

Chapter no: O1 (UNIT-I)			Class-8th		Micro-organisms: Friend & Foe	
EXERCISES						(Page no: 12-13)
1. Fill in	the Blank	s:				
(a) microscope		(b) nitrogen	(c) yeast		(d) bacteria	
2. Tick th	ne correct	t answer:				
(a) ii	(b) ii	(c) i	(d) ii	(e) iii	(f) iii	

#### 3. Match the organisms in Column I with their action in Column II.

COLUMN I	COLUMN II		
(i) Bacteria	Causing Cholera		
	Producing Antibodies		
(ii) Rhizobium	Fixing Nitrogen		
(iii) Lactobacillus	Setting of curd		
(iv) Yeast	Baking of bread		
(v) A protozoan	Causing Malaria		
(vi) A virus	Causing Aids		

#### 4. Can Microorganisms be seen with the naked eye? If not, how can they be seen?

**Ans:** No, microorganism cannot be seen with the naked eye because they are too small in size. They can be seen only with the help of a microscope.

#### 5. What are the major groups of microorganisms?

Ans: The majorgroups of microorganisms are as follows:

- ➢ Bacteria
- Protozoa
- ➢ Algae
- ➤ Fungi
- ➤ Virus

Viruses are different from other microorganisms. They reproduce only inside the cell of the host organism i.e., bacteria and plant or animal cell.

#### 6. Name the microorganisms which can fix atmospheric nitrogen in the soil?

The microorganisms which can fix atmospheric nitrogen in the soil are: -

- Rhizobium &
- Blue-green algae (Anabaena & Nostoc)

#### 7. Write 10 lines on the usefulness of microorganisms in our lives?

Ans: The usefulness of microorganisms in our lives are as follows; -

1. Microorganisms decompose waste into simpler materials and clean up the environment.

- 2. An *acetobacter* bacteria is used for production of acetic acid from alcohol.
- 3. Yeast is used for commercial production of alcohol and wine.
- 4. They increase soil fertility by fixing nitrogen of atmosphere.
- 5. They are used in making medicines like antibiotics and vaccines.
- 6. They are used to control many plant diseases.
- 7. They are used as preservatives for food items.
- 8. Microorganisms help in the preparation of curd, bread, cake etc.

#### 8. Write a short paragraph on the harms caused by microorganism.

**Ans:** Microorganisms are also very harmful to us. They cause a number of diseases in humans as well as in other animals. Common cold, Tuberculosis (TB), measles, Chicken pox, polio, cholera, typhoid and malaria are some common human diseases caused by microorganisms. Anthrax is a serious disease in animals caused by microbes.

#### 9. What are antibiotics? What precautions must be taken while taking antibiotics?

**Ans:** A medicine which stops the growth of, or kills the disease causing microorganisms is called an antibiotic.

Some of the precautions to be observed in the use of antibiotics are as follows:

- i. Antibiotics should be taken only on the advice of a qualified doctor.
- ii. A person must complete the "full course" of antibiotics prescribed by the doctor.
- iii. The antibiotics should be taken in proper doses as advised by the doctor. If a person takes antibiotics in wrong doses (*or when not needed*), it may make the antibiotics less effective when the person might need it in future.
- iv. Antibiotics should not be taken unnecessarily as it may kill the useful bacteria in the body and harm us.

<u>Chapter no: 15</u>			Stars and the Solar System		
EXERCISES				(P.no 200-201)	
1. Fill in the	Blanks:				
(i) universe	(ii) meteorite	(iii) planets	(iv) moon (satellites)		
(v) Pluto	(vi) comet	(vii) core	(viii) constellation		
2. Statemen	ts given below a	re incorrect. W	/rite correct statement	s.	
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- i. Halley's Comet visits our solar system after **76** years.
- ii. **Hydrogen** gas constitutes most of the atmosphere of the sun and the stars.
- iii. Alpha Centauri is the star nearest to our solar system.

- iv. Astronomers have divided the sky into **88** constellations.
- v. Meteors on burning leave behind **dust** and light.
- vi. The orbit of **Pluto** is different from the orbits of other planets in the solar system.
- vii. **Venus** is the second planet nearest to the sun.
- viii. Moon revolves around the earth in  $27\frac{1}{3}$  days.

#### 3. Answer the following questions:

## (i) What is universe? Name six different kinds of heavenly bodies found in the universe.

**Ans:** Universe is the vast un-imaginable space which has in it distant stars, planets and all other things that exist.

