Appendix D

Final Achievement test based on comprehension

Date: Time

Name of the student:

Roll No.

Whether Goes to Tuition Classes or Not? YES/NO

Fathers occupation: Mothers Occupation:

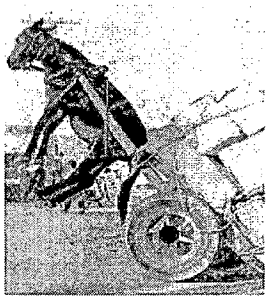
ANSWER ALL THE QUESTIONS. DO NOT LEAVE ANY QUESTION BLANK

Answer the following questions as directed:

Q.1. Which type of lever is the alligators jaw? Indicate the type of lever and also label the parts of lever in the given diagram. (2)

Q.2. Which type of lever is the flag being hoisted? Indicate the type of lever and also label the parts of lever in the given diagram. (2)

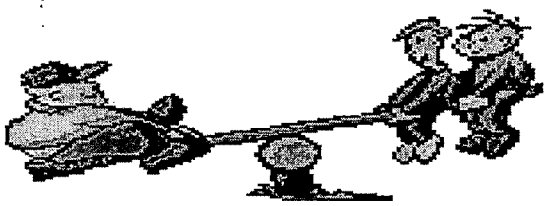
Q.3. Which type of lever is the horse shown below indicate? Indicate the type of lever and also label the parts of lever in the given diagram. (2)



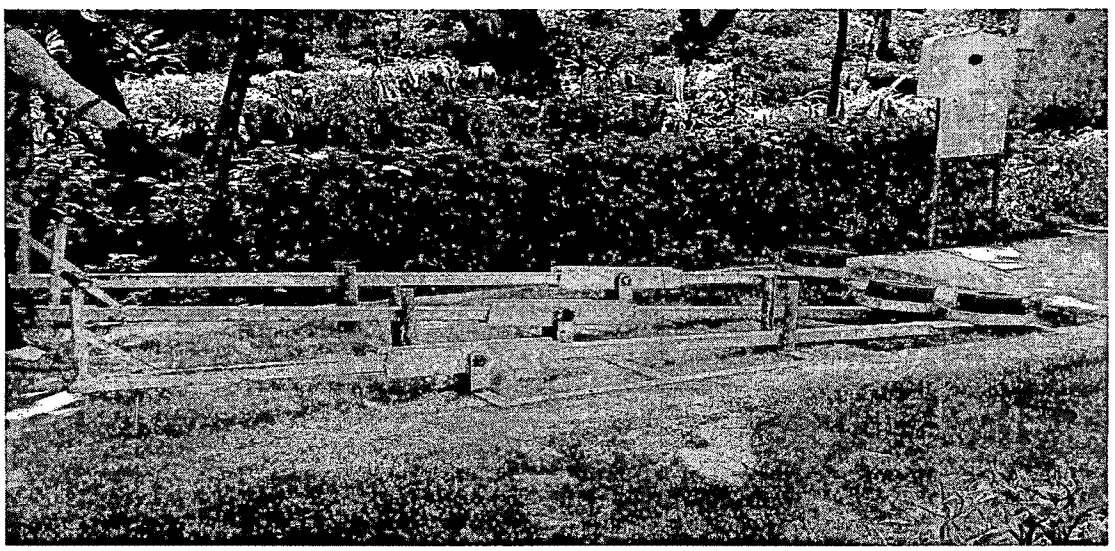
Q.4. Which type of lever is the following? Indicate the type of lever and also label the parts of lever in the given diagram. (2)

Q.5. Take a beaker half filled with water. Now add 20 ml of kerosene to the beaker. Also add 20 ml of honey to it. Now draw the diagram showing the beaker filled with water, kerosene and honey. (2)

Q.6. If boy sitting on the left side is of 35 kg weight and is sitting 4 cm from the fulcrum where should two boys each of 25 kg weight be made to sit on a see-saw so that see saw is balanced? (2)



Q.7. In which case should the effort applied be less? Why? Indicate first, second and third from the side of hand. The weights kept on all the three levers are of same weight. (2)



