



Delhi Public School, Gandhinagar

Olympiad Mock Test Paper

Class IV

National Science Olympiad

Date:

Time: 1 hour

M. Marks: 20

Name: _____ Sec: _____ Roll No: _____

General Instructions:

- i. All the questions are compulsory.
- ii. Answer the questions as per the instructions

QI

Choose the correct option.

X1=

1. ACEGI, BDFHJ, KMOQS, __, UWYAC, VXZBD

- | | |
|----------|----------|
| a. TUVWX | b. LPRTV |
| c. LNPRT | d. PQRTV |

2. 6 10 14 18 22 26 30

- | | |
|----------|----------|
| a. 36 40 | b. 33 37 |
| c. 38 42 | d. 34 38 |

3. Here are some words translated from an artificial language.

malgauper means peach cobbler

malgaport means peach juice

moggagrop means apple jelly

Which word could mean "apple juice"?

- | | |
|--------------|--------------|
| a. moggaport | b. malgauper |
| c. gropport | d. moggagrop |

4. Cage is about

- | | |
|---------|--------------|
| a. Zoo | b. Paper |
| c. Area | d. Enclosure |

5.



(A)

(B)

(C)

(D)

6.

Kavita wanted to conduct an experiment to find out if the change in the amount of digestive juice would affect the digestion of cooked rice. She prepared the following set-ups for this experiment.

Dish	Amount of digestive juice (ml)	Amount of cooked rice (g)	Temperature of cooked rice (°C)	Duration of experiment (min)
A	5	20	28	20
B	5	40	28	20
C	10	20	28	20
D	10	40	25	30

Which of these set-ups should kavita use to conduct a fair test for her experiment?

a. A and B only

b. A and C only

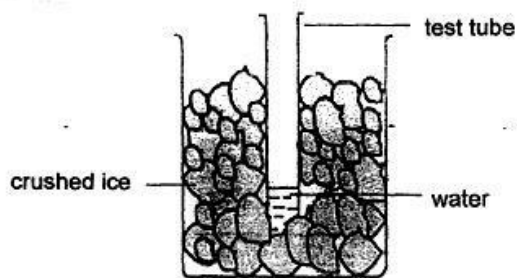
c. B and C only

d. C and D only

7.

Minu put a test tube of water with a temperature of 60°C in a beaker of crushed ice in the living room as shown below.

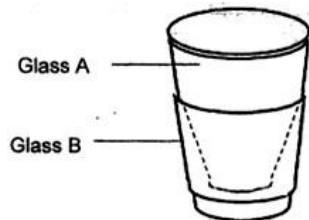
Which one of the following did Minal identify correctly?



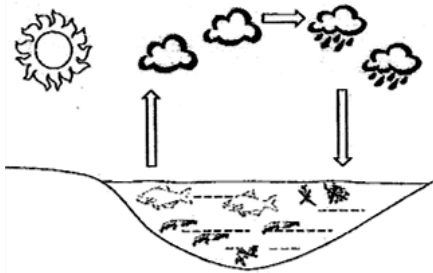
	Water in test tube	Crushed ice
(A)	Lost heat	Lost heat

(B)	Lost heat	Gained heat
(C)	Gained heat	Lost heat
(D)	Gained heat	Gained heat

8. The diagram below shows two glasses, A and B which are stuck together. Bunny tries to separate the two glasses but finds it difficult to do so. What should Bunny do in order to separate the two glasses?

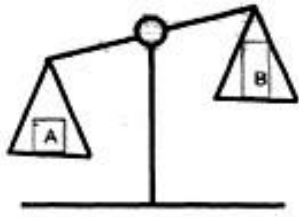


- Pour iced water into Glass A and put Glass B in iced water.
 - Pour iced water into Glass A and put Glass B in warm water.
 - Pour warm water into Glass A and put Glass B in iced water.
 -)Pour warm water into Glass A and put Glass B in warm water.
9. Which of the following statements about plants are correct?
- Only flowering plants produce fruit
 - Only non-flowering plants have leaves
 - Flowering plants produce flowers when the conditions are right
 - The leaves of all plants have different sizes but similar shape
- I and II
 - I and III
 - I and IV
 - II, III and IV
10. The diagram shows the water cycle.



- Why is the water cycle important to the aquatic organism in the pond?
- It provides a continuous supply of water for the organism to live in
 - It provides a continuous supply of water to keep the body of all the organisms wet
 - It provides a continuous supply of water to keep temperature of the pond constant
 - It provides a continuous supply of water for the organisms to keep their body temperature down

11. Two cubes A and B were placed on a balance as shown below.



Next the cubes were put into two beakers containing the same amount of water as shown



Based on the above observation which boy made the correct observation?

