



BIOLOGY

BOOKS - CENGAGE BIOLOGY

HEALTH, HYGIENE, AND DISEASES

Question

1. Is H1N1, a subtype of influenza A virus, infectious or non-infectious disease ? Why ?



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2. What is the difference between the treatment and the prevention of a disease ?



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3. BCG vaccine is administered against which disease ?



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4. What is the function of reverse transcriptase enzyme which is present in HIV virus ?



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Mandatory Exercise Exercise Set I

1. Health is not just a disease-free condition.
Explain briefly.



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2. Different between antiseptic and disinfectant



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3. Difference between acute disease and chronic disease



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4. Give two examples : Bacterial diseases



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5. Give two examples : Viral diseases



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6. Give two examples : Protozoan diseases



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7. What is a pathogen?



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8. What is a vector?



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9. What is a vaccine?



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10. Expand WHO :



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11. Expand CPR :



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12. Expand BCG :



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13. Expand HIV :



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14. Explain PULSE :



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15. _____ is World Health Day.



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16. _____ is World AIDS Day.



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17. Name the scientists .

Discovery of penicillin: _____



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18. Name the scientists .

Discovery of smallpox vaccine: _____



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19. Give reasons : Cuts and wounds should not be allowed to come in contact with soil.



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20. Give reasons : Dog bite should not be ignored.



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21. AIDS caused by HIV is transmitted/ not transmitted in which of the following situations :

Situation	Transmitted/not transmitted
Handshake	
Mosquito bite	
Sexual contact	
Sharing bathroom	
Sharing syringes	
Blood transfusion	



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22. The body of a patient has lost its power of fighting any infection. Name the disease

responsible for this.



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Mandatory Exercise Exercise Set II

1. Which is the largest organ of the integumentary system (the organ system that is involved in protection of the body from damage)? Name two diseases that affect this organ.



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2. Classify the following as antibiotic, disinfectant, antiseptic, or vaccine.

BCG:

Ampicillin:

Sodium chloride:

Formaldehyde:

Boric acid:

DPT:

Rifampicin:

Phenol:



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3. Explain ELISA. This biochemical technique is widely used to detect which disease?



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4. Name the diseases which can be prevented by using the following vaccines: Salk vaccine



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5. Name the diseases which can be prevented by using the following vaccines:BCG vaccine



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6. What is DDT? Why is it banned for use in many developed nations?



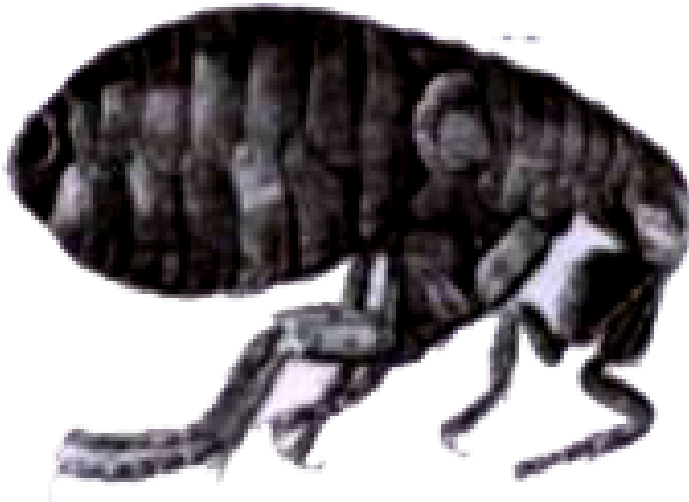
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7. Is disinfectant same as sterilization?



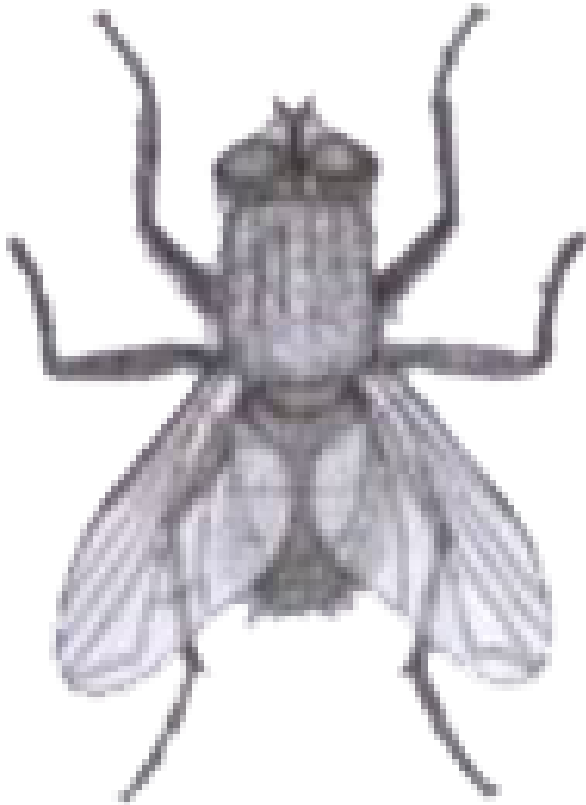
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8. Identify the vectors.



