



**Somalwar Academy's**  
**Annasaheb Somalwar Memorial Initiative**  
**of Rewarding Excellence**

**A SEARCH OF INNATE TALENT**

**Class VIII**

**Round II – Major Test**

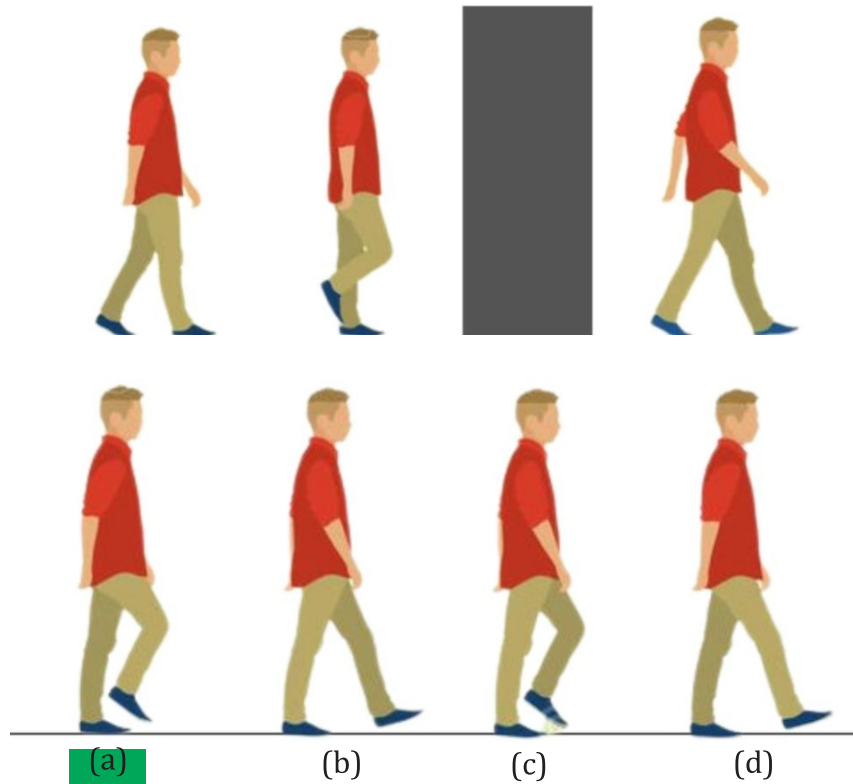
**Max Marks : 100**

**Duration : 2 hrs.**

**General Instructions :**

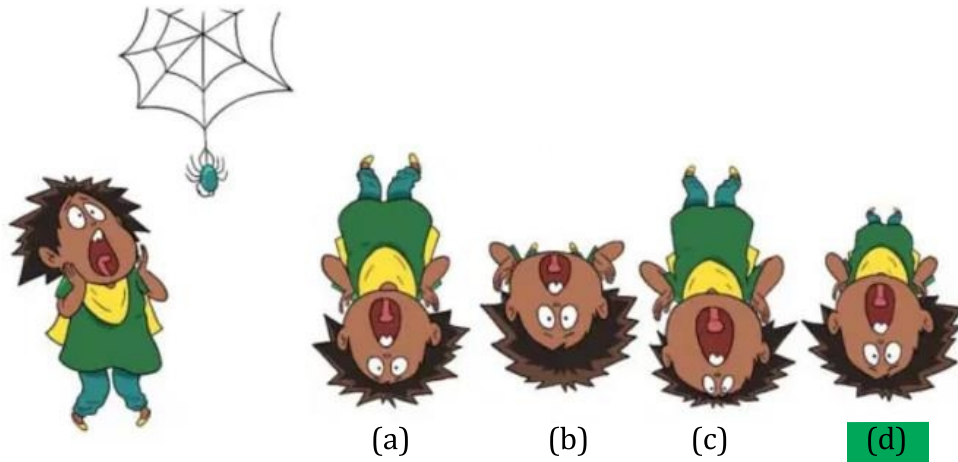
- i) All questions are compulsory
- ii) Each question carries 2 Marks
- iii) There is no negative marking
- iv) Please read and follow the instructions on OMR sheets while solving this test

- 1) The below picture shows a step series with a missing picture. Select the correct option for the missing picture from the given alternatives.

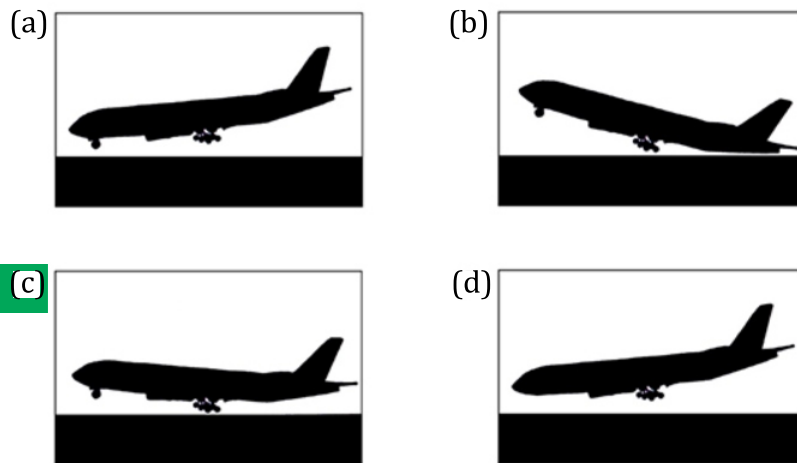


- 2) A biologist tests this hypothesis: the greater the amount of vitamins given to rats the faster they will grow. How can the biologist measure how fast rats will grow?
- (a) Measure the speed of the rats.
  - (b) Measure the amount of exercise the rats receive.
  - (c) Weigh the rats every day.
  - (d) Weigh the amount of vitamins the rats will eat.