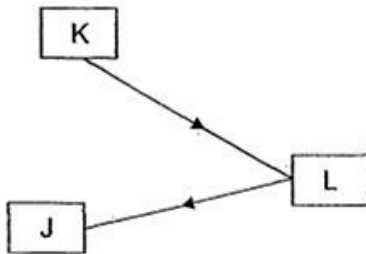
Aman: Cube A has greater mass than cube B

Bobby: Cube B occupied more space than cube A

Jiya: The greater the mass of the cube, the greater the amount of space it occupies

(A) Aman and Bobby	(B) Bobby and Jiya
(C) Aman and Jiya	(D) Aman, Bobby and Jiya

12. The diagram below shows the path of light that enabled Riya to read her book in the well-lit library.



What could J, K and L be?

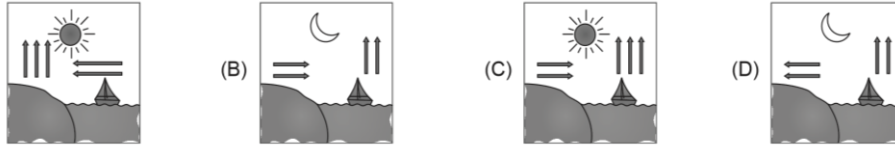
	J	K	L
(A)	Book	Rita	Ceiling light
(B)	Rita	Ceiling light	Book
(C)	Book	Ceiling light	Rita

(D)	Ceiling light	Book	Rita

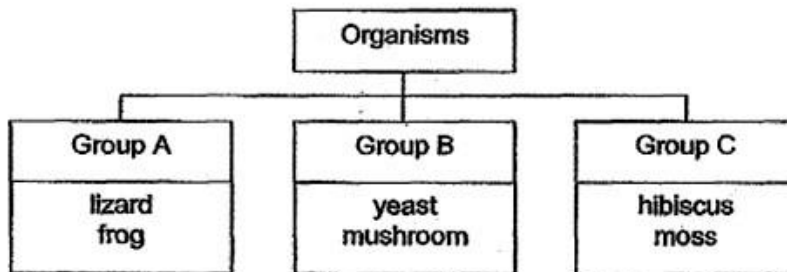
13. Which of the following activities are ways to help in the conservation of water?
- I. Use a water efficient washing machine to do laundry
 - II. Watering plants at noon instead of early morning hours
 - III. Use a toilet system that has half-flush and full flush options
- a. Only I
 - b. Both I and III
 - c. Both II and III
 - d. All I, II and III
14. Which of the following does not show the correct ways to conserve energy?
- a. Taking shorter showers
 - b. Walking or cycling instead of driving
 - c. Using an air conditioner instead of fan
 - d. Turning off electrical appliances when they are not in use
15. The octopus is an animal that can squeeze through holes smaller than itself. This octopus _____. (A) (C) Has no organs in its body may because the
- a. Has moist skin system
 - b. Has no skeletal
 - c. Has no organs in its body
 - d. Has no respiratory System
16. Which of the following does not mainly affect the tides?
- a. The gravitational attraction by the Moon
 - b. The gravitational attraction by the Sun
 - c. The Earth's rotation
 - d. The Moon's rotation
17. Which of the following activities will produce heat?
- I. Bending a paperclip back and forth repeatedly
 - II. Rubbing hands together
 - III. Hitting a piece of metal with a hammer.
- a. I and II Only
 - b. I and III only
 - c. II and III only
 - d. I, II and III
18. Refer to the given conversation.
- Meetu : Mummy, please stitch a cotton frock for my doll
 Mother : Sure Meetu ! She must be feeling _____ wearing woollens in _____.
- Select the correct option to fill the blanks in the above conversation.
- a. Hot, summer
 - b. Cold, summer
 - e. Wet, winter
 - e. Cold, winter

19. The food prepared by the leaves is used by the plants for their daily activities. The excess food gets stored as starch in _____
- Roots
 - Stems
 - Fruits
 - All of these

20. Which of these illustrates sea breeze?



21. The classification chart shown below shows how some organisms are grouped.



Choose suitable heading for group A and group B.

