

**Class VII
Science
Sample Paper – 2**

Time: 3 hrs

Total Marks: 100

SECTION A

Attempt all questions from this Section

- 1.** The vessels which carry carbon dioxide rich blood from all the parts of the body back to the heart are called [1]
 - (a) Veins
 - (b) Arteries
 - (c) Capillaries
 - (d) Valves
- 2.** Which among the following is not a juicy fruit? [1]
 - (a) Apple
 - (b) Mango
 - (c) Orange
 - (d) Walnut
- 3.** Which gas is produced when sludge is digested? [1]
 - (a) Methane
 - (b) Ethane
 - (c) Propane
 - (d) Butane
- 4.** What do we call the network of several food chains connecting each other? [1]
 - (a) Food web
 - (b) Food chain
 - (c) Food cycle
 - (d) Trophic level
- 5.** The mechanism that cools the plants is called [1]
 - (a) Excretion
 - (b) Transportation
 - (c) Transpiration
 - (d) Translocation
- 6.** In Gujarat, construction of 18 check dams is being planned by an N.G.O. and the villagers on which of the following rivers? [1]
 - (a) Saraswati River
 - (b) Ganga River
 - (c) Yamuna River
 - (d) Rukmavati River

7. Neutralisation of calcium hydroxide with hydrochloric acid is an example of [1]
(a) Chemical change
(b) Physical change
(c) Both chemical and physical change
(d) No change
8. Breaking of ozone to form oxygen is an example of which change? [1]
(a) Chemical change
(b) Physical change
(c) Crystallisation
(d) Both chemical and physical change
9. Which of the following cannot be called a physical change? [1]
(a) Grating cheese
(b) Fermenting of cheese
(c) Melting cheese
(d) Mixing two cheeses in a bowl
10. Stainless steel is an alloy of iron with [1]
(a) Zinc
(b) Aluminium
(c) Chromium and nickel
(d) Chromium and copper
11. Surgical instruments do not rust at all since they are made of [1]
(a) Iron mixed with Zinc
(b) Iron mixed with lead
(c) Iron mixed with copper
(d) Iron mixed with nickel
12. The iron pipes used in homes to carry water are coated with [1]
(a) Zinc
(b) Aluminium
(c) Copper
(d) Antimony
13. Which of the following is NOT a physical change? [1]
(a) Tearing postcard
(b) Making curd
(c) Melting wax
(d) Mixing oil in water
14. The shown symbol for the battery has how many cells? [1]
(a) 1
(b) 2
(c) 3
(d) 4
15. The coil of wire in an electric heater used for cooking is called a/an_____. [1]
(a) Filament
(b) Element
(c) High tension wire
(d) Electric wire

- 16.** When the direction of current flowing through a coil is reversed, the direction of deflection in the needle compass kept near it _____. [1]
(a) remains unaffected
(b) gets reversed
(c) points north-south
(d) points east-west
- 17.** Which of the following statements is true about a plane mirror? [1]
i. The image is larger in size than the object.
ii. The image is formed at the same distance as object.
iii. The image is laterally inverted.
iv. The image is virtual and erect.
(a) 1, 2, 3
(b) 2, 3, 4
(c) 1, 3, 4
(d) 1, 2, 3, 4
- 18.** The phenomenon of bouncing back of light falling on a smooth polished surface is known as _____. [1]
(a) Refraction
(b) Absorption
(c) Polarization
(d) Reflection
- 19.** Which of the following mirrors is used in automobiles as rear view mirror? [1]
(a) Concave mirror
(b) Convex mirror
(c) Plane mirror
(d) Both a and b
- 20.** Formation of spectrum by a glass prism takes place because [1]
(a) light of different colors has different intensities.
(b) light of different colors has different frequencies.
(c) light of different colors refracts with different angles of refraction.
(d) light of different colors has different energies.

SECTION B

- 21.** Why is sewage said to be of a complex mixture? [2]
- 22.** What is the importance of the parts labeled 'A' and 'B' in the below figure? [2]
- 23.** Why forests are called green lungs? [2]
- 24.** What do you understand by water table? Name the factors that affect the water table. [2]
- 25.** What is photosynthesis? Why is it considered a chemical change? [2]
- 26.** Explain how galvanization of an iron object prevents it from rusting? [2]
- 27.** The same substance can undergo a physical change or a chemical change depending upon the conditions. Explain with an example. [2]
- 28.** Draw a circuit diagram for the following electric circuit: [2]

29. Identify the lenses shown in the given figures. [2]
30. Give two advantages of CFLs. [2]

SECTION C

31. [4]

(a)

- i. What do you understand by seed dispersal?
- ii. What happens to the seeds when fruits burst with sudden jerks?

(b) Name the following:

- i. Two hard fruits.
- ii. The protective structure enclosing the embryo.

(c) How does kidney failure occur? What can be done to help the survival of such people?
[4]

(d) [4]

- (a) Why do plants need water? What will happen if water is not available for plants?
- (b) What is shown in the figure below?

(e) [4]

- (a) Why it is essential that food must be made available to every cell of the plant?
- (b) Write the function of:
 - i. Xylem
 - ii. Phloem

(f) Classify the following examples into physical and chemical changes. [4]

- (a) Log of wood burns to form ash.
- (b) Steam condenses to form water.
- (c) A bicycle chain rusts.
- (d) Water is absorbed by a paper towel.
- (e) A piece of a mango rots on the ground.
- (f) Dissolving sugar in water.
- (g) Eggs turn into omelet.
- (h) Stretching metals to form wires.

(g) Explain the following with reasons: [4]

- (a) Formation of clouds is a physical change.
- (b) Melting of butter to make ghee is a chemical change.

(h) Explain any four methods of preventing rusting of iron. [4]

(i) [4]

- (a) How can we make a battery from two or more cells?
- (b) Give two applications of heating effect of electric current.

(j) [4]

- (a) If an object is placed at a distance of 10 cm in front of a plane mirror, how far would it be from its image?
- (b) Why do different colours of light refract at different angles in the formation of a spectrum?

(k) [4]

- (a) What is the function of needle in a magnetic compass?
- (b) Some electrical appliances have elements in them. How do you notice that they

have become hot?

SECTION D

41.

- (a) Label the parts shown as A-F in the below schematic diagram of circulation. [5]
- (b) What is the function of the red pigment of blood? Where is this pigment present in blood?

42.

- (a) Name the following: [5]
 - a. Parts of a stamen.
 - b. The process in which the pollen of a flower lands on the stigma of another plant
 - (c) (of the same kind) situated far away.
 - (d) The process of fusion of male and female gametes to form zygote.
 - (b) How the germination of seed takes place?
- 43.** When an ant stings a person, the solution of substance K is rubbed on the stung area of the skin to get relief from pain. The substance K is also used in kitchen for cooking purposes. Another substance L is sour in taste and contains an organic acid M. It is pungent smelling and is used as a preservative in foods. When a solution of K is mixed with L, then a change N takes place to produce bubbles of gas O. [5]
- (a) Identify K.
 - (b) What is substance L?
 - (c) Name the acid M.
 - (d) What type of change is N?
 - (e) Name the gas O.

44. Give reasons for the following. [5]

- (a) Which mirrors are used as side mirrors in scooters? Give reason.
- (b) Mention any three uses of concave mirrors.