- 3) Imagine a scene where Mira encounters a spider. Which of the following images best represents the spider's point of view of Mira?



- 4) A plane is landing smoothly on the airport runway. Select the correct picture

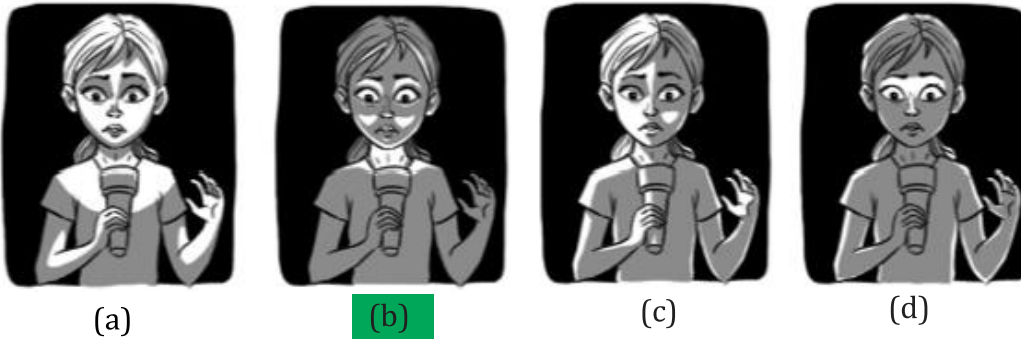


- 5) Observe the tools below and read the statements. Based on your observations, which of the following statements is correct?



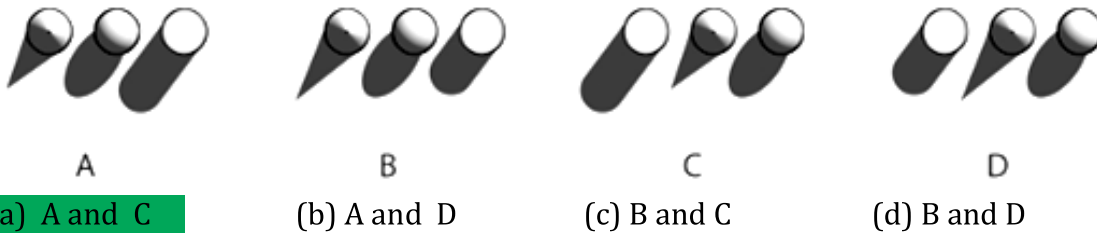
- (a) Three of them are designed specifically for cracking nuts.  
 (b) All of them can be used for cutting fabric  
 (c) Only one has spring back element, at least one has provision to crack nuts  
 (d) Three of them have a provision to crack nuts

- 6) Kavita is holding a lit torch below her face as she narrates a ghost story to her friends in a dark room. Which option shows the lighting correctly?



- 7) Which of the following options is related to the phrase 'Easy to understand'?
- (a) Functionality (b) Usability (c) Durability (d) Aesthetics

- 8) A sphere, a cylinder and a cone, with equal heights are resting on a surface along a straight line. If the source of light is fixed and the light rays are parallel, which of the options show(s) the shadows correctly?

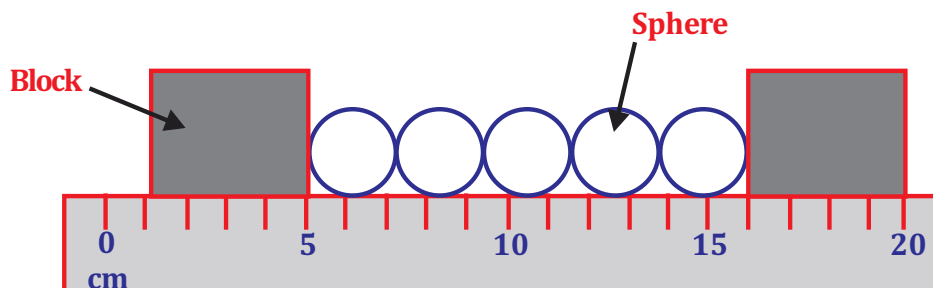


- 9) The Andaman Islands in the Bay of Bengal depend exclusively on rain for their freshwater supply. Some of the hotels in the Andamans started using seawater instead of fresh water for flushing toilets. This is an example of\_\_\_\_\_.
- (a) recycling of resources (b) conservation of resources  
(c) prevention of pollution (d) environmental planning

10) Population Change in a place is

- (a) (No. of births + No. of out migrants) - (No. of deaths + No. of out migrants)  
(b) (No. of births + No. of in migrants) - (No. of births + No. of out migrants)  
(c) (No. of births + No. of in migrants) - (No. of births + No. of out migrants)  
(d) (No. of births + No. of in migrants) - (No. of deaths + No. of out migrants)

- 11) Five identical spheres are placed between two blocks in order to measure their diameter.



