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Session: 2024-25

MID TERM

SUBJECT: SCIENCE

CLASS: VIII

MAX. MARKS: 60

DURATION: 2 ½ Hr.

General Instructions:

1. Read all the questions carefully. All questions are compulsory
2. The question paper has five sections A,B,C,D and E. There are 26 questions in the question paper.
3. Section A- questions no 1 to 10 all questions and parts thereof are of one mark each. These questions contain multiple choice questions (MCQs), and assertion reason-type questions.
4. Section B- questions no. 11 to 15 are very short answer-type questions, carrying two mark each. Answers to these questions should be in the range of 30 to 50 words.
5. Section C-question no 16 to 21 are short answer type questions, carrying 3 marks each. Answer to these questions should be in the range of 80 to 120 words.
6. Section D- question no- 21 to 24 are source based /case based questions carrying 3 marks each with sub parts.
7. Section E- question no-25 to 26 are long answer type questions carrying 5 marks each. Answer to these questions should be in range of 80 to 120 words.
8. There is no overall choice. However, internal choice have been provided in some questions. A Student has to attempt only one of the alternatives in such questions.
9. Wherever necessary, neat and properly labelled diagrams should be drawn.

SECTION-A (1x10 = 10 marks)

MCQ-

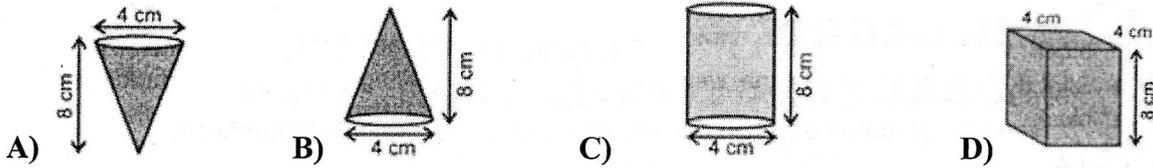
1. Petroleum separates into different fractions on the basis of difference in their:

- A) Melting points B) Boiling points C) Freezing points D) Colour

2. Substance used to produce immunity against diseases in the living body is called

- (a) immune (b) vaccine (c) antibody (d) antigen

3. Which of the following objects exerts the maximum pressure on the floor? (All objects have the same mass).



4. Which is the best type of coal?

- (a) Lignite (b) Anthracite (c) Bituminous (d) peat

5. The most common element used as fire extinguisher is

- (a) CO₂ (b) oxygen (c) phosphorous (d) oxygen

6. Match the following:

Column A		Column B	
(I)	Sowing	[A]	Butachlor
(II)	Irrigation	[B]	Sickle
(III)	Weeding	[C]	Seed drill
(IV)	Harvesting	[D]	Drip system

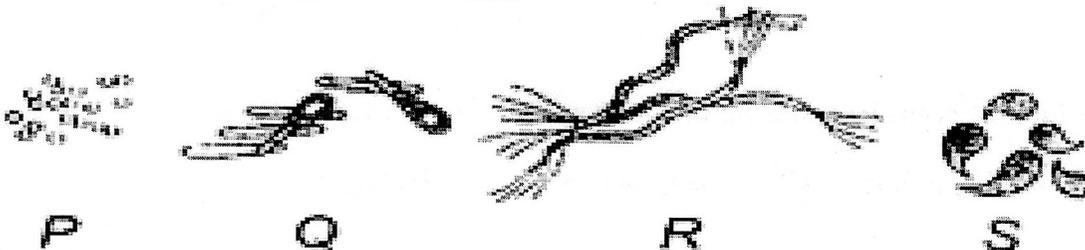
A) (I - D), (II - A), (III - C), (IV - B)

B) (I - C), (II - D), (III - B), (IV - A)

C) (I - C), (II - D), (III - A), (IV - B)

D) (I - B), (II - D), (III - A), (IV - C)

7. Bacteria have been grouped into four different types based on their shapes. Identify the different types and select the correct statement regarding it.



