

Bloom School Olympiads

Bloom Science Olympiad (BSO)

Class 5th

Question Paper 2022

Student Name _____

Mobile No. _____

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Total Questions : 50

Time : 60 min.

Instructions

1. Additional 10 min. will be given to students to fill up the student's information before the start of the exam.
2. There are two sections, Section A & Section B. **Section A** has 40 questions of 1 mark each and **Section B** has 10 questions of 2 mark each.
3. All questions are compulsory. Use of calculator is not allowed.
4. Write and circle your Roll Number and Subject clearly on the Answer sheet and do not forget to sign.
5. There is only one correct answer hence mark one choice only.
6. Darken your choice with HB Pencil or Blue/Black Ball Point Pen only.

For example

Indira Gandhi International Airport, is situated in which city?

- (a) New Delhi (b) Mumbai
(c) Chennai (d) Hyderabad

20: ☒ (a) ☐ (b) ☐ (c) ☐ (d)

As the correct answer is (a), the student should darken the circle corresponding to option (a)

7. Rough work should be done in the blank space provided in the booklet
8. Return the answer sheet to the exam in-charge teacher at the end of the exam.

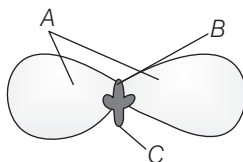
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Bloom Science Olympiad Class 5

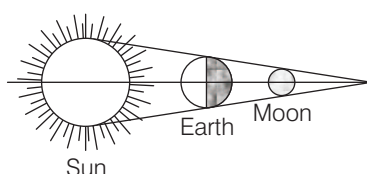
Section A (1 Mark)

1. Water vapour is a form of ice.
(a) solid (b) gaseous (c) liquid (d) All of these
2. In the given diagram, label A, B and C, respectively.



- | A | B | C |
|--------------------------------------|---|---|
| (a) Tiny shoot, Tiny root, Cotyledon | | |
| (b) Cotyledon, Tiny shoot, Tiny root | | |
| (c) Tiny root, Cotyledon, Tiny shoot | | |
| (d) Tiny root, Tiny shoot, Cotyledon | | |
3. We can purify water for drinking, using some steps listed below, not necessarily in proper order.
- | | |
|------------------------------|---------------------------------------|
| I. Filter the water. | II. Boil the water for 15-20 minutes. |
| III. Store the boiled water. | IV. Cool the water. |
- Which of the following option represents the correct sequence of steps?
- | | |
|-----------------------|-----------------------|
| (a) II → I → III → IV | (b) I → II → IV → III |
| (c) II → I → IV → III | (d) I → II → III → IV |
4. Which of the following is a characteristic of simple machines?
- (a) They are not very large
(b) They have few or no moving parts
(c) They take a long time to perform task
(d) They run on electricity
5. Sun emits different rays, which reach on Earth. Which two types of Sun rays are responsible for bringing heat and light energy to Earth?
- | | |
|------------------------------|---------------------------------|
| (a) Ultrared and infraviolet | (b) Ultrared and infrared |
| (c) Ultraviolet and infrared | (d) Ultraviolet and infraviolet |
6. Select the correct statement.
- (a) Animals that are awake at night can see things only in black and white colours.
(b) Birds can easily move their eyes.
(c) A silkworm can find the female worm by her sound.
(d) Animals that are awake in daytime can not see more colours.

7. There is no bone present in the tip of nose due to which we can bend it. But it is quite strong. How?
- Due to the presence of strong elastic tissue called cartilage
 - Due to the presence of ligament
 - Due to the presence of tendons in it
 - The muscles become strong and stiff
8. Consider the diagram shown below which depicts an eclipse.



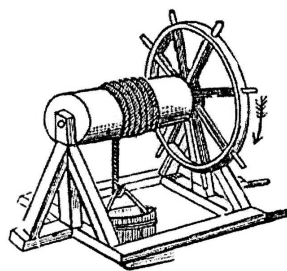
Which type of eclipse is shown in the above figure?

