

Bloom School Olympiads

Bloom Science Olympiad (BSO)

Class 6th

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.

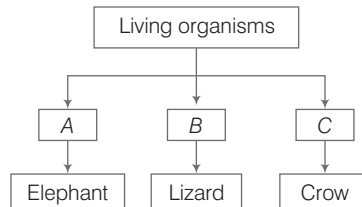
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Bloom Science Olympiad Class 6

Section A (1 Mark)

1. In the flow chart given below, the organisms are categorised on the basis of their food requirements. Identify *A*, *B* and *C*.



Codes

	Autotrophs	Herbivores	Carnivores	Omnivores
(a)	<i>A</i>	<i>B</i>	<i>C</i>	–
(b)	–	<i>A</i>	<i>B</i>	<i>C</i>
(c)	–	<i>B</i>	<i>A</i>	<i>C</i>
(d)	<i>B</i>	<i>C</i>	<i>A</i>	–

2. While doing an activity in class, the teacher asked Arpita to handover a translucent material. Which among the following materials will Arpita pick and give her teacher?
- (a) Glass tumbler (b) Mirror
(c) Muslin cloth (d) Aluminium foil
3. In the plant given below, which of its part stores starch?



- (a) Flower (b) Buds
(c) Leaves (d) Stem
4. Animals are characterised according to their habitat needs. Some animals like the water spider and water beetle can stay underwater for a long time to hunt and feed because they__.



Water spider

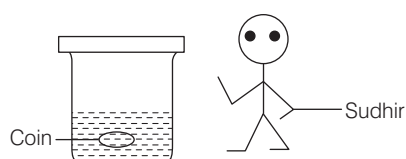


Water beetle

- (a) have air tubes for breathing
 (b) have gills to breathe underwater
 (c) can trap air with their body parts for breathing
 (d) can breathe through their special nostrils
5. When a person passes under a leafy tree during a sunny day, he observes some bright circular patches of light on the ground under the tree. These patches are
 (a) shadows of Sun (b) images of Sun
 (c) pinhole images of Sun (d) Sun
6. Which of the following materials did people use in ancient times for making clothes?
 I. Leaves of trees II. Newspaper
 III. Metal foils IV. Animal skins and furs
 Choose the correct option
 (a) I and II (b) I and III (c) II and III (d) I and IV
7. Rolling of chapatti and baking of chapatti are the changes that
 (a) can be reversed
 (b) can not be reversed
 (c) can be reversed and can not be reversed, respectively
 (d) can not be reversed and can be reversed, respectively
8. I give you shape. Without me, you are like jelly. I give you support like the pillars of a building. I also protect your delicate parts. Who am I?
 (a) Tissue (b) Cell wall (c) Skeleton (d) Muscle
9. Rohan travelled by car to Mumbai. He travelled 292 km in first 3 h, then he started driving his car faster and travelled 400 km in next 4 h. How far did he travelled in 7 h?
 (a) 108 km (b) 692 km (c) 984 km (d) 1184 km
10. In the given short segments of food chain, which ones are incorrect with respect to the correct order food chain?
 I. Lion – Goat II. Lizard – Rat
 III. Snake – Rat IV. Goat – Grain
 V. Insect – Spider VI. Lizard – Spider

Codes

- (a) II, III and VI (b) II, III, V and VI (c) II, V and VI (d) II and V
11. While playing, Sudhir's coin fell down in a bucket filled with water. He was able to see the coin clearly within the water.



This is because

- (a) the water is translucent.
- (c) the coin is lustrous.

- (b) the water is transparent.
- (d) the coin is transparent.

12. Read the statements provided by three children about the roots of plants.

Navya : All roots grow underground.

Purvi : Some roots provide us with food.

Ravi : Roots that grow underground tend to grow downwards.