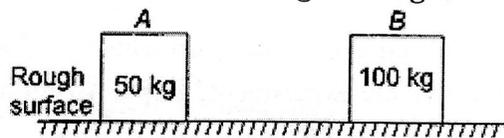
A) *Vibrio cholerae* is an example of type S, which causes cholera.

B) *Lactobacillus* is an example of type P, which helps in curdling of milk.

C) Type R bacteria are rod-shaped and are called as bacilli bacteria.

D) *Streptococcus* is an example of type Q bacteria that causes pneumonia.

8. Two objects A and B are moving on rough surface as shown in figure. Object A has greater velocity than B then



- A) A experiences more frictional force than B
- B) B experiences more frictional force than A
- C) Both experience same frictional force
- D) Cannot be said because data is insufficient

Directions Q-9 to 10 are Assertion Reason Type questions. Choose the correct answer from the options given below

- (a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- (b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A)
- (c) Assertion (A) is true but reason (R) is false.
- (d) Assertion (A) is false but reason (R) is true.

9. Assertion- The LPG can catch fire easily.

Reason- LPG have low ignition temperature OR LPG are inflammable substances.

10. Assertion (A): Bacteria are harmful for curd.

Reason (R): Milk is converted into curd by Lactobacillus.

SECTION-B (2x5=10 marks)

- 11. Explain sowing. Why sowing seeds with seed drill is better than broadcasting? (2)
- 12. What is the role of bacteria in increasing the soil fertility? Name some free living Nitrogen fixing bacteria. (1.5, 0.5)
- 13. 60 kg of fuel was completely burnt for an experiment. The amount of heat energy was found to be 1,80,000 kJ. Calculate the calorific value of the fuel. (2)
- 14. Give reasons-
 - a. Why do weightlifters apply chalk powder on their palms while lifting weights? (1)
 - b. Why do we slip if we mistakenly stepped on a banana peel? (1)
- 15. a. We use ball bearings between the hub and axle of ceiling fan and bicycles. Why? (1)
- b. Which factors affect fluid friction? (1)

SECTION-C (3x6=18 marks)

16. Weedicides are the chemicals that are sprayed on crop fields to remove weeds. A farmer wanted to test the effect of two different weedicides on wheat production. He sprayed each weedicide on two different fields. No weedicide was sprayed on field 3.

- a. Why did the farmer not spray any weedicide on Field 3? (1)
- b. The farmer's friend suggested that the farmer should have tested Weedicide 1 on wheat field and Weedicide 2 on mustard field. Will this suggestion help improve the experiment? Explain your answer. (1)
- c. Why are weedicides generally sprayed on weeds before they start producing lowers and seeds? (1)



Field 1 - sprayed with weedicide 1

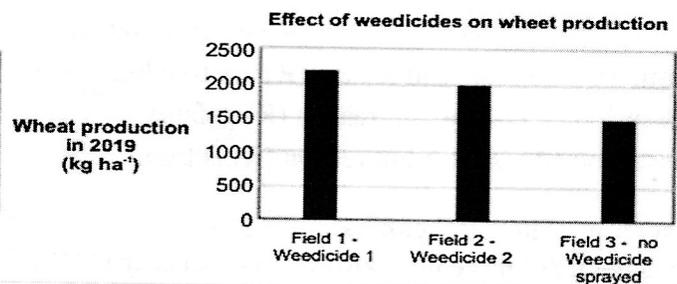
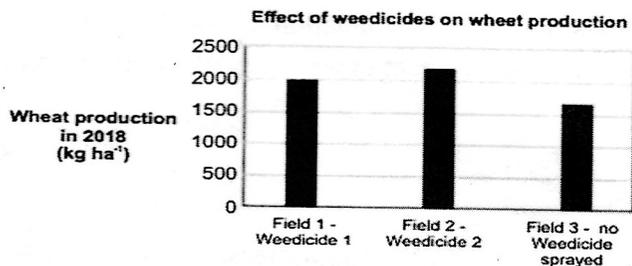