- | | |
|---|---|
| <p>Group A</p> <p>a.Plant</p> <p>b.Fungi</p> <p>c.Bacteria</p> <p>d.None of the above</p> | <p>Group B</p> <p>Fungi</p> <p>Plant</p> <p>Plant</p> |
|---|---|

22. Which of the following statements about plants are correct?

- I. Only flowering plants produce fruit
- II. Only non-flowering plants have leaves
- III. Flowering plants produce flowers when the conditions are right
- IV. The leaves of all plants have different sizes but similar shape

- | | |
|-------------|-------------------|
| a. I and II | b. I and III |
| c. I and IV | d. II, III and IV |

23. Which of the following activities are ways to help in the conservation of water?

I. Use a water efficient washing machine to do laundry

II. Watering plants at noon instead of early morning hours

III. Use a toilet system that has half-flush and full flush options

a. Only I

b. Both I and III

c. Both II and III

d. All I, II and III

24. Observe the plant shown here and answer the following question.



What is the purpose of drip tips on leaves shown in the given figure?

I. It protects plant from bacteria and fungi

II. It allow water to run off

III. It allows more sunlight to reach the plant

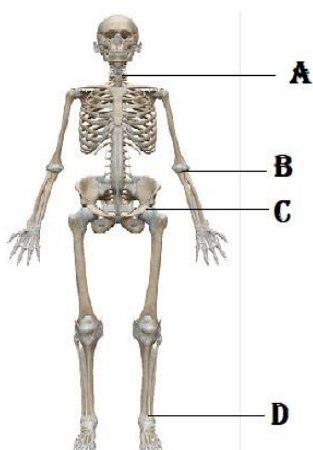
a. Only I

b. Only II

c. Both I and II

d. Both I and III

25. The given figure is of human skeletal system. At which joint (A, B, C and D) can the movement be only like the opening and closing of a door?



a. A

b. B

- c. C
- d. D

26. Which of the following does not show the correct ways to conserve energy?
- a. Taking shorter showers
 - b. Walking or cycling instead of driving
 - c. Using an air conditioner instead of fan
 - d. Turning off electrical appliances when they are not in use
27. A jackhammer is useful for breaking up concrete. It makes use of _____ which is converted to _____.

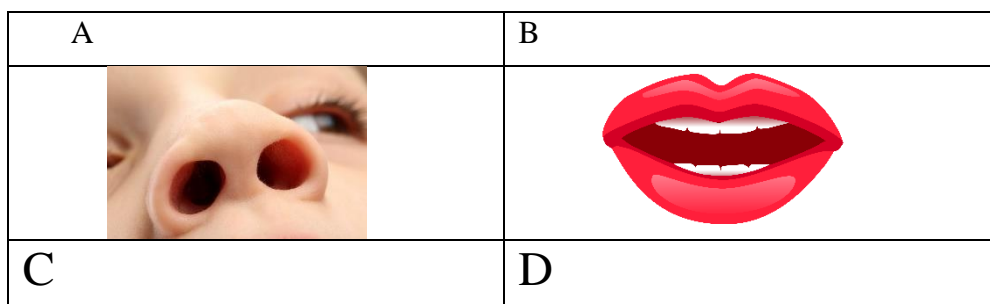


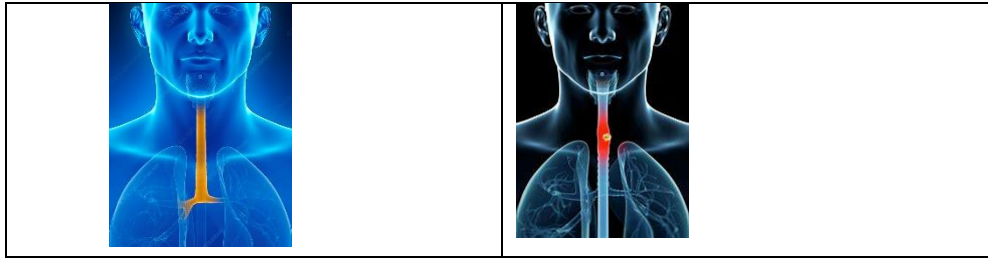
- a. Sound energy, kinetic energy
 - b. Electrical energy, kinetic energy
 - c. Potential energy, kinetic energy
 - d. Kinetic energy, electrical energy
28. Using solar energy, we can cook food with the help of _____.
- a. Solar water heater
 - b. Solar battery
 - c. Solar cooker
 - d. None of these
29. The octopus is an animal that can squeeze through holes smaller than itself. This may be because the octopus _____.
- a. Has moist skin
 - b. Has no skeletal system
 - c. Has no organs in its body
 - d. Has no respiratory system
30. Which of the following does not mainly affect the tides?
- a. The gravitational attraction by the Moon
 - b. The gravitational attraction by the Sun
 - c. The Earth's rotation