- Solar eclipse
 - Eclipse
 - Lunar eclipse
 - Either (a) or (c)
9. The cycle given below depicts the change of state of water vapours present in air during transfer of heat.
-
- During which two processes marked as A, B, C and D heat is transferred into the surrounding ?
- A and B
 - B and D
 - A and C
 - C and D
10. During process, water vapours convert into liquid state.
- evaporation
 - sublimation
 - condensation
 - melting
11. What are the conditions required for proper germination of seeds?
- | | |
|----------------|--------------|
| I. Air | II. Warmth |
| III. Glycerine | IV. Iodine |
| V. Water | VI. Cow dung |

Codes

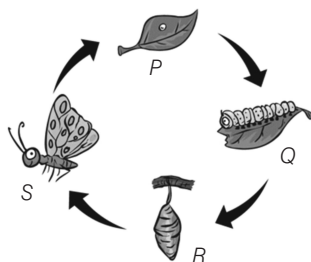
- I II V
 - III IV VI
 - II III IV
 - I III VI
12. Which of the following processes is not used to clean water?
- Filtration
 - Sedimentation
 - Condensation
 - Chlorination

13. Consider a figure below that shows a well.

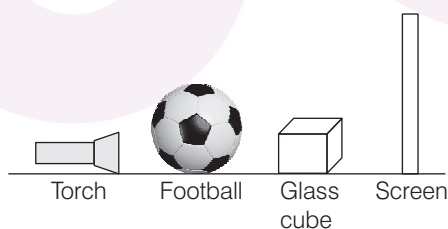


Which type of simple machine is used in the above figure?

- (a) Pulley (b) Wheel and axle (c) Lever (d) Both (a) and (b)
14. It is a chemical widely used in refrigerators and air conditioners. It warms up the atmosphere, causing greenhouse effect. Name it
- (a) chlorofluorocarbon (b) carbon dioxide (c) sodium chloride (d) nitrous oxide
15. The diagram given below depicts life cycle of a butterfly. Identify different stages of its life correctly and choose the correct option;



- | | P | Q | R | S |
|-----|----------|----------|----------|----------|
| (a) | Egg | Larva | Pupa | Adult |
| (b) | Adult | Egg | Larva | Pupa |
| (c) | Pupa | Adult | Egg | Larva |
| (d) | Larva | Pupa | Adult | Egg |
16. What is it which forms the main axis of the skeleton and protects the delicate spinal cord?
- (a) Bone marrow (b) Vertebral column (c) Ligament (d) Ribcage
17. Raghu is confused among the four celestial bodies which are listed below among one of them is a star. Manu tells him the correct answer. What would be the answer given by Manu?
- (a) Alpha century (b) Venus (c) Neptune (d) Jupiter
18. Daniel placed a football and a glass cube in front of a torch and the light focused on the two objects as shown below :



Which one of the following shadows would be formed on the screen?



19. Rohit carries a matter in a closed container. Each time, he changes the container, the shape of the matter also changes. Moreover, the matter occupies the complete space provided to it irrespective of its size. The matter most likely to be is

- (a) chalk powder (b) hydrogen gas
(c) cold drink (d) Either (b) or (c)

20. Seeds are found in the which are developed from the

- (a) fruits, flowers (b) flowers, fruits
(c) leaves, fruits (d) fruits, leaves

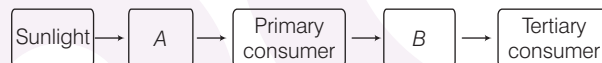
21. Choose the odd one out with regard to the floating properties in water.

- (a) Oil (b) Ice
(c) Mud (d) Raisin

22. Burning of paper accompanies which of the following conversions of energy?

- (a) Chemical energy → Light and heat energy
(b) Mechanical energy → Heat energy
(c) Heat energy → Light energy
(d) Light energy → Heat energy

23. Complete the following general food chain by filling missing elements;



A

- (a) Secondary consumers
(b) Plants
(c) Producers
(d) Decomposers

B

- Producers
Herbivores
Secondary consumers
Secondary consumers

24. Which of the following has the most extreme sense of hearing?



25. While playing volley ball, the ball hit the chest of Mohit. There, only sensitive organs like heart and lungs are present. Which structure in our body protects our heart and lungs from such shocks.