Field 2 - sprayed with weedicide 2

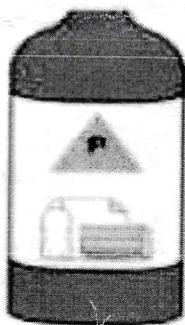


Field 3 - sprayed with weedicide 3

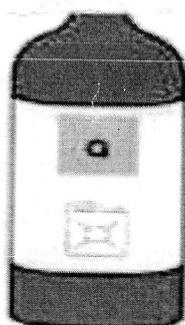
The graph shows the production of wheat crop from each field over two years.



17. The picture shows 4 types of fire extinguishers. Each extinguisher is suited for specific sources of fire.



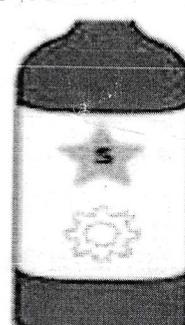
- Cloth
- Wood
- Rubber
- Paper
- Plastics



- Petroleum
- Grease
- Oil



Electrical fires



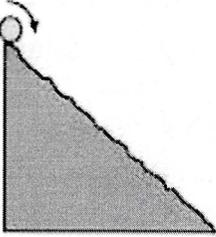
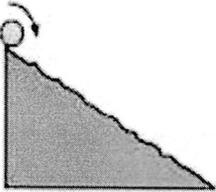
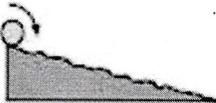
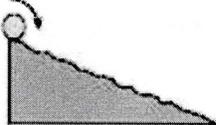
Combustible metals

- a. A tailor has money for any two of the fire extinguishers. Which pair of fire extinguishers should he buy for his tailoring shop and why? (1)
 - b. Which fire extinguisher can perform most of the work as required in kitchen, and why? (1)
 - c. How does dumping sand on fire extinguish the flame? (1)
18. a. Which force is responsible for downward movement of a parachutes? Will he come down with the same speed without the parachute? (1)
- b. A force of 100 N is applied on an area of 4 m². Compute pressure being applied on the area. (2)

19. a. Why is sodium kept immersed in kerosene? (1)

b. How does a matchstick catch fire? (2)

20. Anshu lets a marble roll freely on four rough wooden planks. The table shows the time taken by the marble to reach the bottom of each plank.

	Plank 1	Plank 2	Plank 3	Plank 4
				
Time taken by the marble to reach bottom	2 seconds	3 seconds	X seconds	4 seconds

a. What would be the value of x in the table? (1)

b. Anshu polished all four planks to smoothen the surfaces. She repeated her activity on the polished planks. Will there be any change in the results? Explain your answer. (2)

21. Define the term 'petrochemicals'. Name two products that you obtain from the destructive distillation of coal. What is the residue left in this process? Give one main use of this residue. (1,2)

SECTION- D (4x3=12 marks)

22. Raju wanted to find out which one of the four surfaces produces the greatest friction. He pushed the same toy car on the four surfaces separately.

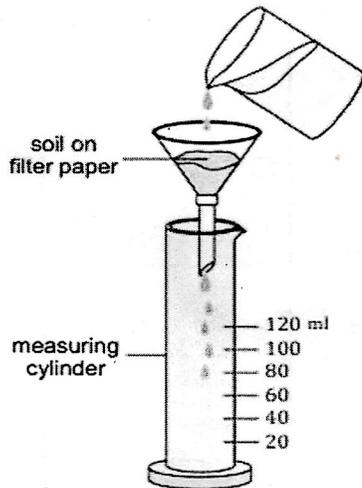


Raju noted the distance travelled by car on each surface before stopping.