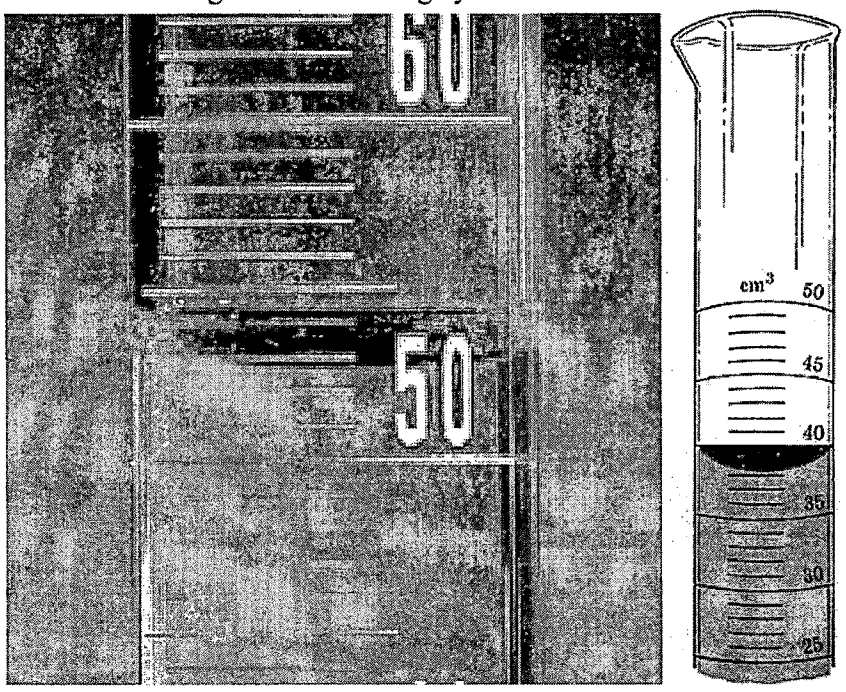
Q.8. Rub an inflated balloon with wool and touch the balloon to the wall. What will happen? Why? (2)

Q.9. Rub a comb with wool and bring it near a pith ball suspended on a thread? What will happen? Why? Now touch the pith ball with the same comb and again bring the comb near to the ball. What will happen in the second case? Why? (2)

First Case:

Second Case:

Q.10. What is the reading in the measuring cylinders shown below: (2)



Q.11. How can you determine the density of a irregular shaped object which floats in water and is insoluble in water? (2)

Q.12. When a north pole of a magnet is kept facing South Pole of another magnet and a glass pane is placed on them and iron fillings are spread on a glass pane kept on the magnets and tapped what kind of magnetic lines will be formed. Show the magnetic lines by drawing a diagram. (1)

Q.13. While measuring the length of knitting needle, the knitting needle is kept on the scale such that the reading of the scale at one end is 3.0 cm and at other end is 33.1 cm. What is the length of the needle? (1)

Q.14. The plane mirror, concave mirror and convex mirror got mixed by mistake. How will you separate them without touching at its surface? (3)

Q.15. Classify the objects or materials given below as opaque, transparent or translucent:
Rock, a sheet of aluminum, a mirror, a wooden board, a sheet of polythene, fog, wall, butter paper along with reason for classifying them under a particular category (2)

Opaque	Transparent	Translucent

Q.16. Take two textbooks of science and technology of standard VII and arrange them such that the cover page of one book is inserted (lies) on the back page of the other book. Now start arranging the pages by placing each page of one book on the page of another book. Continue doing like this till you are able to cover all the pages. Now ask your friend to hold one book from one side and you hold another book from other side and try to pull the book. What will happen? Why? (2)
Result:

Reason:

Q.17. A Bar magnet has no marking to indicate its poles. Can you find out where is the north pole and where is the south pole of the bar magnet? How Explain? (1)

Q.18. A Magnet was brought from different directions towards a toy boat that has been floating in water in a tub. Effects observed in each case is stated in Column A. Possible reasons for the observed effects are mentioned in Column B. Match the statement given under Column A with those given under Column B (2)

Column A	Column B
(i)Boat gets attracted towards the magnet	(a) Boat is fitted with a magnet with north pole towards the head
(ii)Boat is not affected by the magnet	(b) Boat is fitted with a magnet with south pole towards the head
(iii) Boat moves toward the magnet if north pole of the magnet is brought near its head	(c) Boat has a small magnet fixed along with its length
(iv) Boat floats away from the magnet if north pole of the magnet is brought near its head	(d) Boat is made of magnetic material
	(e) Boat is made up of non-magnetic material