d. The Moon's rotation

31. Which of the following statements is true about the leaves of the rain tree in the pictures shown below?
- a. The leaflets open up to allow photosynthesis
 - b. The leaflets close up due to lack of water
 - c. The leaflets have been dried up by the sun during the day
 - d. The leaflets close up because they respond to touch
32. The seed stores its food in its _____.
- a. Seed leaves
 - b. Roots
 - c. Seed coat
 - d. Shoots
33. Which of the following absorbs the most light?
- a. Green crayon
 - b. White crayon
 - c. Red crayon
 - d. Black crayon
34. Which of the following activities will produce heat?
- I. Bending a paperclip back and forth repeatedly
 - II. Rubbing hands together
 - III. Hitting a piece of metal with a hammer
- a. I and II Only
 - b. I and III only
 - c. II and III only
 - d. I, II and III
35. A piece of metal is made up of Metal X on top and metal Y below. When the piece of metal is heated, it curls downwards. Why does this happen?
- a. Metal X expands and metal Y contracts
 - b. Metal X contracts and metal Y expands
 - c. Metal X expands more than metal Y
 - d. Metal Y expands more than metal X

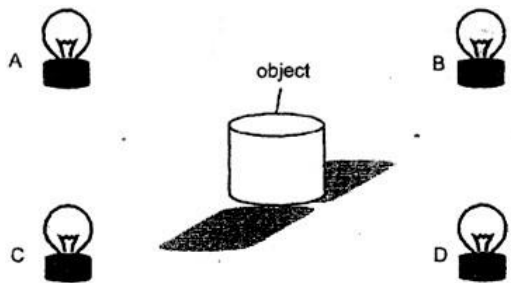
36. Study the diagram below. Which part contains fine hairs to trap dust particles?





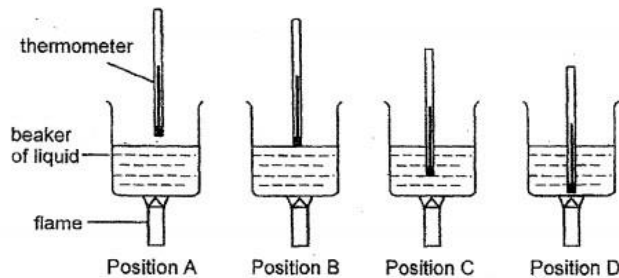
- a. A
- b. B
- c. C
- d. D

37. Study the diagram shown below. Here an object is placed at the center of four light bulbs, A, B, C and D. Which light bulb(s) is/are switched on to form the shadows shown in the diagram.



- a. A and B
- b. B and C
- c. B and D
- d. C and D

38. Four laboratory thermometers are held at positions A, B, C and D to measure the temperature change of a liquid as shown below.



At which position should the thermometer be held so as to give the best measurement of the temperature of the liquid?

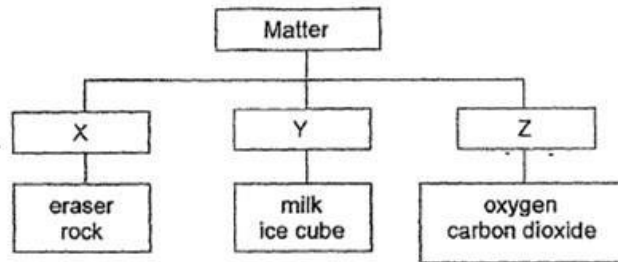
- a.A
- b.B
- c. C
- d. D

39. Oil spills from ships can cause harm to the environment. Which of the following are the effects of oil spills?

- a. Some aquatic animals will die due to the lack of oxygen
- b. The people in the town will experience breathing difficulties

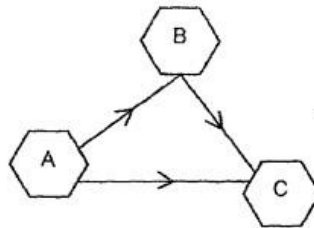
- c. Birds will have difficulties flying if they are caught on the layer of oil spills
- d. Some sea mammals can no longer swim or float as their fur clump together
 - a. a and b only
 - b. b and c only
 - c. b and d only
 - d. a, c and d only

40. The classification chart shown below shows how different states of matter are grouped.



Which of the following is wrongly grouped?