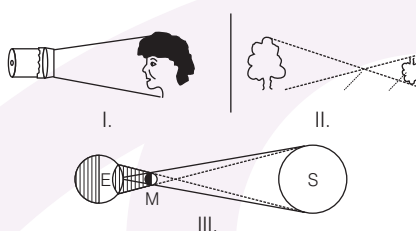
Who made correct statement(s) about roots?

- (a) Navya
- (b) Navya and Purvi
- (c) Navya and Ravi
- (d) Purvi and Ravi

13. Which of the following characteristics help(s) the water hyacinth to float on water?

- | | | |
|---------------|------------------|----------------|
| A. Air spaces | B. Fleshy leaves | C. Waxy leaves |
| (a) Only A | (b) A and B | |
| (c) A and C | (d) B and C | |

14. In which of the following figures shown below, shadow is formed?

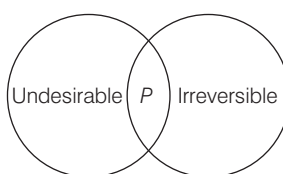


- (a) I and II
- (b) II and III
- (c) I and III
- (d) All of these

15. Number of yarns used to make fabric by weaving and knitting are

- (a) two sets of yarns in each case
- (b) single yarn in each case
- (c) two sets of yarns in weaving and single in knitting
- (d) single yarn in weaving and two sets in knitting

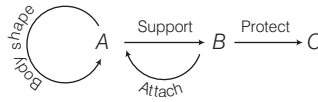
16. Study the following venn diagram.



P is

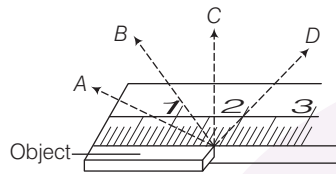
- (a) burning of cooking gas
- (b) coming of summer
- (c) mixing of sugar and milk
- (d) an earthquake

17. Given below is a flow diagram for a major system in our body. Choose the option that fills the missing links A, B, C correctly



Codes

- | A | B | C | A | B | C |
|-------------|---------|---------|-------------|---------|--------|
| (a) Tendons | Bones | Muscles | (b) Bones | Muscles | Organs |
| (c) Organs | Muscles | Bones | (d) Muscles | Bones | Organs |
18. Consider the figure shown as below. What should be the most appropriate position of the eye of an observer in order to measure the length accurately?



- (a) A (b) B (c) C (d) D
19. Female mosquitoes live on blood that they suck from humans and other animals. They have a long, sharp pipe-like structure instead of teeth, that is used to pierce the skin and suck blood. Male mosquitoes on the contrary feeds on plant sap and nectar. Identify the category to which they belong?

Female

Male

- | | |
|------------------|-------------|
| (a) Herbivorous | Omnivorous |
| (b) Herbivorous | Herbivorous |
| (c) Sanguivorous | Herbivorous |
| (d) Carnivorous | Carnivorous |
20. Which pair of substances among the following would float in a tumbler half-filled with water?
- (a) Cotton thread, thermocol
 (b) Feather, plastic ball
 (c) Pin, oil drops
 (d) Rubber band, coin
21. Read what Avi describes about the plant that he has in his garden.



It is a land plant. It has flowers.
It has hard and woody stem.

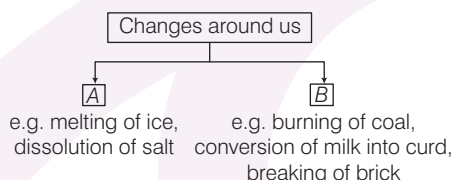
Which of the following is likely to be the plant that Avi is describing?

- (a) Rose (b) Sandalwood (c) Passion flower (d) Sunflower

22. Animals use different parts of their bodies to move around. Which of the following rows shows an animal that is not correctly matched to its body parts for movement?

