

- 7) The synthetic fibre which resembles wool is _____
- a) Rayon
 - b) Nylon
 - c) Acrylic
 - d) Polyester
- 8) The control center of a cell is
- a) Plastids
 - b) Protoplasm
 - c) Cytoplasm
 - d) Nucleus
- 10) Oxides of _____ are acidic in nature.
- a) Metals
 - b) Non-metals
 - c) Salts
 - d) Metalloids

II. PASSAGE BASED QUESTIONS

Deforestation is a major cause which leads to the change in soil properties. Physical properties of the soil get affected by plantation and vegetation. Trees prevent soil erosion. Fewer trees result in more soil erosion. Removal of the top layer of the soil exposes the lower, hard and rock layers. This soil has less humus and is less fertile. Gradually the fertile land gets converted into deserts. It is called **desertification**.

Deforestation also leads to a decrease in the water holding capacity of the soil. The movement of water from the soil surface into the ground (infiltration rate) is reduced. So, there are floods. The other properties of the soil like nutrient content, texture, etc., also change because of deforestation.

- 1) What is the major cause which leads to the change in soil properties?
 - a) Deforestation
 - b) Desertification
 - c) Conservation
 - d) Soil erosion
- 2) Gradual conversion of fertile land into desert is called _____.
 - a) Afforestation
 - b) Reforestation
 - c) Desertification
 - d) Deforestation
- 3) Which among the following are some of the consequences of deforestation?
 - a) Droughts, cyclones
 - b) Cyclones, desertification
 - c) Storms, droughts
 - d) Droughts, desertification
- 4) What of the properties of soil can be changed because of deforestation?
 - a) Colour
 - b) Size of rock particles

c) Typhoid

d) Tuberculosis

- 2) A thief sneaked into Anju's house. As he opened the door to Anju's room, the door made a squeaking noise. The noise alerted Anju and the thief was caught. The squeaking sound of the door could have been reduced by
- a) Using ball bearings in the door hinge
 - b) Using a lubricant on the door hinge
 - c) Using a lever to open the door
 - d) Using a gear to open the door

V. SECTION B (3 MARKS EACH)

- 1) a) Why cells are the basic structural and functional unit of all living organisms?
b) List the functions of nerve cells.

- 2) a) What are antibiotics?
b) List two precautions taken while taking antibiotics

- 3) a) Why do copper vessels turn green when exposed to moist air for a long time?
b) Write the word equation of the above reaction.
c) What is the nature of metallic oxides?

- 4) a) Why is cell wall present in plant cells but not in animal cells?
b) List the functions of cell membrane

- 5) a) What is drag?
b) Name two factors on which drag on an object depends.
c) How can drag be minimised?

- 6) a) Draw the structure of an amoeba.
b) What is the function of pseudopodia?
c) In what way is an amoeba similar to a human white blood cell?

- 7) Name the three products obtained on processing coal in industries and write one use of each.

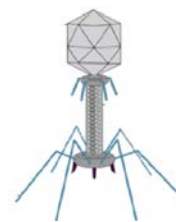
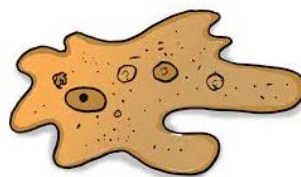
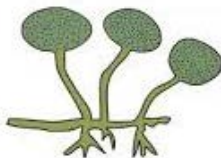
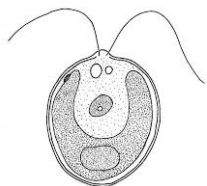
- 8) Give reason.
 - a) Nylon fibres are used to make parachutes and ropes for rock climbing.
 - b) Umbrellas are made of synthetic fibres.
 - c) Plastic bottles are used to store chemicals like bleach.

- 9) Why are fossil fuels considered to be exhaustible resources? Why cannot they be prepared in the laboratory? (2 points)

- 10) How do vehicles cause air pollution? Mention any two ways by which you can reduce air pollution.
- 11) Ponds look green due to algal growth. Write the cause and the harm due to this.
- 12) Name the forces acting on a plastic bucket containing water held above the ground level in your hand. Why the forces acting on the bucket do not bring a change in its state of motion.
- 13) Why are grooves provided in the soles of shoes?
- 14) a) Draw diagrams to show linear polymerization and cross-linked polymerization in synthetic fibres.
b) Write any two differences between thermoplastics and thermosetting plastics.
- 15) a) Mention two physical properties of copper that makes it most suitable to be used as electrical cables.
b) Why are non-metals not used for making bells?
- 16) a) Which force is responsible for the following? a) Dust particles getting attracted to the TV monitor
b) A compass needle remaining in north south direction
c) Atmosphere of earth remaining bound to it.
- 17) a) Define fermentation.
b) Explain how milk is converted into curd?
- 18) Disposal of plastic is considered as an environmental hazard. Why? List any two things that can be done to limit the harmful effects associated with plastics.
- 19) A boy introduced a piece of red-hot charcoal into a gas jar and covered it with a lid so as to collect the gas evolved.
a) How will he find the nature of the gas?
b) Write the word equation for the reaction
- 20) a) What are blended fibres? Name any two blended fibres.
b) What are the properties of plastics that made it a material of choice for many varied applications?
c) State two disadvantages of synthetic fibres.
- 21) a) Distinguish between balanced and unbalanced forces(Two points each)
b) Define pressure. State its SI unit.