Q.19. If you drop a solid piece of wax into a test tube filled with liquid wax where will the solid wax lie before it gets melted? Why? (2)

Q.20. Classify the following into solute, solvent and solution: (2)
Water in detergent
Salt in water
Pepper in limewater,
Making buttermilk by mixing curd, water and sugar

Q.21. Arrange the following objects in increasing order of their ability to reflect light: White paper, mirror, shinny & crinkled foil, dull and crinkled foil, shinny & smooth foil and black paper (3)

Q.22. If you are able to see enlarged image of your face when you bring a mirror near your face and when you take away the mirror you are able to see an inverted and small image which is the mirror in your hand? (1)

Q.23. Write the word AMBULANCE as seen in a plane mirror (1)

Q.24. Two parallel beam of light are made incident on smooth and shiny aluminum foil. Where will the rays after reflection go? Indicate your answer by drawing a diagram. (1)

Q.25. Identify and list the number of forces involved when a thief on the platform is trying to snatch a golden bracelet from the hand of a lady sitting in the running train. (2)

Q.26.Does water contract, expand or remain same in volume when it is changed to ice? (1)

Q.27 Why in the side glass of a vehicle it is written objects in the mirror are closer than they appear? Give scientific principle behind it. (1)

Q.28. Suppose you are at a sea shore and have no other facility of drinking water. How will you make the water available at the sea shore drinkable? (1)

Q.29 You have two plane mirrors kept parallel to each other. You keep a candle in between the two mirrors. How many images of the candle will you be able to observe? Why? (2)

Q.30. How will the following letters appear when seen in the plane mirror? (1)

M G J K Q R S U

Q.31 Read the situation given and answer the following questions. Consider two inflated balloons tied to a string and suspended from a bar. Now if each balloon is rubbed with the woolen cloth one after the other and brought near to each other what do you think should happen? (2)

(a) What will be the effect on the balloons?

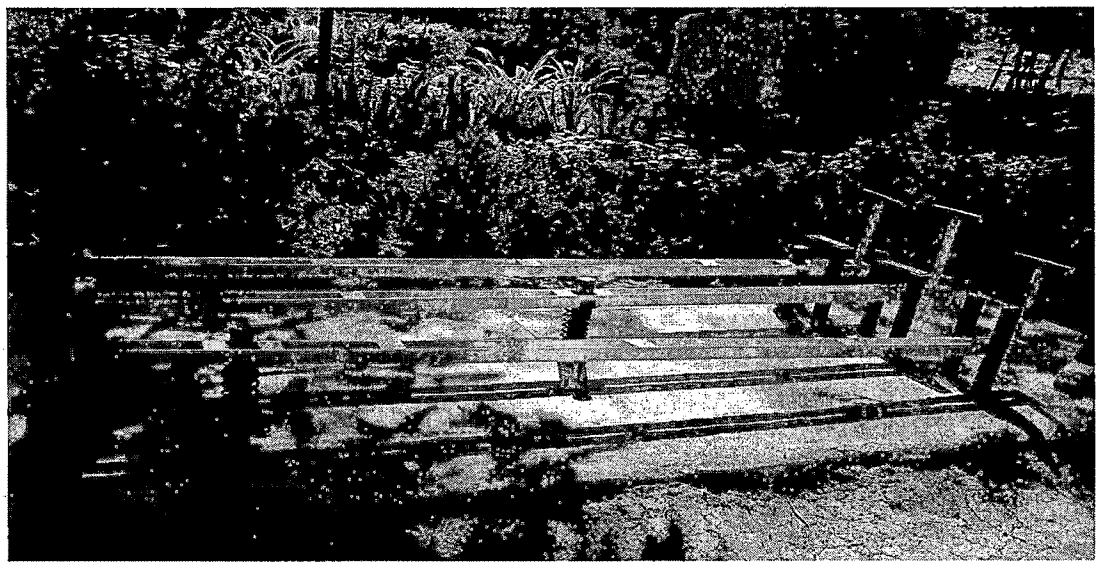
(b) What is the cause of the effect?