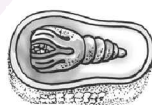
	Animal	Legs	Wings	Body	Flippers
(a)	Snake			✓	
(b)	Penguin		✓		
(c)	Cheetah	✓			
(d)	Dolphin				✓

23. Consider the following flow chart.



A and B stand respectively for

- (a) reversible and irreversible changes
 (b) chemical and physical changes
 (c) permanent and temporary changes
 (d) All of the above
24. The figure given below shows a stage of life-history of silk moth. Identify which stage is this?



- (a) Eggs on mulberry
 (b) Cocoon
 (c) Cocoon with developing moth
 (d) Pupa developing to silk adult moth
25. Iron rim is made slightly smaller than the wooden wheel (which is to be covered by iron rim). The rim is usually heated before fixing into the wooden wheel because on heating, the iron rim
- (a) expands and fits onto the wooden wheel
 (b) contracts and fits onto the wooden wheel
 (c) no change in the size takes place
 (d) expands first, then on cooling contracts and fits onto the wooden wheel
26. Boats and ships are designed to move efficiently through water. Their shape is similar to fishes. From the options below, choose the correct combination of shape and its advantage.

Shape	Advantage
1. Cylindrical	A. Provide wave motion
2. Streamlined	B. Increases water resistance
3. Circular	C. Decreases water resistance
4. Conical	D. Helps in ballooning

Codes

- (a) 1-B
 (b) 2-C
 (c) 3-D
 (d) 4-A

27. Raju, who is a carpenter is boring holes in wooden planks using a drill machine. Which type of motion did the drill machine describe?

- (a) Circular and oscillatory motion
- (b) Rotatory and rectilinear motion
- (c) Rotatory and circular motion
- (d) Rotatory and oscillatory motion

28. Study each of the given set carefully. Identify the odd one.

- (a) Cow, milk, butter
- (b) Hen, egg, meat
- (c) Goat, milk, meat
- (d) Plant, vegetable, butter, milk

29. Four students Radha, Sudha, Sofia and Raveena have four different mixtures.

Radha : Red chilli powder + water

Sudha : Butter + water

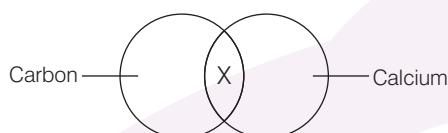
Sofia : Petrol + water

Raveena : Honey + water

Whose mixture is in solution form?

- (a) Radha
- (b) Sudha
- (c) Sofia
- (d) Raveena

30. There is a venn diagram given below. Observe it and identify X in it?



Codes

- (a) Micronutrient
- (b) Macronutrient
- (c) Product of respiration
- (d) Product of photosynthesis

31. Raheem is fond of animals. Thus, he always observe the animals and study about their habitats. Once, he came across an animal having a stream-lined and slippery body. What is the habitat of the animal?

- (a) Water
- (b) Desert
- (c) Grassland
- (d) Mountain

32. Opt the correct sequence to get cloth.

- (a) Fibre → Fabric → Yarn
- (b) Fibre → Yarn → Fabric
- (c) Fabric → Yarn → Fibre
- (d) Yarn → Fibre → Fabric

33. The states where jute is grown at large level are

- (a) Punjab, Haryana and Rajasthan
- (b) West Bengal, Bihar and Assam
- (c) Karnataka, Kerala and Tamil Nadu
- (d) Madhya Pradesh, Orissa and Uttar Pradesh

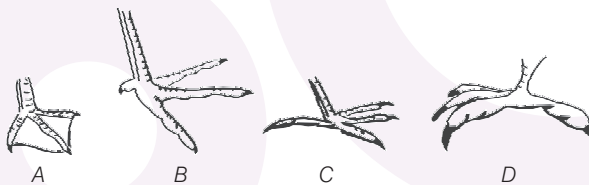
34. Formation of curd from milk is a

- I. temporary change
- II. irreversible change
- III. chemical change
- IV. exothermic change

