

Bloom Science Olympiad Sample Paper 1

Maximum Time : 60 Minutes

Maximum Marks : 35

INSTRUCTIONS

1. There are 35 Multiple Choice Questions in this paper carrying 1 Mark each.
2. Each question has Four Options out of which **ONLY ONE** is correct.
3. All questions are compulsory.
4. There is no negative marking.
5. No electric device capable of storing and displaying visual information such as calculator and mobile is allowed during the course of the exam.
6. Shade the correct option completely as shown here with HB pencil or Blue/Black ball point pen clearly :



Student's Name

School Name

1. What are the tiny bumps on the surface of tongue are called?

- (a) Taste corners
- (b) Taste points
- (c) Taste buds
- (d) Taste tips

2. A simplified equation for photosynthesis is given below



Identify what other necessary elements are missing from this equation?

- (a) Chlorophyll and humidity
- (b) Chlorophyll and nutrients
- (c) Chlorophyll and sunlight
- (d) Nutrients and sunlight

3. In the given figure X, a football filled with air and in Y, a football without air is shown below. What conclusions can you draw by comparing the two figures?



X



Y

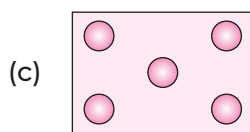
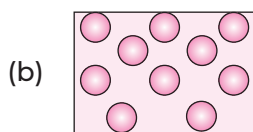
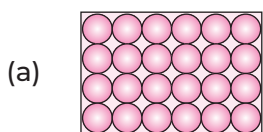
- (a) Air has no weight
- (b) Air occupies space
- (c) Air exerts no pressure
- (d) Air exerts pressure

4. Which of the following animals do not have hair on their skin?

Fish, cow, goat, snake, tiger

- (a) Fish and snake
- (b) Tiger and cow
- (c) Fish and tiger
- (d) Tiger and snake

5. Radhika is pouring the soap solution from its packet into bottle. What would be the arrangement of molecules present in soap solution?



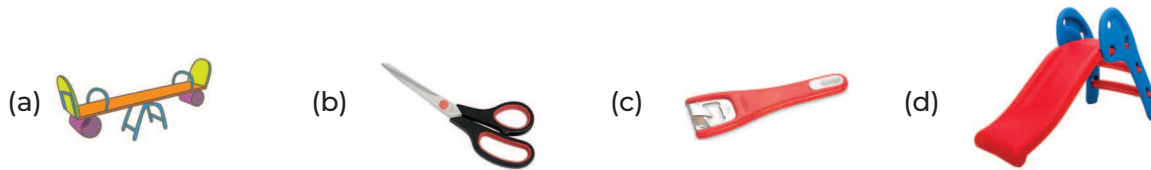
(d) None of these

6. Select the option which on unscrambling gives the name of a food preserving technique where salt is added to food item.

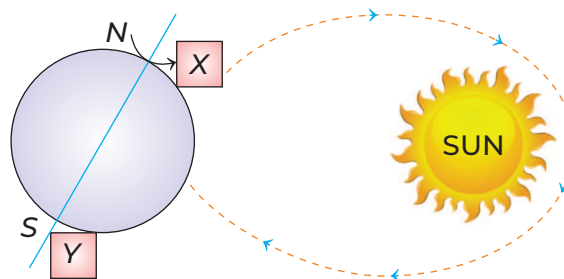
- (a) ILATSGN
- (b) NEIFRZEG
- (c) HATONIDEYRD
- (d) GENERATORFER

- 7.** Moon is not called a planet because it
- (a) Lacks atmosphere (b) Does not revolve around the Sun
(c) Does not have light of its own (d) Does not have life
- 8.** The mineral from which we get metals are called
- (a) Metallic minerals (b) Natural minerals
(c) Non-metallic minerals (d) Magnetic minerals
- 9.** A patient has been advised to add tomatoes, spinach and lots of other citrus fruits and vegetables in his diet. This will help the patient to overcome
- (a) Deficiency of calcium (b) Vitamin-C deficiency
(c) Malnutrition (d) Iron deficiency
- 10.** In human beings, the 16 teeth in each jaw consists of
- (a) 2 incisors, 4 canines, 4 premolars and 6 molars
(b) 4 incisors, 4 canines, 4 premolars and 4 molars
(c) 4 incisors, 2 canines, 4 premolars and 6 molars
(d) 2 incisors, 6 canines, 4 premolars and 4 molars
- 11.** In what ways does the food prepared by plant is used?
- (a) Some food is used by plants to grow
(b) Some food is used by plants to repair damaged parts
(c) Extra food is stored as starch and eaten by animals and humans
(d) All of the above

- 12.** Pick the odd one out on the basis of type of simple machines.