- (a) Ribcage (b) Muscles (c) Skin (d) Limbs

26. was the first Indian satellite launched in

- (a) Sputnik I, 1957 (b) Aryabhata, 1959
(c) Aryabhata, 1975 (d) Sputnik I, 1973

27. We know that sound needs a medium to travel. In which of the following cases sound can not be heard?

- (a) An aeroplane flying very high (b) Bell ringing in vacuum jar
(c) Baby crying in a locked room (d) An orchestra playing in a sound proof room

28. What type of change takes place when oxygen gas is filled and sealed in cylinders?

- (a) Physical change (b) Chemical change
(c) No change (d) Either (a) or (b)

29. Crops are needed to be protected against;

- I. Grazing animals like cows and goats
II. Air, water and warmth
III. Pests like locust, grasshopper
IV. Diseases

Codes

- (a) Only II (b) I, II and IV (c) I, III and IV (d) II and IV

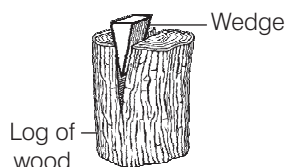
30. Consider the following statements.

- I. Stagnant water causes diseases.
II. Female *Anopheles* mosquitoes which cause malaria breeds in stagnant water.
III. Typhoid is caused by the intake of dirty water.

Choose the incorrect statement.

- (a) Only I (b) Only II (c) Only III (d) All are correct

31. Observe the diagram shown below carefully which depicts a wedge being used to cut a log of wood.



Which of the following options correctly show the direction of force exerted on wedge and force acting on the wood.

	Force exerted on wedge	Force exerted on the wood
(a)	↑	← →
(b)	↓	←←
(c)	↑	→←
(d)	↓	← →

32. In a jungle, there are rabbits, wolves and lions along with plants. What will happen to wolves, if all rabbits are killed?

- (a) They will change their nature and will start eating grass
- (b) They will die due to lack of food
- (c) They will start eating lions to survive
- (d) They will eat one another to survive

33. Which of the following features helps the birds in flying?

- I. Hollow bones which reduce body weight.
- II. Feathers covering their body.
- III. A streamlined body.
- IV. Wings with powerful muscles.

Codes

- (a) Only I
- (b) I, II and III
- (c) I, II and IV
- (d) I, II, III and IV

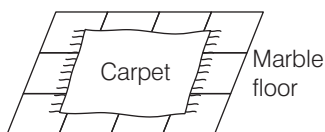
34. Upper leg meets lower leg at knees. Which three bones meet at the knee?

- (a) Humerus, radius and ulna
- (b) Femur, radius and ulna
- (c) Femur, tibia and fibula
- (d) Humerus, tibia and fibula

35. Sarita was astonished to observe while watching sky that the constellations seem to move across the sky. What could be the reason of the motion of these constellations?

- (a) Some constellations are moving constellations
- (b) As the Earth rotates, constellations seem to move
- (c) The outer portions of the galaxy rotates very slowly around the Earth
- (d) All constellations move randomly through the sky

36. Raghuram observes that when he stands on a carpet which was placed on a marble floor, he feels warmer as compared to marble floor.



Which of the following options is the most appropriate explanation of his observation?

- (a) The carpet gains heat from the surroundings
- (b) Heat travels from the marble floor to the carpet
- (c) The marble floor conducts heat faster than the carpet
- (d) The marble floor has a lower temperature than the carpet

37. Two or more substances are combined in an indefinite amount to form

- (a) compound
- (b) molecule
- (c) element
- (d) mixture

38. Complete the following flow chart.



- (a) A-Seedling, B-Flower
- (b) A-Roots, B-Leaves
- (c) A-Seedling, B-Roots
- (d) A-Roots, B-Flower

39. What inference can you draw from the figures shown below?



- (a) The water bottle contracts when it freezes because of which water is unable to fit into it.
- (b) The air in the freezer condenses to form a column of ice.
- (c) Water expands after freezing.
- (d) The bottle along with the cap contracts to allow the water to pour out and form a column of ice.

40. While carrying an electric iron, Selvi accidentally drops it on the floor because of which a small crack was formed on the floor. Which force was acting on the iron during this incident?

- (a) Muscular force
- (b) Electric force
- (c) Reaction force
- (d) Friction force

Section B (2 Marks)

41. Consider the following statements.

- I. Flora are the plants of a particular region or habitat.
- II. Flora are the animals of a particular region or habitat.
- III. Fauna are the plants of a particular region or habitat.
- IV. Fauna are the animals of a particular region or habitat.