	Surface 1	Surface 2	Surface 3	Surface 4
Distance travelled by the toy car before stopping	120 cm	150 cm	100 cm	180 cm

- On which surface did the car experienced the greatest friction and what could be the possible reason for that? (2)
- What must be kept same in the activity to compare the distances travelled by the car? (1)
- What will happen to car wheels if it continues to move on the surface for 1 hour? (1)

23. Soham investigates the water-holding capacity of four different types of soils. He sets up an experiment for each type of soil as shown in the diagram. Soham records his observations in a table.

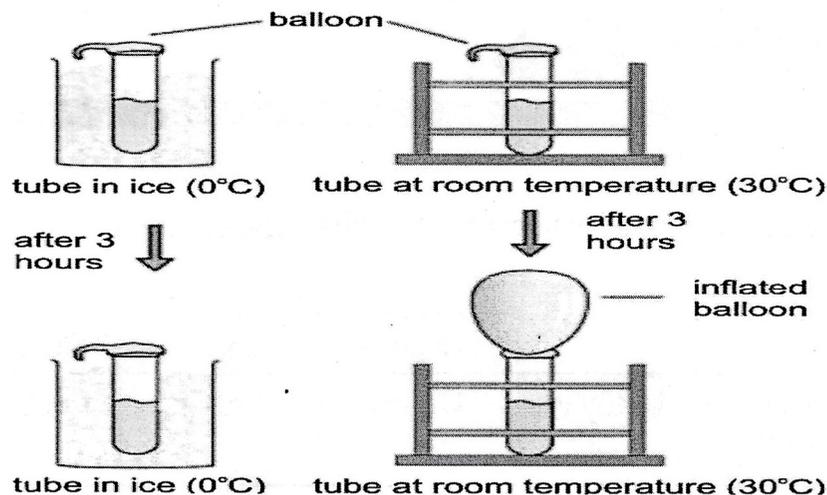


	Soil type			
	Clay	Loam	Sand	Silt
Amount of water added to the soil (ml)	150	150	150	150
Amount of water collected in the measuring cylinder (ml)	30	60	105	50

- Which type of soil absorbs the more water and why? (0.5, 1.5)
- Soham added the same amount of water to each type of soil. State one more thing that Soham needs to keep the same in his experiment. (1)
- Which type of soil will be most preferred to grow i) peanuts ii) cotton and why? (0.5,0.5)

24. Manoj adds yeast to two test tubes containing sugar solution. One test tube is kept in ice and the other at room temperature. The picture shows what happens after three hours.

- What is Manoj investigating by this experiment? (1)
- How can Manoj confirm if the gas produced in the test tube at room temperature was due to the gas growing in it? (2)
- Where do we use yeast grown like this? (1)



SECTION-E (5x2=10 marks)

25. On Rahul's birthday, his mother prepared many dishes for him. After having their meal, they found that many food items were left over. Rahul's mother kept these leftovers in a air-tight container and refrigerate them.

- (a) What is food preservation? (1)
- (b) What will happen to the food if it is not refrigerated? (1)
- (c) What is the role of refrigeration in food preservation method? (1)
- (d) Name any 2 methods of food preservation and explain them. (2)

OR

25. Sourav was heating oil to fry potato chips. The cooking oil all of a sudden caught fire. He took water to pour on the fire to extinguish it. But meanwhile his mother came and switched off the gas and covered the wok completely with a plate.

- a. Do you think pouring water to the burning oil would have worked? Why? (1)
- b. Do you think what Sourav's mother had done is right? Why? (1)
- c. Can you suggest other ways in which we can stop fire due to burning oil? (1)
- d. Mention any four characteristics of a good fuel. (2)

26. Radhey prefers to go to school by pooling car. On other occasions he like to opt for public transport rather than private transport. For short distances, he walks or uses bicycle.

- (a) What are the benefits of carpooling? (1)
 - (b) Which mean of transport do you think is best for short distances? (1)
 - (c) How on our end we can reduce the consumption of fossil fuels? (1)
 - (d) What is CNG? What are its uses? (2)
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