- 22) a) Name any two uses of phosphorous.
 b) Paheli bought a statue made of copper. To her surprise after few months it acquired a dull green coating. Name the phenomenon by which the statue acquired the green coating. What is the chemical composition of the green coating?
 c) Why is sodium metal stored under kerosene?

23) Identify the groups to which the following microorganisms belong



24) Explain the role of microbes in the following.

- Cleaning the environment.
- Increasing soil fertility.
- Making of curd.

25) a) State any four effects of force.

b) What is atmospheric pressure?

26) a) How does use of ball bearings help in reducing friction?

b) Explain why objects moving in fluids must have streamlined shape.

27) a) How is friction caused?

b) "Friction is an evil". Justify this statement by giving two suitable examples.

c) Why do gymnasts apply coarse powder on their hands before playing?

VI. SECTION C (5 MARKS)

1) a) State three differences between plant cells and animal cells.

b) What are plastids?

c) Write the function of plastid found in leaves.

28) a) What is displacement reaction?

b) What happens when iron nails are placed in copper sulphate solution? (2 points)

c) Give the word equation of the above reaction.

d) Identify the non-metal used in water purification

29) Complete the following reactions:-

a) Silver + copper sulphate

- b) Iron + oxygen + water
- c) Sulphur dioxide + water
- d) Aluminium + hydrochloric acid
- e) Iron + sulphuric acid

30) a) Draw a neat labelled diagram of animal cell and label the following parts.

- i) Endoplasmic reticulum
- ii) Ribosomes
- iii) Chromosomes
- iv) Nucleus

b) State any two differences between animal cell and plant cell.

c) Explain the structure and function of nucleus.

31) a) Distinguish between thermoplastics and thermosetting plastics. (Two points each)

b) Draw a neat labeled diagram to show linear and cross-linked polymerization.

c) Name the plastic commonly used in the given objects.

d) Differentiate between biodegradable and non-biodegradable substances.



A- Plastic pipes



B- Non stick utensils

32) a) State any four harmful effects of friction.

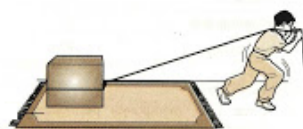
b) Explain the two types of contact forces with examples for each.

33) Refer the picture carefully and answer the question that follows

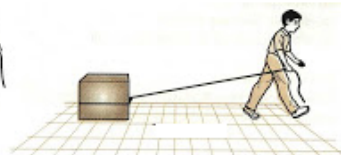
a) State the observation and inference for the given activity.

b) Calculate the pressure when a force of 200 N is exerted on an area of 10 m^2 .

c) Explain why the school bags are provided with broader shoulder straps?



A- On a carpet



B- On a tiled floor

34) a) An inflated balloon was pressed against a wall after it has been rubbed with a piece of synthetic cloth. It was found that the balloon sticks to the wall. Which force might be responsible for the attraction between the balloon and the wall? Explain the force.

b) Why is it difficult to pull the rubber sucker off from the surface where it is stuck?

c) Tyres of heavy tanker vehicles are very wide and huge. Why?

d) State the differences between contact and non-contact forces with examples.

35) Briefly explain nitrogen cycle.

36) a) Metal oxides are basic in nature. Explain with the help of an example. Represent all the reactions involved in word equations.

- b) What happens when dilute hydrochloric acid is poured on a copper plate? Explain and also represent the reaction in a word equation.
- c) State any two uses of non-metals.
- d) Name the gas which is evolved when metal reacts with acid. How can you test the presence of this gas?

37) a) Explain the process of formation of petroleum.

b) State any one use of the following-

- i) coke
- ii) bitumen
- iii) paraffin wax
- iv) natural gas

c) Mention any two tips given by PCRA to save petrol while driving a vehicle.

38) a) What are vaccines? How does a vaccine work? (5)

b) How do viruses differ from other microorganisms such as bacteria?

39) Complete the following table

DISEASE	CAUSATIVE MICROBE	PLANTS/ANIMALS
Polio	A	B
Citrus Canker	C	D

40) a) Name the plastic used to make articles i and ii.

b) Identify the kind of plastic used in i and ii?

c) Write one characteristic each of these kinds of plastic.

d) Give two disadvantages of using plastics.



41) a) Take two balls and roll one over a marble floor and one over a grass lawn. In which case will the distance covered by the ball be less? Give reason

b) You can move heavy boxes by sliding them on the ground or you can put them on a trolley and then roll them over the ground. Explain which method will be easier.

c) Write one advantage and disadvantage of friction

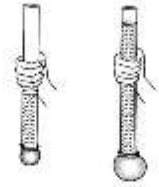
42) a) Why is petroleum called 'Black Gold'?

b) What is meant by refining of petroleum?

c) Identify the product of petroleum used for the following

- i) jet aircrafts
- ii) Vaseline
- iii) solvent for dry cleaning

- iv) road surfacing
- d) Give the advantage of CNG over other fuels?
- 43) a) State the S I units of force and pressure.
- b) Give reason why shoulder bags are provided with broad straps.
- c) A woman is applying 300 N/m^2 of pressure onto a door with her hand. Her hand has an area of 0.02 m^2 . Find out the force being applied.
- d) In the picture shown below, why is the rubber sheet tied to the second tube bulged more than the one in the first tube?



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