- 13.** Study the figure given below.



According to the position of Earth with respect to Sun, the season observed at sites X and Y will be

- (a) Summer and winter, respectively (b) Winter and summer, respectively
(c) Summer and autumn, respectively (d) Winter and autumn, respectively

14. How does *Cactus* prepare its own food?

- (a) It depends on other plants for food
- (b) It is an insectivorous plant
- (c) Its stem is green, waxy and prepares food for the plant
- (d) It does not need food, as it can survive on atmospheric gases

15. Aman saw the sign given below in the column reporting today's weather.



This sign is associated with

- (a) Sunny climate
- (b) Thunderstorms
- (c) Rain with Sun
- (d) Partly sunny

16. Read the following statements.

- I. In India, we have five different seasons.
- II. Polar regions are cold for 6 months.
- III. Mars has seasons like the Earth.
- IV. Earth is the only planet with an atmosphere.

Which of these statements is incorrect?

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

17. If a person has ingested a poisonous substance, what first aid measure will you provide to the patient?

- (a) Give him a glass of water or fluids
- (b) Ask him to sit in the shade
- (c) Make him vomit
- (d) Remove any excess clothing

18. What is common between the animals shown below?



Cockroach



Ant



Snail



Crab



Spider

Select the correct option.

- (a) They do not have a backbone
- (b) All of them have wings
- (c) They all can fly, crawl and walk
- (d) They can live both on land and in water

19. Read the characteristics given below with respect to a planet called X.

I. It is known as red planet

II. It has two Moons

Planet X can be

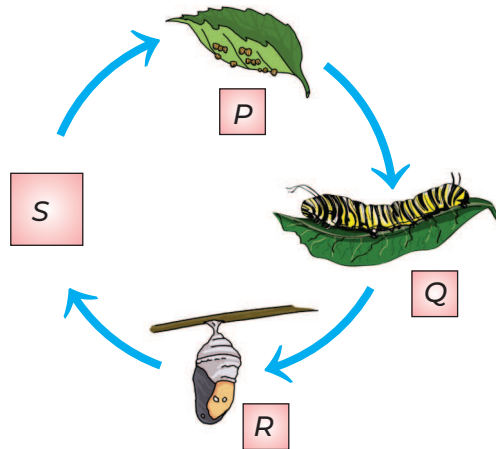
(a) Mercury

(b) Venus

(c) Saturn

(d) Mars

20. Given below are the stages of life cycle of an insect?



Which of the following stages can be placed in box labelled **S** ?



21. In which of the following conditions, the bottled plant can prepare their food?

(a) Plant kept in fully enclosed wooden cupboard

(b) Plant placed near an open window and watered well

(c) Plants whose leaves are covered with vasaline

(d) Plant potted in dry soil

22. Which of the following is a road safety measure?

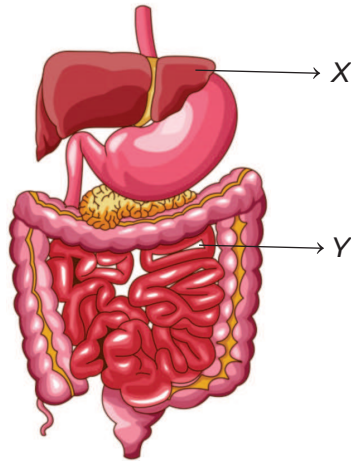
(a) Ignore traffic signals after midnight.

(b) Drive under the influence of alcohol.

(c) Overtake without using your indicator lights.

(d) Wear a safety helmet while riding a motorcycle.