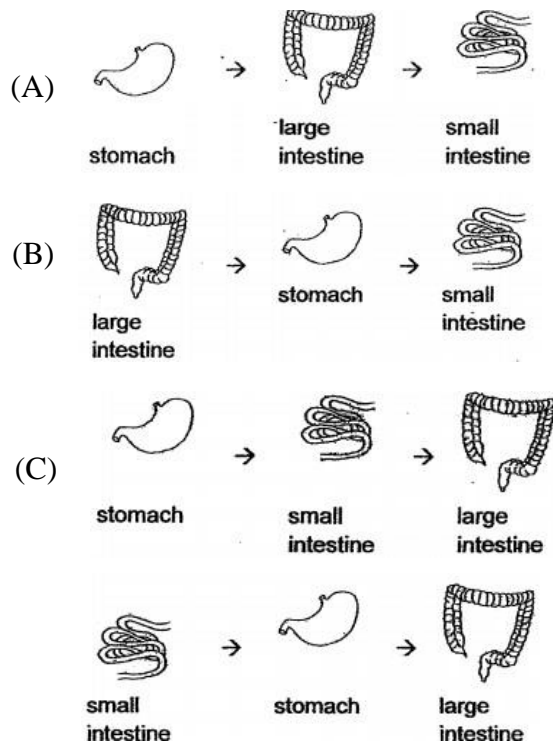
- a. Rock
 - b. Eraser
 - c. Ice-cube
 - d. Carbon dioxide
41. In the diagram below the path of light is indicated by the arrows.



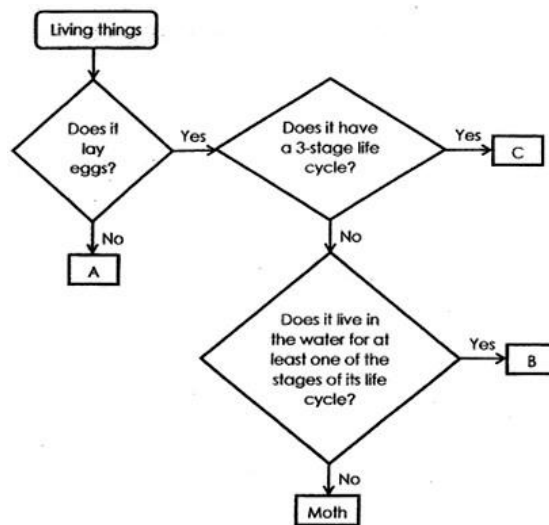
Choose the option that best fits A, B, and C.

	A	B	C
a.	Eyes	Object	Light Source
b.	Eyes	Light Source	Object
c.	Light Source	Eyes	Object
d.	Light Source	Object	Eyes

42. Aliya ate a piece of cake. Which one of the following shows the correct path taken by the cake as it moves down his digestive system?



43. Study the flow chart shown below. Here A, B and C are living things.



Based on the information given in the flowchart, which one of the following correctly represents animals A, B and C?

	A	B	C
a.	Frog	Cockroach	Mosquito

b.	Human	Mosquito	Cockroach
c.	Cockroach	Frog	Human
d.	Human	Frog	Mosquito

44. Select the food chain that can exist in nature.
- Grass -----à Wheat -----à Grasshopper -----à Frog -----à Snake
 - Grass -----à Rabbit -----à Fox -----à Lion
 - Wheat -----à Grasshopper -----à Snake -----à Frog
 - Mango -----à Caterpillar -----à Bird -----à Monkey -----à Salmon

45. Refer to what Meera is saying and select the correct option regarding it.



- Organism R can be a hibernating animal like penguin
 - Organism R can be a aestivating animal like arctic fox
 - Organism R can be a aestivating animal like lizard
 - Organism R can be a aestivating animal like polar bear
46. A teacher was teaching in a class that you have four sets of teeth: 8 incisors, 4 canines, 8 Premolars and 12 molars. She is talking about.
- Temporary teeth
 - Permanent teeth
 - Teeth of a herbivore
 - Teeth of a carnivore

47. Nisha has severe cough and cold. Now, she cannot breathe properly because of congestion in the Lungs. Doctor says, may be that her _____ system is affected.

- a. Digestive
- b. Respiratory
- c. Nervous
- d. Excretory

48. Select the correct option

- a. Solute + Solution = Solvent
- b. Solvent + Solution = Solute
- c. Solvent – Solute = Solution
- d. Solvent + Solute = Solution

49. Ashok is pushing a loaded barrel through a slope onto a wooden plank a surface as shown. What Is this simple machine known as?



- a. A pulley
- b. An inclined plane
- c. Wheel and barrow
- d. A screw

50. Which of the following is INCORRECTLY written?

- a. The chocolate weighs 20 grams.
- b. The capacity of water tank is 1 kilogram.
- c. The capacity of jug is 2 litres.
- d. The bag of flour weighs 10 kilograms.