**What is the diameter of a single sphere?**

- (a) 2.2 cm                      (b) 2.0 cm                      (c) 2.1 cm                      (d) 2.3cm

**12) Which of the following is dominant example of artificial intelligence**

- (a) playing a game                      (b) DRS in cricket  
(c) Composing a poem                      (d) Industrial Robot

**13) A boat carrying a number of large stones is floating in a pond. If the stones are unloaded into the water, the level of water in the pond**



- (a) Will remain unchanged                      (b) Will rise marginally  
(c) Will fall marginally  
(d) Will rise till half the number of stones are unloaded and then will begin to fall

**14) Which one of these principles is Velcro, a common fastener, based on?**

- (a) Hook and Loop                      (b) Push and Pull  
(c) Cut and Paste                      (d) Tick and Stick

**15) A student wants to plan a family camping trip during a full moon. The student looks outside to see that the moon is currently in its first quarter phase. About how many days does the student need to wait in order to go camping on the night of a full moon?**

- (a) 4 days                      (b) 8 days                      (c) 13 days                      (d) 20 days

**16) Use the information below to answer the question.**

**Lemonade Ingredients:**

<p><b>5 cups of sugar</b> <b>5 cups of lemon juice</b> <b>20 cups of water</b></p>
--

**A student follows a recipe using the ingredients shown to make lemonade. Which statement describes a relationship between ingredients in this recipe?**

- (a) There should be 20 cups of water for every 10 cups of sugar  
(b) There should be 5 cups of lemon juice for every cup of sugar  
(c) There should be 4 cups of water for every cup of lemon juice  
(d) There should be 1 cup of sugar for every 5 cups of lemon juice

- 17) Ashmit measures his weight by standing on the weighing scale on both feet. He then lifts one of his feet. What do you think will happen to his weight now?

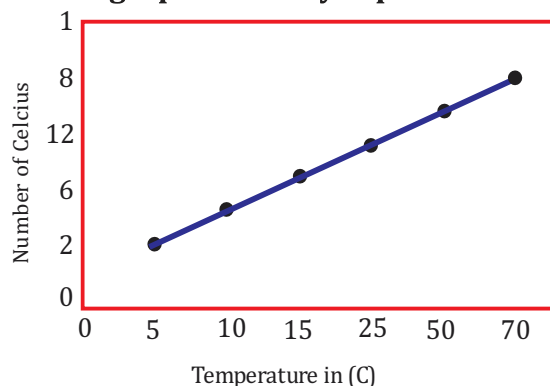


- (a) It will increase                      (b) It will decrease.                      **(c) It will remain the same.**  
 (d) We cannot say anything for sure without knowing his original weight.
- 18) A farmer wonders how he can increase the amount of corn he grows. He plans to study factors that affect the amount of corn produced. Which of these hypotheses could he test?
- (a) The greater the amount of fertilizer the larger the amount of corn produced.**  
 (b) The greater the amount of corn, the larger the profits for the year.  
 (c) As the amount of rainfall increases, the more effective the fertilizer.  
 (d) As the amount of corn produced increases, the cost of production increases.
- 19) A student in a science class studied the effect of temperature on the growth of bacteria.

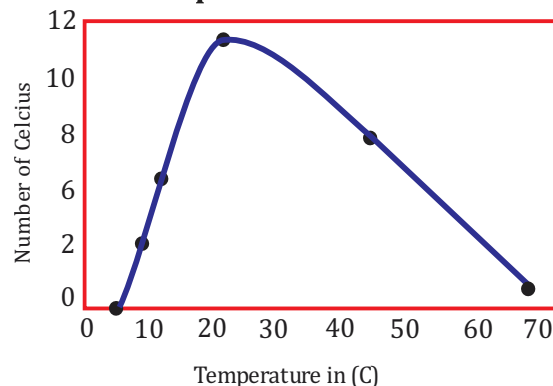
The student obtained the following data:

Temperature of the growth chamber (°C)	Number of bacterial colonies
5	0
10	2
15	6
25	12
50	8
70	1

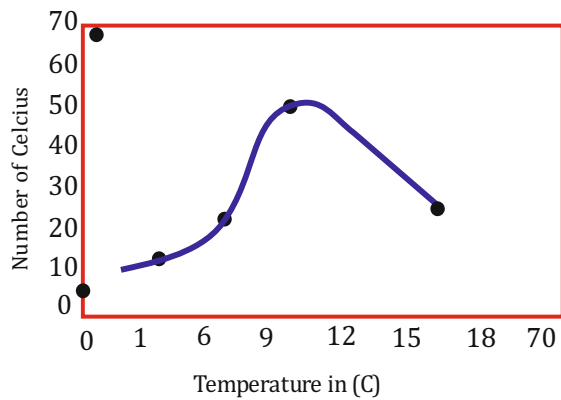
Which graph correctly represents the data from the experiment?



