



Indian School Al Wadi Al Kabir
Mid Term Examination
SCIENCE – SET I

Class : VIII
Date : 25.09.2022

Time: 2 ½ Hours
Max. Marks : 80

General Instructions:

- i. All questions are compulsory. Marks are indicated against each Section.*
- ii. The question paper comprises 8 pages and 32 questions in 5 sections A, B, C, D and E*
- iii. Q 1 to Q 16 in **section A MCQ** carries 1 mark each. Write the correct answer along with the option only in the answer script.*
- iv. Q 17 to Q 19 in **section B CASE STUDY BASED** carry the THIRTEEN marks.*
- v. Q 20 in **section C SOURCE BASED** carry THREE marks.*
- vi. Q 21 TO Q 26 in **section D** are Short Answer Type Questions and carry THREE marks each.*
- vii. Q 27 to Q 32 in **section E** are Long Answer Type Questions and carry FIVE marks each.*
- viii. Write the same question number as given in the question paper.*
- ix. Ink killer or whitener should not be used in the answer script.*
- x. Diagrams should be drawn using a pencil.*

SECTION A (16X1=16)

1. An agricultural implement used since ancient times for tilling the soil, adding fertilisers, removing weeds etc. is:
 - a) sickle
 - b) plough
 - c) combine
 - d) seed drill

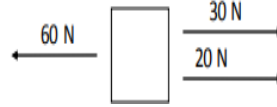
2. The Greeks were already aware of the electric charges from 600 BC. They knew that a type of resin and fur when rubbed together, can attract light objects like hair. What was the name of the resin used here.
 - a) ebonite
 - b) amber
 - c) apricot
 - d) rubber

3. The uniform of firemen is made up of synthetic fibres and have coating of melamine plastic. What is the likely characteristic that melamine plastic has that makes it ideal to make uniform for firemen?
 - a) It is a poor conductor of heat
 - b) It is a good conductor of heat

- c) It does not absorb all the heat.
- d) It reflects all the heat

4. What is the net force on the box shown below?

- a) 10 N to the left
- b) 10 N to the right
- c) 60 N to the left
- d) 50 N to the right



5. A person X pushes a cart with a force. Another person Y starts pushing the cart in the opposite direction with the same force. How does it affect the cart?

- a) it brings the cart to rest
- b) it changes the direction of cart
- c) it increases the speed of the cart
- d) it will change the shape of the cart

6. What is an example of a non-contact force?

- a) an apple falling from a tree
- b) drawing water from a well
- c) a ball bouncing on the ground
- d) reducing the speed of a ball sliding over a ramp

7. A unit of inheritance in living organisms.

- a) plastid
- b) gene
- c) cell
- d) ribosome

8. A student collects plant waste, animal waste and some old newspaper from the home. Later, the student adds all the material in a container and mixes all the materials. The material was then added to soil as compost to observe the plant growth. What can be concluded from this activity?

- a) Reusing newspaper can eliminate the risk of herbivores that consume plants.
- b) Reusing newspaper in compost can eliminate the waste from the environment.
- c) Reusing newspaper in compost can convert harmful chemicals in soil into useful substances.
- d) Reusing newspaper in compost adds nutrient to the soil and contributes to afforestation.

9. PCRA stands for

- a) Public Conservation Research Association
- b) Petroleum Conservation Research Association
- c) Public Council of Research Association
- d) Partial Counting of Remaining Amendment

10. Under which conditions does coal formation take place from plant and animal remains?

- a) high temperature and high pressure

- b) high pressure and cold surroundings
- c) low pressure and high temperature
- d) low pressure and cold surroundings

11. To sharpen the blade of a knife by rubbing it against a surface, which of the following will be most suitable?

- a) Stone
- b) Plastic block
- c) Wooden block
- d) Glass block

12. Least amount of friction is required in which of the following sports?

- a) Car racing
- b) Football
- c) Tug of War
- d) Ice skating

13. The image shows two blocks resting on ground. Block X is easier to move than Block Y. Why is block X easier to move?

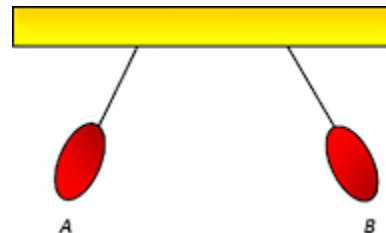


- a) the surface is pressed harder by block X because of lesser mass, so greater is the friction
- b) the surface is pressed harder by block Y because of greater mass, so greater is the friction
- c) the surface is pressed harder by block X because of lesser mass, so lower is the friction
- d) the surface is pressed harder by block Y because of lesser mass, so lower is the friction