The correct alternative is

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

35. Given below are some structures of human body. Pick the odd one out.
 (a) Ball and socket (b) Pivot (c) Hinge (d) Sternum
36. Gagan Narang, who is among the India's best shooter shoots a bullet in a straight line on the wall. Which kind of motion did the bullet perform?
 I. Rectilinear II. Circular III. Rotational IV. Curvilinear
- Codes**
 (a) I and II (b) II and IV (c) I and III (d) III and IV
37. Which sets of substances is not used for making fibres?
 (a) Silk, chemicals (b) Yak hair, camel hair (c) Husk, bones (d) Flax, wool
38. Substance 'X' is a good conductor of heat as well as electricity. It is a solid at room temperature and commonly used for making wires. X is
 (a) wood (b) copper (c) iron (d) mercury
39. Consider the statements given below
 I. Plants are unicellular.
 II. Plants are heterotrophs.
 III. Plants respond to environment.
 IV. Plants prepare their own food.
 Which of the above statements are correct?
 (a) II and IV (b) III and IV (c) Only IV (d) I, II, III and IV
40. Here are some drawings of birds feet. Which bird would be most likely to be adapted for swimming? Choose the correct option.



- (a) A and D (b) C and D (c) Only B (d) Only A

Section B (2 Marks)

41. Matrix-matching

Column A	Column B
I. Regular reflection	p. Mirror
II. Diffused reflection	q. Glass
III. No reflection	r. Air
	s. Wood
	t. Metals
	u. Paper

Codes

- | | I | II | III |
|-----|-----|-----|-----|
| (a) | p,u | r,s | q,t |
| (b) | q,t | r,s | p,u |
| (c) | q,r | s,u | p,t |
| (d) | p,t | s,u | q,r |

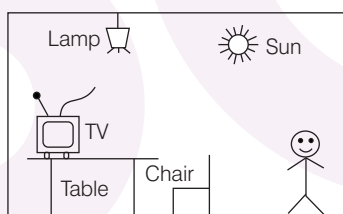
42. State whether the following statements are true (T) or false (F) and select the correct answer.

- I. A mixture of oil and water can be separated by filtration.
- II. Water can be separated from salt by evaporation.
- III. A mixture of wheat grains and wheat flour can be separated by sieving.
- IV. A mixture of iron filings and rice flour can be separated by magnet.
- V. A mixture of wheat grains and rice flakes can be separated by winnowing.

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

Direction (Q. Nos. 43 and 44) Read the following information and answer the questions that follow : Luminous bodies like the sun, a gas flame and an electric light filament are visible since they are light sources. The objects other than luminous objects are visible only when they are in the presence of light from the luminous objects.

43. In the figure given below, a kid is watching TV at his home. How many luminous objects are there ?



- (a) 1 (b) 2 (c) 3 (d) 4

44. Pick the odd one out.

- (a) Boy (b) Chair (c) Television (d) Table

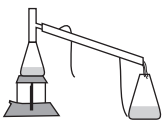



45. **Assertion** (A) The length of a curved line can be measured by using a thread and a scale.

Reason (R) A measuring tape is used to measure the length of a curved line.

Select the correct answer from the options given below.

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

46. Match each mixture (given in Column I) to the apparatus (given in Column II) which may be used to separate the components of the mixture.

Column I	Column II
1. Alcohol and water	A. 
2. Sand and water	B. 
3. Salt and water	C. 
4. Iron filings and sand	D. 

	1	2	3	4
(a)	A	C	B	D
(b)	B	D	C	A
(c)	C	A	B	D
(d)	D	B	A	C

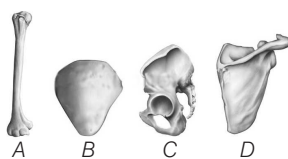
47. The table below shows sources, functions and deficiency diseases caused by some vitamins and minerals.

Vitamin/Mineral	Source	Function
Vitamin-C	Oranges, lemons and grapes	Makes skin and gums healthy and heal wounds quickly
Vitamin-D	Milk, butter, eggs, fish and liver	Makes bones and teeth strong
Calcium	Milk and eggs	Makes bones and teeth strong
Phosphorus	Milk, apple, beans, dry fruits and pulses	Helps in the body development and makes children strong; helps in the digestion of food

Which one of the following statements is correct?