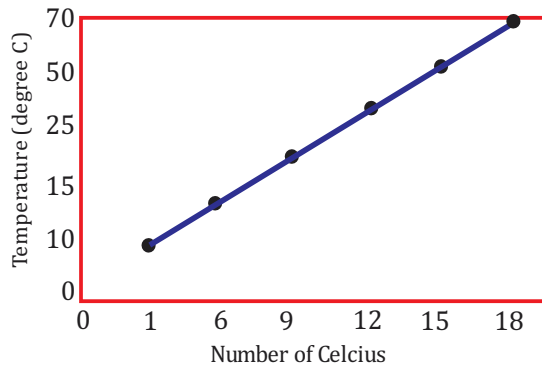
(a)



**(b)**



(c)

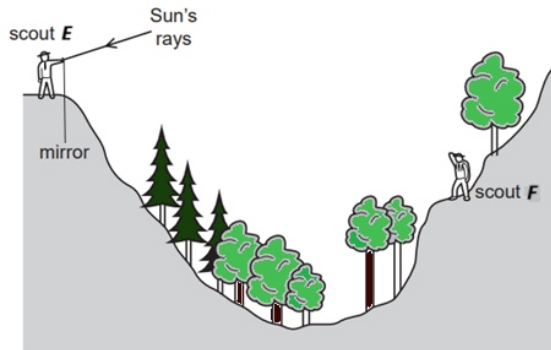


(d)

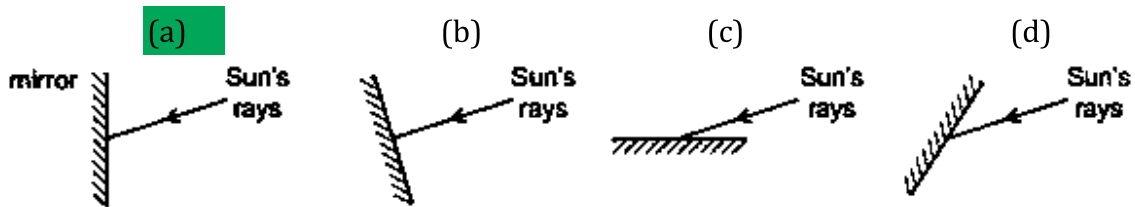
20) Why do researchers use statistics to draw conclusions about their data?

- (a) Researchers usually collect data (information) about everyone/everything in the population.
- (b) The public is easily persuaded by numbers and statistics.
- (c) The true answers to researchers' questions can only be revealed through statistical analyses.
- (d) Researchers are making inferences about a population using estimates from a smaller sample.

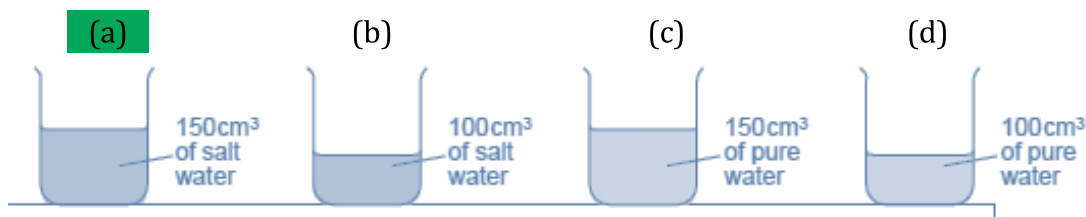
21) Scout E signals to scout F on the other side of a valley by using a mirror to reflect the Sun's rays.



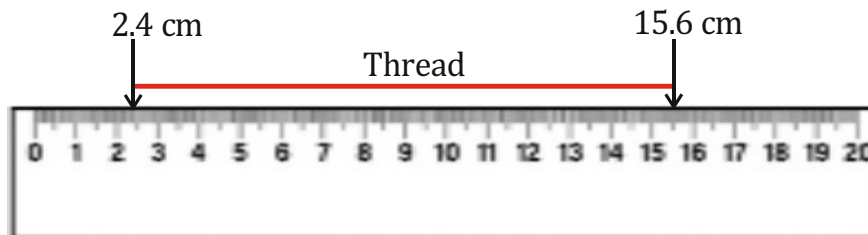
Which mirror position would allow the Sun's rays to be reflected to scout F?



22) A student places four identical beakers on a bench. Two beakers contain salt water of density  $1.1 \text{ g / cm}^3$  and two beakers contain pure water of density  $1.0 \text{ g/cm}^3$ . Which beaker exerts the greatest pressure on the bench?



23) A thread is measured between two points on a ruler.



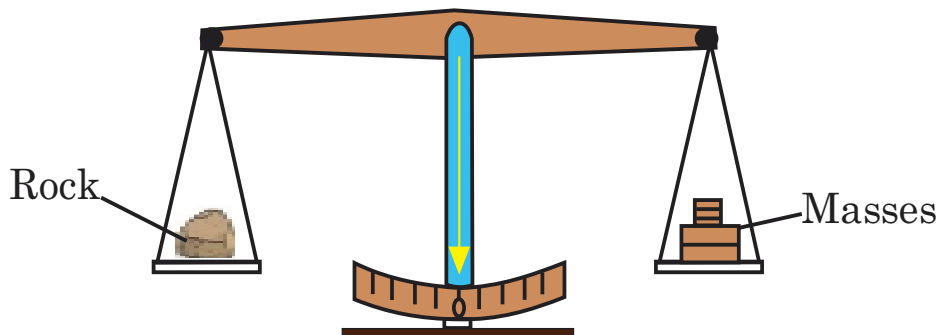
When this thread is wound closely around a pen, it goes round six times.