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9. Identify the vectors.



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10. Name a vaccine prepared from the following: Live, attenuated organisms



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11. Name a vaccine prepared from the following: Killed organisms



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12. Name a vaccine prepared from the following: Inactivated toxic compounds



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13. What is water contamination? Name three waterborne diseases.



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Consolidated Exercise

1. Read the following passage and answer the questions:

Our body has the defence system to protect against invading microbes. The outermost line of defence is the barrier that prevents the entry of microbes into the body, and if they enter, phagocytic cells kill the microbes. This forms the local defence system of the body. The innermost line of defence includes formation of specific antibodies that combine with the antigen (microbe) and then destroy it. This is called specific immunity.

What are the mechanical barriers that prevent microbial entry into our bodies?



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2. Read the following passage and answer the questions:

Our body has the defence system to protect against invading microbes. The outermost line of defence is the barrier that prevents the entry of microbes into the body, and if they enter, phagocytic cells kill the microbes. This

forms the local defence system of the body.

The innermost line of defence includes formation of specific antibodies that combine with the antigen (microbe) and then destroy it. This is called specific immunity.

Name the different secretions of our body which have antimicrobial properties.



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3. Read the following passage and answer the questions:

Our body has the defence system to protect against invading microbes. The outermost line of defence is the barrier that prevents the entry of microbes into the body, and if they enter, phagocytic cells kill the microbes. This forms the local defence system of the body. The innermost line of defence includes formation of specific antibodies that combine with the antigen (microbe) and then destroy it. This is called specific immunity.

How is the local defence system different from the antibody-producing specific immune system?



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4. Match the following :

Column A	Column B
Disease	Mode of transmission
(a) Plague	(i) Snakes
(b) Rabies	(ii) Soil
(c) Cholera	(iii) Rats
(d) Tetanus	(iv) Air
(e) TB	(v) Dog bite
	(vi) Water



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5. In 2009, a new strain of virus spread worldwide and caused about 17,000 deaths by

the start of 2010. In June 2009, WHO declared it pandemic. The virus that was responsible for this global outbreak was _____



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6. The use of vaccine is for _____
(treatment/prevention) of the disease



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7. The specific protein molecule (globulin) produced by the body against the foreign substance (antigen) is called _____



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8. This gas is colourless, odourless, tasteless, non-irritating, toxic, and a major pollutant in most urban areas due to vehicular exhaust. It also binds to haemoglobin, which is the

oxygen-carrying component in blood. The gas is _____



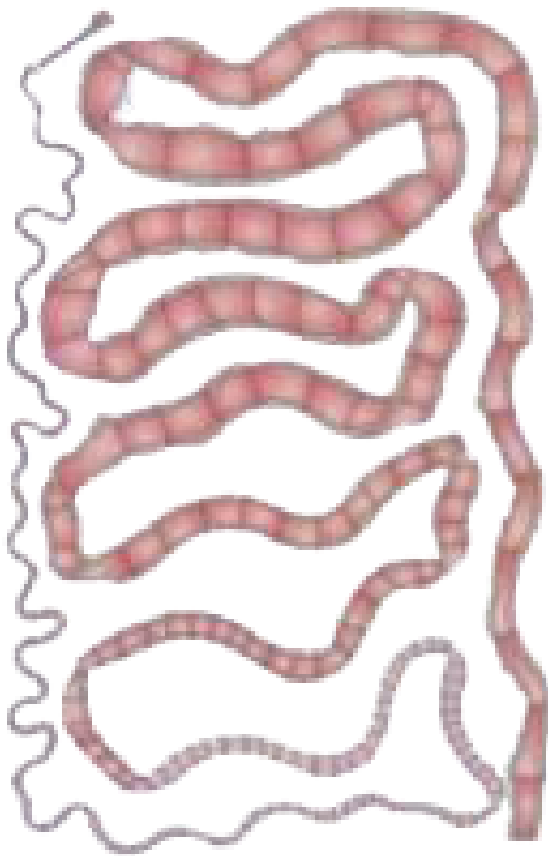
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9. In this condition, the body has temperature of more than $40.6^{\circ}C$ due to environmental heat exposure and lack of thermoregulation. The condition is called _____



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10. Identify the pathogen. Also, name the disease it causes.



