is required for maintaining a healthy body. It provides raw materials and energy in appropriate amount which is needed for the substances such as carbohydrates, protein, fats , minerals, etc., that in turn are essential for the proper growth and functioning of the healthy body.

b) Health of an organism depends upon the surrounding environmental conditions. It is a state of being well enough to function well physically, mentally and socially. These conditions depend upon the surrounding area, it is likely we might get infected or diseased.

c) Our surrounding area should be free of stagnant water because many water borne diseases and insect vectors flourish in stagnant water that cause diseases in human beings.

d) Human beings live in societies and different localities like villages or cities which determines the social and physical environment. Hence both are to be kept in harmony. Public cleanliness is important for individual health. We need good food for healthy body for better living conditions and for the treatment of diseases the economic conditions should also be good.

12. What is a disease? How many types of diseases have you studied? Give examples
When the functioning or the appearance of one or more systems of the body change for the worse, then there is a disease.

Examples : Influenza, tuberculosis, pneumona (infectious), cancer (non – infectious), etc.

Types of Diseases :

a) Acute and chronic on the basis of duration

Acute disease	–	Common cold
Chronic disease	-	Tuberculosis of lungs

b)Congenital and acquired on the basis of period of occurrence.

Congenital Disease	–	Colour Blindness
Acquired disease	-	Malaria
Acquired disease are of two kinds of causal agent.	-	Infectious and non-infectious on the basis
Infectious Disease	-	Typhoid
Non-infectious Disease	-	Cancer

13. What do you mean by disease symptoms? Explain giving two examples

When the functioning or the appearance of one or more systems of the body change for the worse, it gives certain abnormal signs of the disease. These visual changes in human beings with indication of the presence of a particular disease is called disease symptoms.

Examples:

a) Skin lesions are the symptoms of Chicken pox.

b) Cough is the symptom of lung infection.

14. Why is immune system essential for our health?

The immune system is essential for our health as it functions as a defensive mechanism to fight against pathogenic microbes. It has cells that are specialised to kill infecting microbes and keep our body healthy.

15. What precautions will you take to justify "Prevention is better that cure"?

Following precautions should be taken for prevention of disease:

a) Maintaining hygienic conditions.

b) Awareness about the disease and causal organism.

c) Proper nutrition with balanced diet, clean food and water

d) Regular medical check up

e) Regular exercise and relaxation

16. Why do some children fall ill more frequently than others living in the same locality?

Some children fall ill more frequently due to poor domestic and personal hygiene, unclean food and lack of proper nutrition and balanced diet. Due to these immune system become we4ak.

17. Why are antibiotics not effective for viral disease?

Antibiotics are not effective for viral disease as they block the biosynthetic pathways of the microbes / bacteria. However, viruses have very few biochemical mechanisms of their own and hence are unaffected by antibiotics.

18. Becoming exposed to or infected with an infectious microbe does not necessarily mean developing noticeable disease. Explain [HOTS]

Infected with a microbe does not mean developing a disease because an infectious microbe is abel to cause a disease only if the immune system of the person is weak and a person with strong immune system normally fights off microbes. We have cells which are specialised to kill the pathogenic microbes. These cells are active when infecting microbes enter the body and if they are successful in removing the pathogen, we remain disease free. So, even if we are exposed to infectious microbes, the person will not catch the disease.

19. Give any four factors necessary for a healthy person.

Factors necessary for a healthy person are as follows

a) A clean environment with proper public health services

b) Personal hygiene prevents infectious diseases

c) A proper balance diet and sufficient nourishment are necessary for good immune system of our body

d) Immunisation / vaccination against severe diseases.

20. Why is AIDS considered to be a 'Syndrome' and not a disease?

AIDS is considered a syndrome and not a disease because AIDS causing virus – HIV comes into the body via the sexual organs or any other means like blood transfusion and spread to lymph nodes all over the body. The virus damages the immune system of the body and the body can no longer fight off even minor infections, Instead, every small cold can become pneumonia, or minor cut infection can become sever diarrhoea. The effect of disease becomes very severe and complex, at times killing the person suffering from AIDS. Hence, there is no specific disease symptoms for AIDS but it results in a complex diseases and symptoms.