What length of thread makes one round?

- (a) 2.2cm (b) 2.6cm (c) 13.2cm (d) 15.6cm

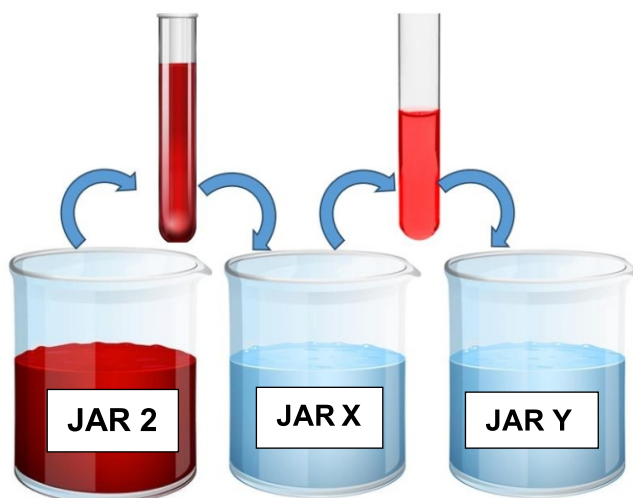
24) A geologist places a small rock on the left-hand pan of a balance. The two pans are at the same level as shown when masses with a total weight of 23 N are placed on the right-hand pan. Take the weight of 1.0kg to be 10N.



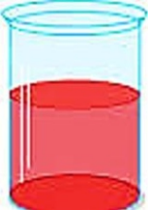
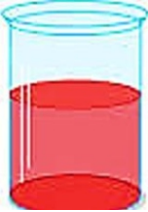

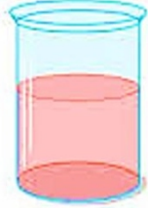
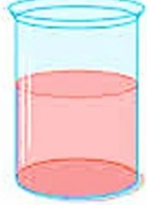
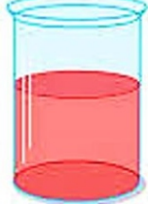
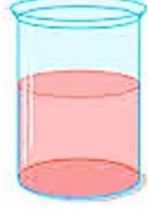
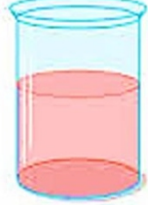
What is the mass of the small rock ?

- (a) 0.023 Kg (b) 2.3 Kg (c) 23 Kg (d) 230 kg

25) Vibhuti took 10 mL of the coloured water from Jar 2 and poured it into 100 mL of plain water in Jar X. He then took 10 mL of the mixture from jar X and poured it into 100 mL of plain water in Jar Y.



What would be the likely colour of the liquids in Jar X and Jar Y respectively?

Colour of liquid in Jar X	Colour of liquid in Jar Y
<p>a)</p> 	
<p>b)</p> 	
<p>c)</p> 	
<p>d)</p> 	

26) 'Ban on junk food in school' is the Government policy because -



- (P) Junk food is costly
- (Q) Junk food salesman are careless about cleanliness and hygiene
- (R) Junk food consists of lot of calories, salts and fats.
- (S) Junk food causes obesity.

**Options :-**

(a) R and S

(b) P and S

(c) Q and R

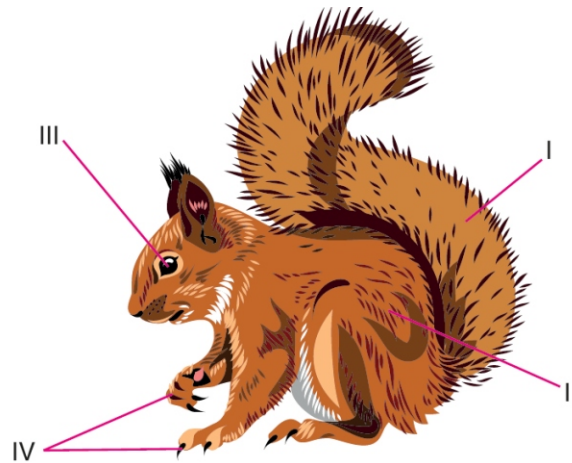
(d) P and Q

27) What will happen if all the planets in the solar system stop rotating around their axis?

- (a) All planets will collide
- (b) Planets will go away from sun
- (c) All the planets will be pulled towards sun.

(d) Sun facing side of planets will become very hot and their back side will become very cold.

28) The diagram shows a squirrel. Which feature shows that it is adapted to climbing vertical tree trunks?