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11. Mark the following statements as True or False: Lack of physical exercise can cause disease.



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12. Mark the following statements as True or False: Diarrhoea is caused by bacterial pathogens only.



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13. Mark the following statements as True or False: Fleas which cause plague are wingless.



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14. Mark the following statements as True or False: The 'Red Lion with Sun' symbol, used by Iran, is still recognised with equal status to the 'Red Cross', 'Red Crescent', and 'Red Crystal' symbols.



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15. Mark the following statements as True or False: Cats can cause rabies.



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Consolidated Exercise Mcqs

1. AIDS is mainly caused by

A. Sexual intercourse

B. Blood transfusion

C. Through placental transfusion

D. All of the above

Answer: D



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2. SARS and Swine flue are caused by

A. Virus

B. Virus and Bacterium

C. Protozoa

D. Helminth

Answer: A



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3. Acne are caused by

A. H1N1 virus

B. Trypanosoma

C. Staphylococcus

D. Leishmania

Answer: C



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4. A disease transmitted through sexual contact is

A. HIV

B. Gonorrhoea

C. Syphilis

D. All of the above

Answer: D



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5. Fungal disease targets

A. Skin

B. Eye

C. Leg

D. Brain

Answer: A



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6. Ascariasis spreads through

A. Vectors

B. Contaminated food and water

C. Fomites

D. Droplets

Answer: B



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7. A communicable disease is caused by

A. Metabolic disorder

B. Allergy

C. Pathogen

D. Hormone

Answer: C



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8. Which one is an acute disease?

A. Diabetes

B. Tuberculosis

C. Hypertension

D. Typhoid

Answer: C



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9. Clean drinking water is related to

A. Economic status

B. Social status

C. Personal hygiene

D. Public hygiene

Answer: D



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10. In chronic diseases, a patient suffers from

A. poor appetite

B. short breath

C. tiredness

D. All of the above

Answer: D



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11. Which of the following is a non-communicable disease?

A. Allergy

B. Malaria

C. Diarrhoea

D. Tuberculosis

Answer: A



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12. An insect which transmits a disease is known as

A. Intermediate host

B. Parasite

C. Vector

D. Prey

Answer: C



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13. Congenital diseases are those which are

A. protein deficiency diseases

B. present from time of birth

C. mineral deficiency diseases

D. occur during life time

Answer: B



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14. Droplet method of transmission of disease is found in

A. Common cold

B. AIDS

C. Hepatitis

D. Syphilis

Answer: A



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15. A protozoan disease is

A. Sleeping sickness

B. Kala-azar

C. Malaria

D. All of the above

Answer: D



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16. Common cold is a/an

- A. Acute disease
- B. Chronic disease
- C. Congenital disease
- D. Genetic disorder

Answer: A



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17.is the commonest carrier of pathogens

A. Mosquito

B. Housefly

C. Helminthes

D. None

Answer: B



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18. AIDS virus has

A. ssDNA

B. dsDNA

C. ssRNA

D. dsRNA

Answer: C



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19. T.B. is caused by

A. Griseofulvin

B. Ubiquinone

C. Mycobacterium

D. Encitol

Answer: C



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20. Haemophilia is a

A. Acute disease

B. Deficiency disease

C. Chronic disease

D. Congenital disease

Answer: C



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21. Which of the following is a bacteria disease?

A. Hepatitis B

B. Poliomyelitis

C. Tetanus

D. Malaria

Answer: C



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22. Which disease is not transmitted by mosquitoes?

A. Malaria

B. Dengue

C. Brain fever

D. Pneumonia

Answer: D



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23. BCG vaccine is used to cure

A. Pneumonia

B. Tuberculosis

C. Polio

D. AIDS

Answer: B



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

A. AIDS

B. Dengue

C. Influenza

D. Typhoid

Answer: D



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25. Which one of the following is not a bacteria disease?

A. Tuberculosis

B. Anthrax

C. Cholera

D. Influenza

Answer: D



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26. Viruses, which cause hepatitis, are transmitted through

A. Air

B. Water

C. Food

D. Personal contact

Answer: B



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27. Jaundice is disease of:

A. Kidney

B. Liver

C. Pancreas

D. Duodenum

Answer: B



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28. Pain in abdomen is a/an

A. Symptom

B. Sign

C. Cause

D. Effect

Answer: A



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29. Examples of vaccines include

A. BCG

B. tetracycline

C. penicillin

D. DPT

Answer: A::D



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30. Toxin can be produced during which of the following conditions?

A. Bee sting

B. Dog bite

C. Tetanus

D. Poliomyelitis

Answer: A::C::D



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31. Wasps are used as biological agents to control population of

A. houseflies

B. humans

C. cockroaches

D. rats

Answer: A::C::D



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32. Which of the following diseases are caused by parasitic worms?