Q.32. A girl is standing 1.5 m in front of a plane mirror. What is the position at which her image will appear? What will be the type of image formed? (2)

Q.33. Read the situation and answer the question below. Place a marble in a transparent glass tumbler. Lay the tumbler on its side on a table. Now slide the tumbler along the table very rapidly (fast) sliding its open end first. Stop it suddenly.
(a) What happens to the marble when you are sliding the tumbler very fast? Why? (2)

(b) What happens to the marble when the tumbler is suddenly stopped? Why?

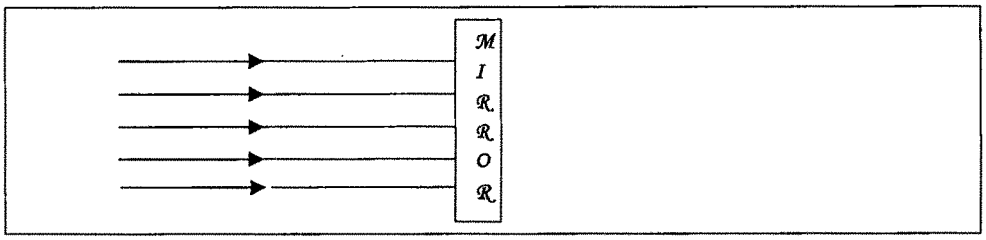
Q.34. In Which case will you be required to apply less force? Why? Indicate first, second and third from the side of garden. (2)



Q.35. Extend your arms out from your body and then answer the following questions
(a) What do you feel after some time? (2)

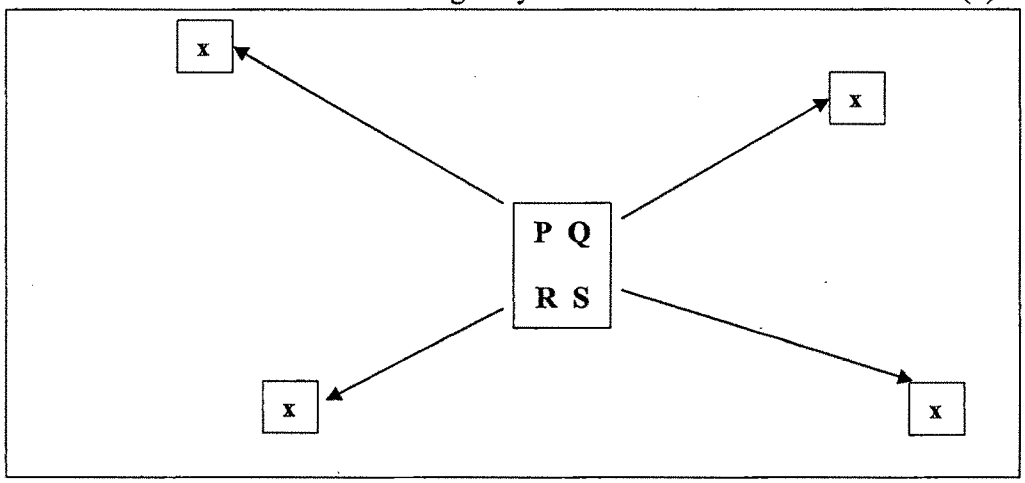
(b) What is the cause for the effect you felt?

Q.36. when parallel beam of light is incident on a plane mirror how will the reflected rays appear? Draw the reflected rays in the given diagram. (1)



Q.37 Imagine that in two pots same number of seeds are sown at the same time and both the pots are kept at the same situation (like amount of soil, sunlight, manure, quantity of water) except that one is watered with sea water and another with soft water. Draw a diagram showing the growth of plant watered with soft water and another watered with sea water. (2)

Q.38. A child kept four snails namely P, Q, R and S down next to each other as shown in the figure below and then marked the point at which each of them reached after 30 second of time by putting cross at each point. The traits are as shown below. The snail P covered a distance of 70 mm, Q covered distance of 50 mm, R reached 40 mm and S reached 60 mm as shown in the diagram below. If snail R went with the same speed for another 15 seconds how far would it go beyond? (1)



Q.39. Suppose you have a box of length 4 cm, breadth 4cm and height 2 cm. How many dice of 1 cubic cm will you able to place in the box you have. Show your calculations. (1)

Q.40. When a north pole of a magnet is kept facing north pole of another magnet and a glass pane is placed on them and iron fillings are spread on a glass pane kept on the magnets and tapped what kind of magnetic lines will be formed. Show the magnetic lines by drawing a diagram. (1)