- (a) I                      (b) II                      (c) III                      (d) IV

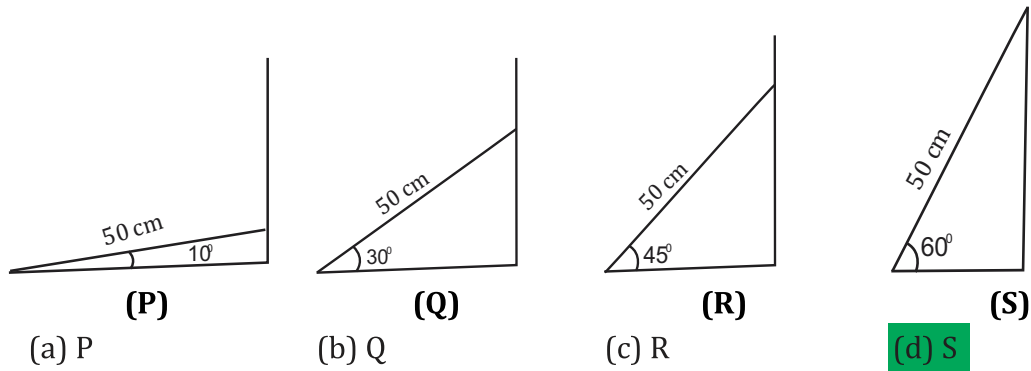
29) On what occasion we see 100% surface of moon ?

- (a) on full moon day                      (b) on half moon day  
(c) Never                      (d) once in year

30) The size of shadow of an object depends upon which factor ?

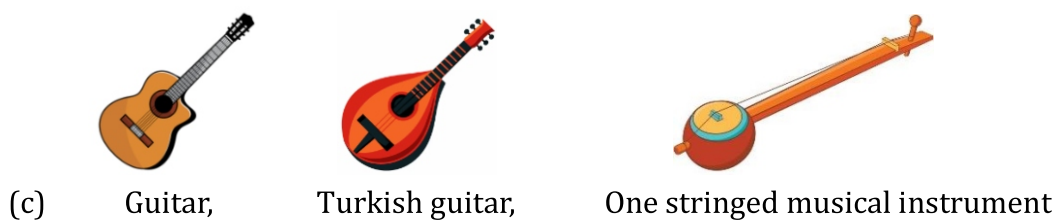
- (a) intensity of light source                      (b) smoothness of substance  
(c) size of screen                      (d) distance between the object and screen

31) As shown in figure, a plank measuring 50 cm in length is kept in four different ways. In which arrangement, an object sent from the top of plank will reach the ground earliest ?

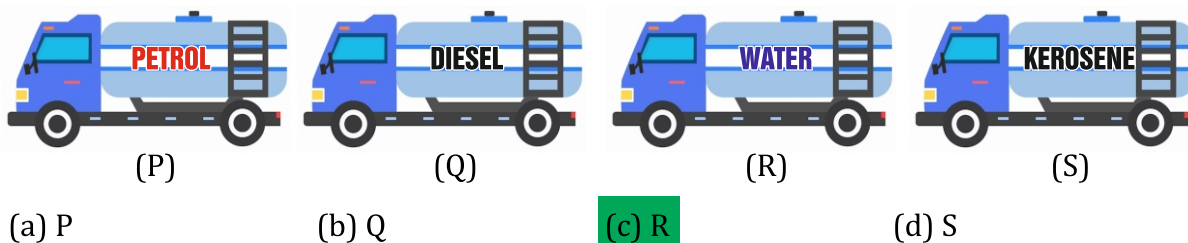


32) Find the dissimilar group





33) P, Q, R, S are four similar tankers having capacity of 5000 litres. They are filled with petrol, diesel, water and kerosene respectively. Wheels of which tanker will have to bear the maximum weight ?



34) In a sugarcane crusher, what is the type of motion of sugar cane and that part of crusher which crushes it respectively?



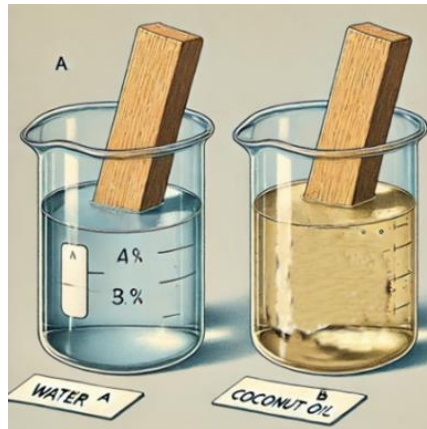
- (a) Linear motion, oscillatory motion  
 (b) Oscillatory motion, Linear motion  
 (c) Circular motion, Linear motion  
 (d) Linear motion, circular motion

- 35) P, Q, R, S are four cities situated on the banks of four different rivers. The table given below, indicates some factors, in the water of these four rivers. Find the river near which city is least polluted using the table

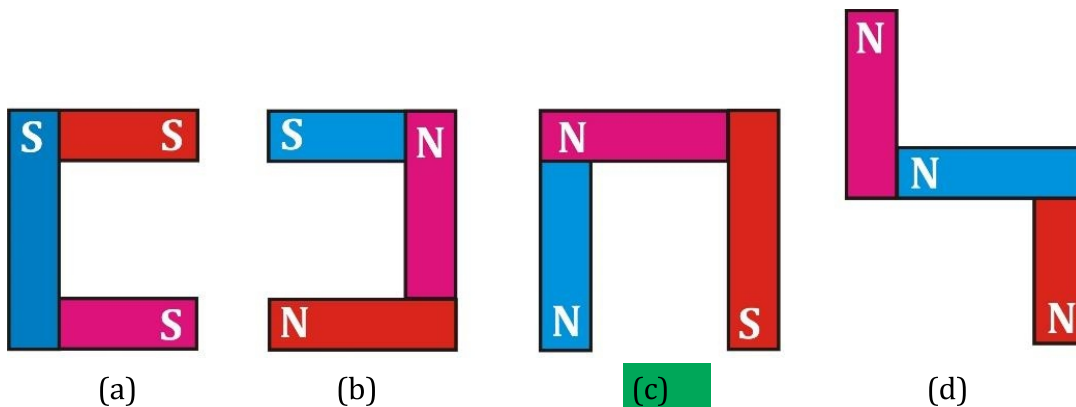
City	No. of microbes	Level of oxygen	Green vegetation	Animals
P	Less	More	Less	Less
Q	More	Less	More	More
R	More	Less	Less	Less
S	Less	More	More	More