A. Ascariasis

B. Malaria

C. Plague

D. Elephantiasis

Answer: A::D



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Olympiad And Ntse Level Exercises

1. Match column I and column II and choose the correct combinations :

Column I
(Bacterial Disease)

- (i) Pneumonia
- (ii) Citrus canker
- (iii) Cholera
- (iv) Leprosy

Column II
(Causative Agent)

- (a) *Vibrio cholerae*
- (b) *Mycobacterium leprae*
- (c) *Yersinia pestis*
- (d) *Xanthomonas citri*
- (e) *Diplococcus pneumoniae*

A. i-e , ii- b , iii-a , iv - d

B. i-e , ii-d , iii-a , iv - b

C. i-c, ii- a , iii-d ,iv-b

D. i-e,ii-d,iii-b , iv-c

Answer: B



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2. Match the disease in Column I with the appropriate items (pathogen/prevention/treatment) in Column

II.

Column I	Column II
a) Amoebiasis	i) <i>Treponema pallidum</i>
b) Diphtheria	ii) Use only sterilized food and water
c) Cholera	iii) DPT Vaccine
d) Syphilis	iv) Use oral rehydration therapy

A. i-b , ii-c , iii-d , iv -a

B. i-a , ii-b , iii-c , iv -d

C. i-b , ii-d , iii-a , iv -c

D. i-b , ii-a , iii-c , iv -d

Answer: A



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3. Polio immunizing vaccine was developed by

A. E. Jenner

B. Jonas Salk

C. J. Lederberg

D. Landsteiner

Answer: B



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4. Ravi visited a blood donation camp in a village. In spite of a syringe being available in the camp, he purchased a new syringe from a chemist. There he saw the doctor sterilising the syringe before it is being administered to other people. In the camp, he also came to know that he is a universal donor.

(i) He took that precaution against an infectious disease/s. Identify it/them.

(ii) Why did the doctor sterilize the syringe?

(iii) What is the blood group of Ravi?

A. (i)-AIDS, (ii)- to avoid infections, (iii)—O-

B. (i)-AIDS, (ii)-to avoid infections,(iii)-AB+

C. (i)-plague,(ii)-to avoid infections,(iii)-AB+

D. (i)-hepatitis, (ii) -to avoid infections, (iii)-

O+

Answer: A



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5. Malaria is an infectious disease that is considered by the World Health Organization to be a disease of worldwide importance. The

female Anopheles mosquito has been more closely studied with regard to malaria than the male Anopheles mosquito. Malaria

A. results in about one million deaths per year

B. is transmitted by the arthropod vector-bite of the female Anopheles mosquito

C. is the most important parasitic infection

D. All of the above

Answer: D





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6. The following table lists the causative agents for four different diseases:

Disease Name	Causative Agent
Influenza	Virus
Taeniasis	Tapeworm
Ringworm	Fungus
Food poisoning	Bacterium

For which of these diseases would treatment with antibiotics be most appropriate?

A. influenza

B. taeniasis

C. ringworm

D. food poisoning

Answer: D



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7. There is a high accumulation of garbage in the past recent days in Bangalore. What would you suggest to the government as to how could the garbage be converted into cooking

gas by decomposing. Which organism is involved in the process of conversion?

A. Klebsiella

B. Yeast

C. Methanogen

D. Clostridium

Answer: C



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8. Few years ago, hospitals and medical practitioners had warned the community about the spread of severe acute respiratory syndrome (SARS). People were experiencing high temperature, body aches and pains similar to that of the flu. How would you classify these descriptions?

A. Controls

B. Symptoms

C. Warnings

D. Methods of transmission

Answer: B



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9. Which one of the sexually transmitted diseases is correctly matched with its pathogen ?

A. Urethritis-Bacillus anthracis

B. Syphilis-Treponema pallidum

C. Gonorrhoea-Entamoeba histolytica

D. Soft sore-Bacillus brevis

Answer: B



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10. Which of the following causes plague?

A. Salmonella typhimurium

B. Trichinella spiralis

C. Yersinia pestis

D. Leishmania donovani

Answer: C



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Challenging Exercise

1. How is vaccine effective as a preventive measure?



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2. There is a rare illness called mad cow disease. It is also called as bovine spongiform encephalopathy (BSE). This disease affects cow's nervous system causing a cow to act strangely. According to scientists, a person is at higher risk of getting a human form of the disease, CJD (Creutzfeldt-Jakob disease), when he/she eats BSE-infected meat. You have studied various disease-causing agents. Which agent do you think is responsible for this rare disease for which there is no treatment yet?



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