Heavenly bodies of the universe are:

- 1. Moons
- 2. Planets
- 3. Sun
- 4. Stars
- 5. Meteors
- 6. Comets

## (ii) With the reference to the average distance from the sun, state:

#### a) The serial number of the planet Earth.

Ans: Earth = 3 (three)

# b) The average distance of the Earth from the Sun?

Ans: Average distance of the Earth from the Sun is 1496 million km.

#### c) The time in which the sunlight reaches the Earth.

**Ans:** Speed of light =  $3 \times 10^5$  Km/sec

Distance of earth from the sun =  $1.5 \times 10^8$  km (approx.)

Therefore, time taken = distance covered / speed of light =

1.5 x 10<sup>8</sup>/ 3 x 10<sup>5</sup>

 $= \frac{1}{2} \times 10^3 = 500 \text{ sec}$ 

= 500/ 60 min=

#### = 8.33 minutes

# (iii) a) Name the natural satellite of the earth?

Ans: Natural satellite of earth is moon.

## b) In how many days does this satellite complete one revolution around the earth.

Ans: Time taken by moon to revolve around the earth is  $27\frac{1}{2}$  days.

#### c) In how many days does this satellite rotate around its own axis?

Ans: The time taken by moon to revolve round its own axis is  $27\frac{1}{2}$  days.

### d) How does the gravity of this satellite compare with the earth?

Ans: The gravitational pull of the moon is  $1/6^{th}$  of that of Earth.

# e) State the maximum temperature on the day side and the minimum temperature on the night side of this satellite?

**Ans:** Maximum temperature on the day side of the moon is 110°C and minimum temperature on the night side of the moon is 150°C.

#### (iv) What do you understand by the following terms: -

#### (a) New Moon

**Ans:** A new moon occurs when the moon is between the earth and the sun, the near side of the moon is dark side. The moon cannot be seen and we call this new moon.

#### (b) Full Moon

**Ans:** A full moon occurs when the moon is on the far side of the earth from the sun. When the earth is between the sun and the moon, the near side of the moon is the light side. We call this full moon.

#### (v) a) Define Solar System?

**Ans:** The sun along with the eight planets and their moons constitute the solar system.

#### b) Name all the planets in the solar system in the order of their distance from the sun?

Ans: There are eight planets in the Solar System: -

- 1. Mercury
- 2. Venus
- 3. Earth
- 4. Mars
- 5. Jupiter
- 6. Saturn
- 7. Uranus
- 8. Neptune

#### (vi) a) How many moons Mars has?

Ans: Mars has two moons.

#### b) Write the names of these moons.

Ans: Photos and Deimos.

#### (vii) What is a comet? Why does a comet develop a tail while approaching the sun?

**Ans:** The bright 'star-like' objects with a long tail, approaching the sun in a highly elliptical orbit are called comets. Because of the pressure of solar radiation, the tail of the comet consisting of gaseous matter always points away from the sun.

## (viii) What is a star? What makes the star give about vast amount of energy?

**Ans:** Stars are huge glowing balls of hot gases, mainly hydrogen. They also contain some helium and dust. In the stars, deep in their cores, hydrogen atoms fuse together to form helium atoms and a large amount of nuclear energy in the form of heat and light are liberated. The changes in the life of stars is very slow as compared to our own life. In this universe, there are millions of stars of different ages. Stars life span is billions of years. Stars are classified according to their brightness, temperature, colour and size.

#### (ix) (a) How are meteors different from stars?

S.no	Stars	Meteor (shooting star)	
01.	Stars mostly consist of	Meteors are mostly made of rocks,	
	hydrogen and helium.	metals and dust.	
02.	Stars produce heat and light	Meteors produce heat and light	
	due to fusion of hydrogen into	energy due to friction of air when	
	helium	they enter the earth's atmosphere.	
03.	Stars are very bright and big in	Meteors are very small pieces of	
	size.	rocks. They may also be as small as	
		dust particles.	
04.	Stars life span is billions of	Meteors last for short period (a few	
	years.	seconds) of time.	

Ans:

# (b) How are meteors different from meteorites?

**Ans: Meteors:** - Meteors are the rocky pieces of planets which exploded and broke up long ago and are now seen floating in space. As soon as they enter the atmosphere, they catch fire due to the heat of friction between air and the rocky pieces. These burning pieces move with great speed and look like streaks of light and are known as meteors. Most of the meteors burn up completely before they fall on the surface of the earth.

**Meteorites:** - Sometimes meteors are big in size. When these meteors enter the earth's atmosphere, they don't burn completely and reach the surface of earth. These unburnt pieces of meteors reaching the earth's surface are called meteorites.