- (a) P (b) Q (c) R (d) S

- 36) Beaker 'A' contains water and Beaker 'B' contains coconut oil. If one wooden block is dipped in them, one by one, what will happen?



- (a) The block will sink in both the liquids.  
 (b) Block will sink in liquid 'A' and float in liquid 'B'.  
 (c) The block will float in both the liquids.  
 (d) Block will float in liquid 'A' and it will sink in liquid 'B'.
- 37) Three magnets are arranged as shown in the figure below. Which arrangements will remain stable ?



- 38) From which of the following planets one can see the sun rising from the west ?  
 (a) Saturn (b) Venus (c) Mars (d) Mercury

39) In a village, a car is stuck in mud due to heavy rain. What is the easiest way to pull the car out?



- (a) Pull the car with a garnet
- (b) Take help of JCB
- (c) Call emergency help line
- (d) Place a wooden plank under the Front wheels of the car

40) What should NOT be done during the first aid treatment for the bone fracture?

- (a) Effort should be made to stop the bleeding
- (b) Set the broken bone at its own plane
- (c) Wooden plank should be tied below the broken bone
- (d) Patient should be shifted to hospital as early as possible

41) We hear the voice of a singer. Arrange the hearing process in correct order.

- (E) Sound waves spread through air
- (F) Sensation produced by vibrations, is passed to the brain through nerves in the ear, and we hear
- (G) Vibrations by vocal cords in voice box or larynx produce sound.
- (H) The diaphragm, of the ear vibrates due to sound.

Options :-

- (a) H, G, F, E
- (b) G, E, H, F
- (c) F, H, G, E
- (d) E, F, G, H

42) What will happen if plane mirrors are installed at both the sides of driver?

- (a) Vehicles / Cars coming from behind will be seen more clearly.
- (b) Accidents will take place because of mis - judgement of the vehicles coming from behind.
- (c) The effect of head lights of the vehicles behind reduced at night time
- (d) It will be easy to drive the car speedily.

43) In the given chart which food stuff will be at 'P' and 'Q'.

No.	Food stuff	Procedure	Observation	Inference
1	Potato	Put some iodine on it	Potato turned blue	P
2	Ground nuts	Crushed in news paper	Observed oil stains on the paper	Q

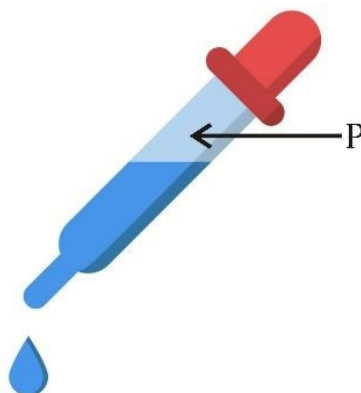
(a) P - Minerals, Q - Proteins

(b) P - Proteins, Q - Carbohydrates

(c) P - Carbohydrates, Q - Fats

(d) P - Fats, Q - Minerals

44) Why the ink in the dropper does not drop down unless, the dropper balloon is pressed?



(a) The pressure at point 'P' is lesser than atmospheric pressure

(b) The pressure at point 'P' is greater than atmospheric pressure

(c) Gravitational force at point 'P' is less

(d) Gravitational force at point 'P' is more

45) Following are four differently calibrated rules. Which one can measure the length accurately?

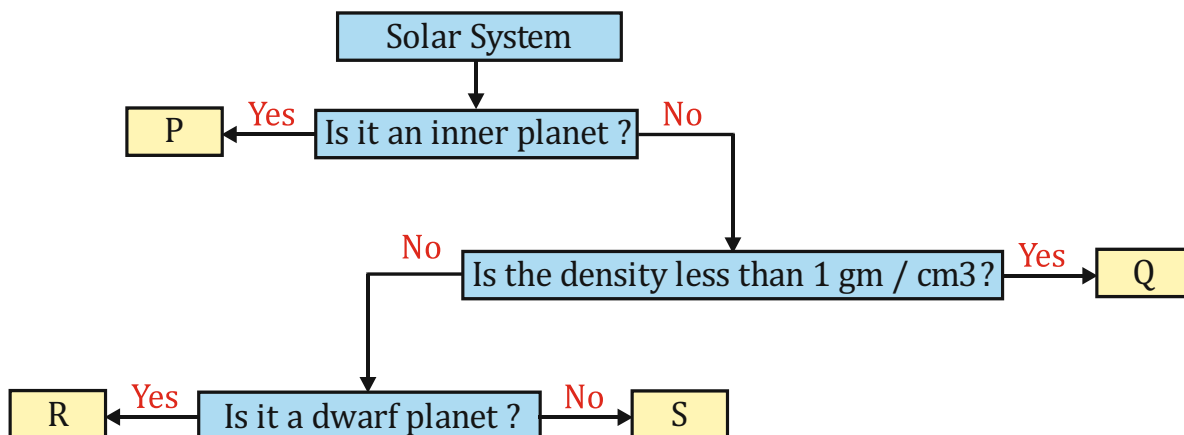
(a) 20 divisions of 1 cm

(b) 10 divisions of 1 cm

(c) 50 divisions of 1 cm

(d) 5 divisions of 1 cm

46) In the given flow chart, find the correct placement of each factor, by choosing the appropriate alternative.