- (a) Vitamin-C is needed for strong bones.
- (b) Scurvy is caused due to deficiency of phosphorus.
- (c) Deficiency of vitamin-C and phosphorus causes rickets.
- (d) Deficiency of vitamin-D and calcium causes rickets.

48. There are three groups given below. Observe each group and identify the correct relation with other groups.



Group 1

Irregular bone	Short bone	Flat bone	Long bone
<i>P</i>	<i>Q</i>	<i>R</i>	<i>S</i>

Group 2

Upper and lower arm	Wrist bone	Pectoral girdle	Vertebrae protects the spinal cord
<i>M</i>	<i>N</i>	<i>O</i>	<i>T</i>

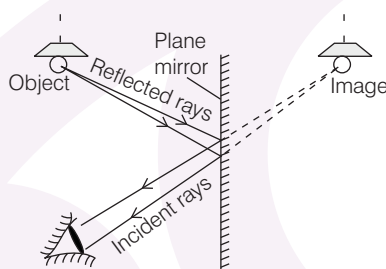
Group 3

Codes

- (a) A-R-M, B-Q-M, C-S-T, D-P-O
 (b) A-Q-N, B-P-O, C-R-N, D-S-T
 (c) A-P-O, B-R-T, C-Q-M, D-S-N
 (d) A-S-M, B-Q-N, C-P-T, D-R-O

49. **Assertion** (A) Image formed by a plane mirror is always virtual and erect.

Reason (R)



Select the correct answer from the options given below

- (a) Both A and R are true and R is the correct explanation of A
 (b) Both A and R are true, but R is not the correct explanation of A
 (c) A is true but R is false
 (d) A is false but R is true
50. Consider the passage given below and opt the option that correctly fills the missing blanks. Animals like cows, buffaloes and A provide us milk. Milk is rich in proteins, B, carbohydrates, vitamins and minerals. The animals that produce milk are C. Like milk, honey is also obtained from animals. It is very nutritious in nature. Honeybees collect nectar from different flowers, mix it with a secretion from their D and convert it into honey.

Codes

	<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
(a)	sheeps	fat	producers	beehives
(b)	goats	dietary fibres	carnivores	petals
(c)	sheeps	dietary fibres	omnivores	pollen grains
(d)	goats	fat	herbivores	mouth

ANSWER KEY

Science Class 6th

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

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Maths
Olympiad

BSO

Bloom
Science
Olympiad

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- Bloom Accounts Olympiad (BAcO)
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- Bloom Computer Olympiad (BCO)

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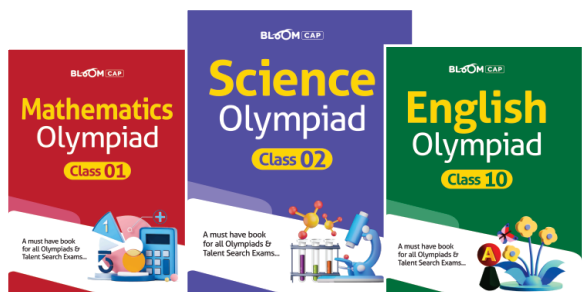
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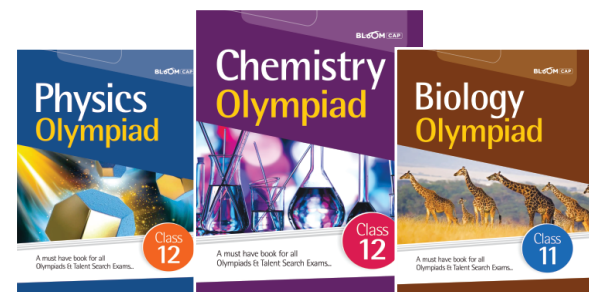
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