Choose the correct option.

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

42. Read the following statements carefully and choose the correct option.

Statement I Birds neither detects nor alarms about the danger around.

Statement II Monkeys give distinct alarm calls for dangers nearby.

Statement III Dolphins make electric signals to communicate with each other.

(a) Statements I and II are false, while statement III is true.

(b) Statement I is false, while statements II and III are true.

(c) All statements are true.

(d) All statements are false.

Direction (Q. Nos. 43-44) Read the following paragraph and answer the following questions based on it. 'Not all messages go to the brain. Certain messages or signals need immediate or automatic action'.

43. What are such actions known as and by which part of the brain, are they controlled?

(a) Reflex action and spinal cord

(b) Involuntary action and nerves

(c) Reflex action and nerves

(d) Voluntary action and spinal cord

44. Which one of the following is the correct example of such action?

(a) Moving away of hand when it touches hot object

(b) Solving a mathematical problem

(c) Riding a bicycle

(d) Beating of heart

45. Match the following columns.

Column I		Column II	
A.	Pluto	(i)	Brightest planet
B.	Mars	(ii)	Largest planet
C.	Jupiter	(iii)	Red planet
D.	Venus	(iv)	Blue planet
E.	Earth	(v)	Dwarf planet

Codes

A B C D E
(a) (v) (iii) (ii) (i) (iv)
(c) (v) (iii) (i) (ii) (iv)

A B C D E
(b) (iii) (v) (ii) (i) (iv)
(d) (iv) (iii) (ii) (i) (v)

46. Choose the incorrect statement in context with light.

I. Rainbow is formed due to the phenomena of reflection of light.

II. Violet is top most colour in a rainbow.

III. Red is the top most colour in a rainbow.

IV. There are seven colours in a rainbow.

Codes

(a) I and II

(b) II and III

(c) III and IV

(d) I and IV

47. Match the following columns.

Column I	Column II
A. Freezing	(i) Gas \rightarrow liquid
B. Boiling	(ii) Solid \rightarrow gas
C. Sublimation	(iii) Gas \rightarrow liquid \rightarrow solid
D. Evaporation	(iv) Liquid \rightarrow gas
E. Condensation	(v) Solid \rightarrow liquid \rightarrow gas

Codes

A	B	C	D	E	A	B	C	D	E
(a) (iv)	(iii)	(i)	(v)	(ii)	(b) (iii)	(v)	(i)	(iv)	(ii)
(c) (iii)	(iv)	(ii)	(v)	(i)	(d) (ii)	(iii)	(iv)	(i)	(v)

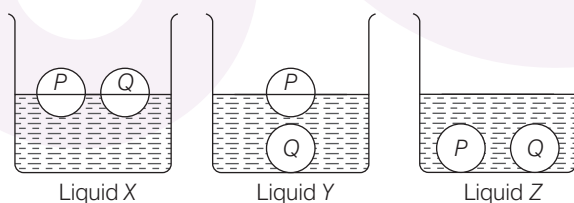
48. Study the following statements and choose the correct option, where 'F' represents False and 'T' represents True statement.

- I. Plants do not play any role to decrease soil erosion.
- II. All the seeds do not grow into a new plant.
- III. Air is not an essential component for seeds to grow.
- IV. Plants are the only producer of food on Earth.