(a) P - Venus, Q - Mars, R - Saturn, S - Pluto

(b) P - Venus, Q - Saturn, R - Pluto, S - Mars

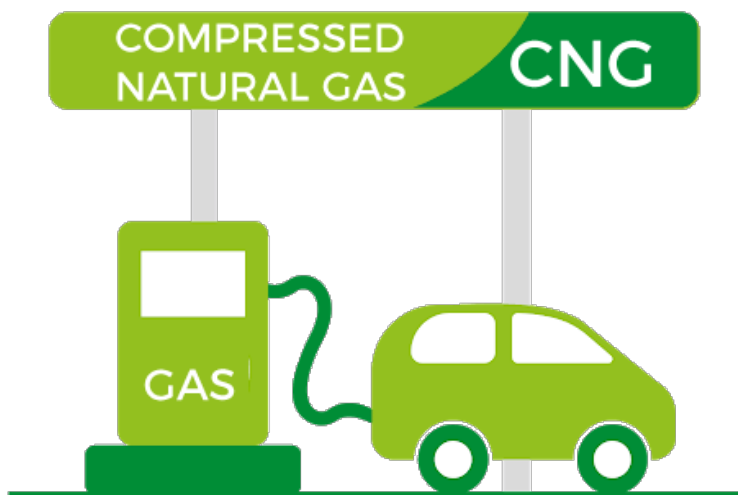
(c) P - Saturn, Q - Venus, R - Mars, S - Pluto

(d) P - Saturn, Q - Mars, R - Pluto, S - Venus

- 47) **Statement-I:** Chocolates, sweets and other sugar products cause tooth decay.  
**Statement-II:** The bacteria present in our mouth breakdown sugar into acid and cause tooth decay. Consider the given statements and choose the correct option.

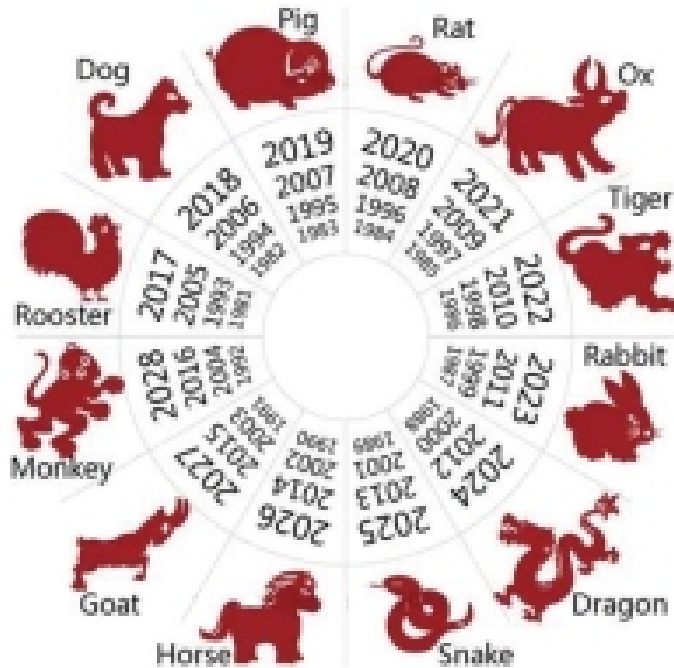


- (a) Only statement-I is correct  
(b) Only statement-II is correct  
(c) Both the statements are correct  
(d) Both the statements are incorrect
- 48) **Which of the following statements is(are) correct?**  
(1) Paper is combustible substance but wood is non-combustible substance  
(2) Iron nail is non-combustible substance but paper is combustible substance  
(3) Kerosene oil is combustible substance but stone is non-combustible substance  
(4) Glass is non-combustible substance but charcoal is combustible substance  
(a) Only (1)    (b) (1) and (4) only    (c) (2), (3) and (4)    (d) (1), (2) and (4)
- 49) **Which of the following is not true about CNG?**



- (a) It is stored under high pressure    (b) It is less polluting than petrol  
(c) It is a cleaner fuel    (d) It is not a fossil fuel

50) According to the Chinese Zodiac of 12 animals, what year will 2052 be?



(a) Horse

(b) Goat

(c) Monkey

(d) Rooster

\*\*\*\*\*

### Feedback Section

51) Please select the most appropriate option according to you and provide us your valuable feedback about the test paper.

(a) Interesting but Difficult

(b) Interesting and Easy

(c) Easy but Boring

(d) Difficult and Boring

## *Space for Rough Work*

---