Q.41. Length of one box of colgate mega value pack is 12 cm, the breadth is 4 cm and height 2 cm. you want to place 43 such colgate mega value pack in another big container. What should be the volume of the bigger container such that it can accommodate 43 such colgate mega packs? (1)

Q. 42 write one word which will remain same in its mirror script. (1)

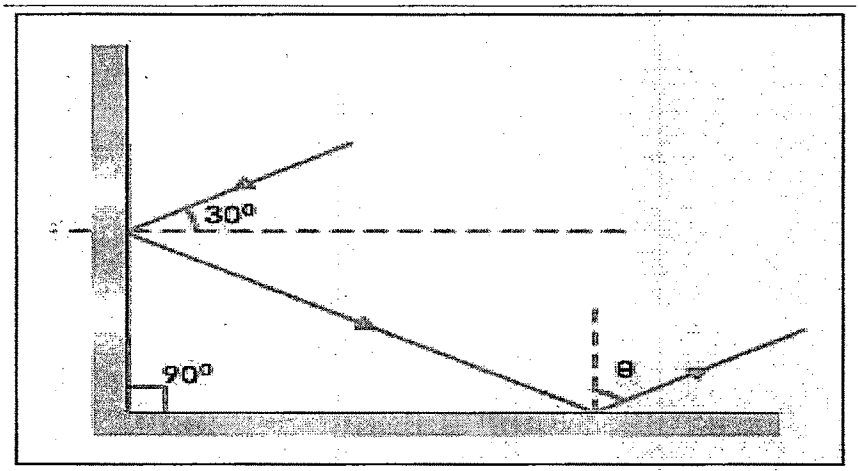
Q.43. Take some water in a beaker. Add one teaspoon of dust having stone, dry leaves to the beaker filled with water. Stir it with spoon and allow it to settle. Now draw the diagram showing the water in the beaker. (1)

Q.44. Take a sheet of white paper and a sheet of black paper of the same dimensions. Now place both the sheets in sunlight and place a concave mirror such that rays of light after reflection focus on one point in both the cases. Which of them will catch fire first? Why? (2)

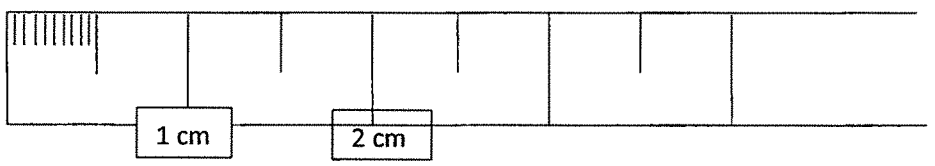
Q.45. Take smooth shinny aluminum foil and observe your face in the foil what are you able to observe. Now crush the aluminum foil with your hand and again try to observe your face in the foil. What are you able to observe. Why? (2)

Q.46 Take two identical beakers containing water till its brim and place them in a saucer. Now immerse a piece of iron in one beaker and a piece of gold having same dimension as that of iron in another beaker. Will the amount of water displaced by immersing iron in one beaker be more, equal or less than the amount of water displaced in another saucer. (1)

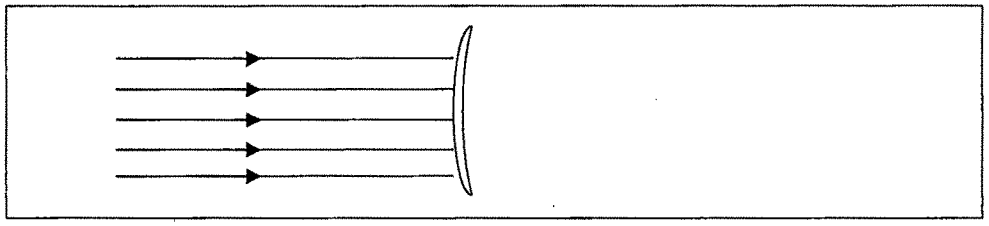
Q.47 Two mirrors are placed at an angle of 90 degree. The ray was incident on the mirror at an angle 30 degree as shown in the diagram below. Find the angle © (1)



Q.48 Find out the least value which can be measured by the scale given below: (1)



Q.49. Show the path of the reflected rays in the following case (1)



Q.50. Peel off the orange and then put the peeled orange in a beaker filled with water. Where will the orange lie in the beaker? (1)