14. How much pressure would be exerted by a block exerting 20N of force on 0.5 m² area?

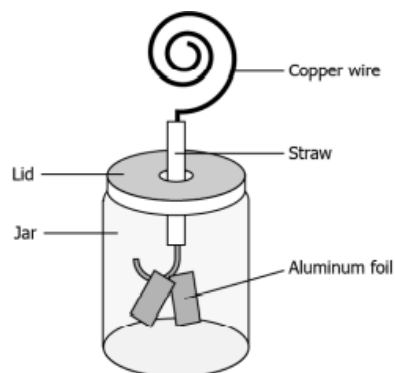
- a) 10 N/m²
- b) 20 N/m²
- c) 30 N/m²
- d) 40 N/m²

15. A student hung two balloons to a stand using some thread. He noticed that the balloons move away from each other to maintain some gap as shown in the image. What might have caused the balloons to repel?



- a) like charges on the balloons
- b) material of the thread
- c) colour of the balloons
- d) shape of the balloon

16. A student studies that an electroscope consists of two aluminium foils as shown in the image. When a charged body is brought near to the metal disc the Aluminium foil strips responds to it. He brought a charged object near the copper wire to test the working of the device. What changes are likely observed when a charged object is brought closer to the copper wire?
- the copper wire unwinds
 - colour of the jar changes
 - the foil sticks to each other
 - Aluminum repel each other foils



SECTION B (13 mark)

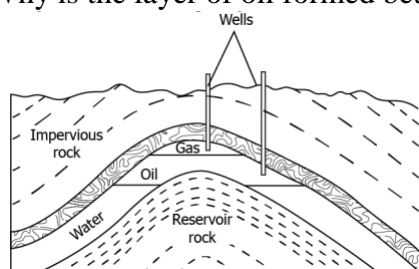
17. Case study A

Rahul read in his science book that petroleum is a fossil fuel and can be obtained by drilling deep into the Earth. He Observed the process of drilling carefully and amazed to see that not only petroleum, but gas and water also obtained. He was surprised to know that petroleum is called the black gold. Petroleum is a mixture of several hydrocarbons. It also contains water, salt and rocky materials. It cannot be used in this form; it has to be purified or refined.

- i. Rahul prepared a list of petroleum products. Which petroleum product is used as a fuel?
- 1, 2, and 3
 - 2, 4, and 5
 - 1, 3, and 4
 - 3, 5, and 6

- | |
|--------------------|
| 1. Petrol |
| 2. Diesel |
| 3. LPG |
| 4. Lubricating oil |
| 5. Paraffin wax |
| 6. Bitumen |

- ii. During drilling, following image was obtained for deposits of petroleum and natural gas. Why is the layer of oil formed between natural gas and water?



- iii. What do you mean by refining of petroleum

18. Case study B

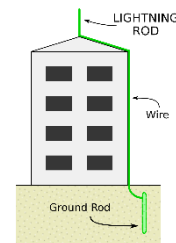
During an experiment, four students studied difference between plant cell and animal cell. They used onion peel and cheek cell slides. They were told that stains are used to observe the components of cell clearly. Students observed number of vacuoles in plant cell as and number of vacuoles in animal cell and wrote statements. Each of them wrote statements, out of which statement written by only one student is correct.

- i. Which of the following represents the correct statement written by students?
 - a) number of vacuoles is more in animal cell
 - b) number of vacuoles is more in plant cell
 - c) number of vacuoles is equal in both the cells
 - d) no vacuole is seen in animal cell.
- ii. Who discovered cell and how?
- iii. What are stains? Which stain is used to prepare temporary mount of cheek cell?
- iv. Mention any two-difference observed by students between plant and animal cell.

19. Case study C

Aditya visited his uncle's construction site. He has seen in all the buildings electric wires coming out from the building were buried under the earth. When he asked about this to his uncle, he told that it is for earthing. He studied that earthing provide advantages to the electric appliances during lightning. Vigorous movement of air current and water droplet, results in building up of charges in the clouds, is the main cause of lightning. He learnt about the precautions which should be taken during electric discharge.

- i. Where is the phenomenon of lightning most likely to be seen?
 - a) Hilltop
 - b) Riverbank
 - c) Electric pole
 - d) Basement of a house
- ii. What is earthing? What is the application of earthing?
- iii. On a rainy afternoon, Aditya was advised not to take an umbrella to an open field. Why should he not carry an umbrella during lightning?
- iv. Identify the device shown in the figure which used to protect buildings from the effect of lightning. How does the device protect the building from the effect of lightning.