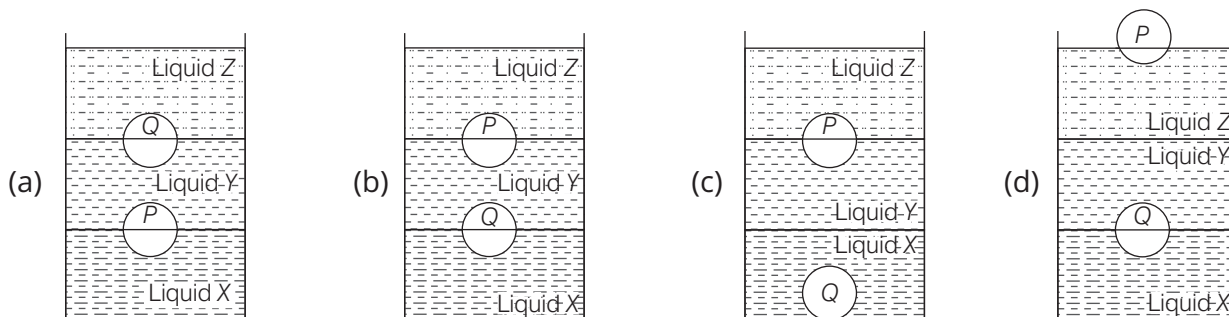
Codes

I	II	III	IV	I	II	III	IV
(a) F	T	F	T	(b) T	T	F	F
(c) F	F	T	T	(d) T	F	T	F

49. Saloni placed two equal sized balls made up of different materials P and Q in three different liquids X, Y and Z.

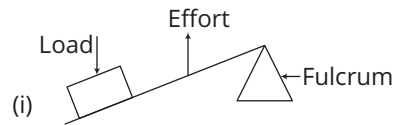


The three liquids do not mix together. When the three liquids were poured into a container with the two balls in it, which of the diagrams below shows the correct positions of the two balls?

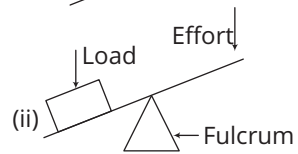


50. Match the following.

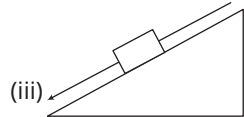
A. First class lever



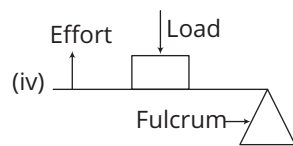
B. Second class lever



C. Third class lever



D. Inclined plane



	A	B	C	D
(a)	(i)	(iv)	(ii)	(iii)
(b)	(ii)	(iv)	(i)	(iii)
(c)	(iv)	(ii)	(i)	(iii)
(d)	(iv)	(i)	(ii)	(iii)

ANSWER KEY

Science Class 5th

1.	(b)	18.	(a)	35.	(b)
2.	(b)	19.	(b)	36.	(c)
3.	(c)	20.	(a)	37.	(d)
4.	(b)	21.	(c)	38.	(a)
5.	(c)	22.	(a)	39.	(c)
6.	(a)	23.	(c)	40.	(c)
7.	(a)	24.	(a)	41.	(c)
8.	(c)	25.	(a)	42.	(b)
9.	(a)	26.	(c)	43.	(a)
10.	(c)	27.	(b)	44.	(a)
11.	(a)	28.	(a)	45.	(a)
12.	(c)	29.	(c)	46.	(a)
13.	(b)	30.	(d)	47.	(c)
14.	(a)	31.	(d)	48.	(a)
15.	(a)	32.	(b)	49.	(b)
16.	(b)	33.	(d)	50.	(b)
17.	(a)	34.	(c)		

BMO

Bloom
Maths
Olympiad

BSO

Bloom
Science
Olympiad

BEO

Bloom
English
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BGO

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GK
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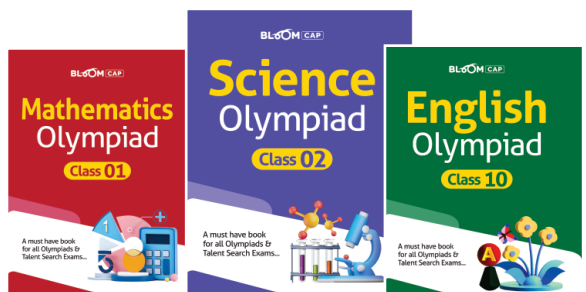
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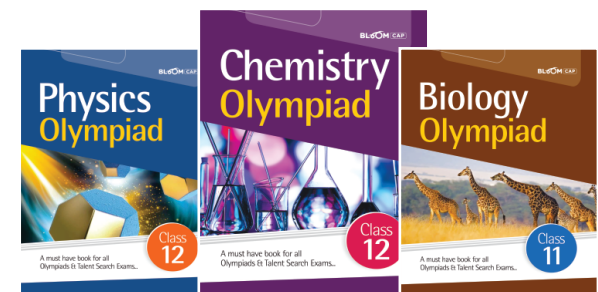
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