SECTION C (1X3=3)

20. SOURCE BASED

The variety of plants and animals existing on earth are essential for the well-being and survival of mankind. Today a major threat to survival of mankind is deforestation. Deforestation means clearing of forests and using that land for other purposes. Trees in the forest are cut for some of the purposes like Procuring land for cultivation, building houses and factories, making furniture or using wood as fuel.

Deforestation causes increase of atmospheric temperature due to increase in concentration of carbon dioxide leading to global warming, Severe draughts and floods. Deforestation changes the nature of soil, water holding capacity and soil erosion. Gradually, the fertile land gets converted

into deserts. It is called desertification. Deforestation causes the destruction of habitat of wildlife; its survival becomes difficult. To protect our flora and fauna and their habitats, protected areas called wildlife sanctuaries, national parks and biosphere reserves have been earmarked. Plantation, cultivation, grazing, felling trees, hunting and poaching are prohibited there.

- i. Regions with more trees experience less soil erosion. How do the trees reduce soil erosion?
 - a) The roots of the trees hold the top layer of the soil firmly.
 - b) The trees absorb more sunrays which increases soil density.
 - c) The trees store extra food in the soil which increases the soil content.
 - d) The trees add dead leaves into the soil which increases the soil quantity.
- ii. Many factories are built by cutting trees and clearing forests. What will be its likely effect on the nature?
 - a) decrease in the number of wildlife
 - b) sudden boost in the plant growth
 - c) availability of more food for wildlife
 - d) increase in the percentage of land occupied with trees
- iii. Which among the following are some of the consequences of deforestation?
 - a) Droughts, cyclones
 - b) Cyclones, desertification
 - c) Storms, droughts
 - d) Droughts, desertification

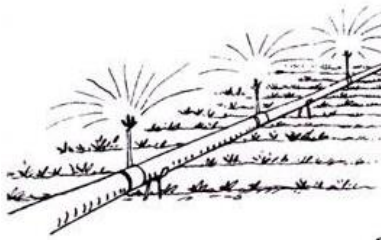
SECTION D (6X3=18)

21. Study the pictures given below and answer the questions:

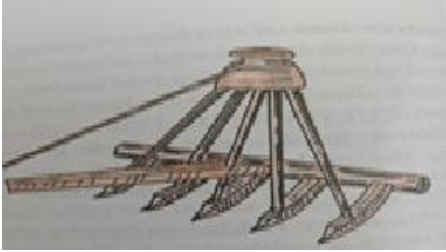
- a) Name the agricultural implement. What is it used for?



- b) Which system of irrigation does the picture show? In which kind of soil is this system of irrigation very useful?



- c) Which method of sowing seeds is shown here? List one advantage of this system

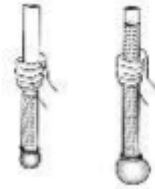


22. a) Why is it necessary to reduce the moisture in freshly harvested grains before storing them for a long period? Explain.

b) Explain briefly crop rotation with example.

23. a) 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.

b) In the picture shown, why is the rubber sheet tied to the second tube bulged more than the one in the first tube



24. a) Draw the structure of an amoeba.

b) What is the importance of pseudopodia?

c) In what way is an amoeba similar to a human white blood cell?

25. a) Name any two products obtained and their uses when coal is processed in the industry.

b) Why is CNG considered to be a better fuel than petrol?

26. a) What is drag? How it can be minimized?

b) Sliding friction is slightly smaller than the static friction. Explain why?

SECTION E (6X5=30)

27. a) Give reason.

- i. The handle and bristles of a toothbrush are made up of different plastic.
- ii. Umbrellas are made of synthetic fibres.
- iii. Plastic bottles are used to store chemicals like bleach.

b) Observe the given pictures carefully :



(i)



(ii)

Name the plastic used to make articles i and ii and write one characteristic each of these kinds of plastic.

28. 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 any two effects of force .
29. a) Explain the process of formation of petroleum.
b) Differentiate between- inexhaustible natural resources and exhaustible natural resources.
c) Mention any two tips given by PCRA to save petrol while driving a vehicle.
30. 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) How does use of ball bearings help in reducing friction?
c) Friction is a necessary evil.” Justify the statement with suitable examples.
31. a) Make a sketch of the human nerve cell. What function do nerve cells perform?
b) The size of the cells of an organism has no relation to the size of its body. Justify the statement by giving suitable example.
c) Distinguish between prokaryotic and eukaryotic cell with examples.
32. a) Draw a neat and labelled diagram to show the structure of earth.
b) What is an earthquake? What causes an earthquake? Explain.
c) What are seismic waves? How are these waves recorded?
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