23. Observe the figure given below and identify the structure X and Y.

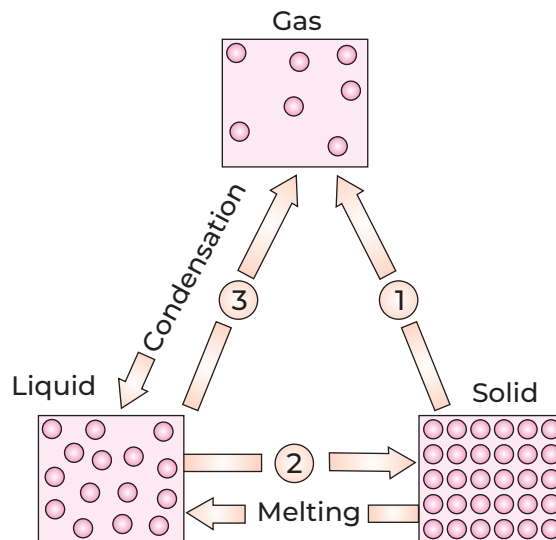


- (a) Liver, small intestine
- (b) Small intestine, heart
- (c) Gall bladder, small intestine
- (d) Stomach, liver

24. Which of the following first aid is given if someone gets injured and bleeding badly?

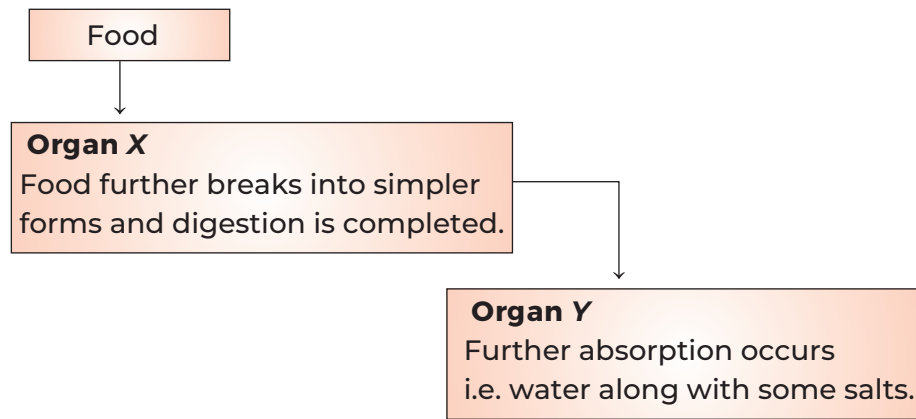
- (a) We should call the police and elders
- (b) We should inform our friends
- (c) We should tie a clean cloth around the wound and take him to the doctor
- (d) We should call the police and doctor

25. Matter can change from one state to another. Based on the above statements identify the process 1, 2 and 3 which are responsible for such changes.



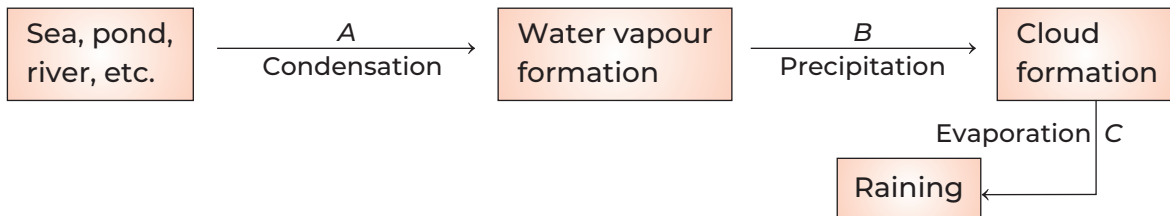
- (a) 1-evaporation, 2-sublimation, 3-freezing
- (b) 1-freezing, 2-evaporation, 3-sublimation
- (c) 1-sublimation, 2-freezing, 3-evaporation
- (d) 1-precipitation, 2-evaporation, 3-sublimation

26. The diagram shows a part of digestive process in human body as the food moves through the alimentary canal.



The organs X and Y can be identified as

- (a) Mouth and stomach
 - (b) Stomach and small intestine
 - (c) Small intestine and large intestine
 - (d) Stomach and large intestine
27. The given flow chart depicts the water cycle



Which process in the water cycle shown above is not correctly labelled?

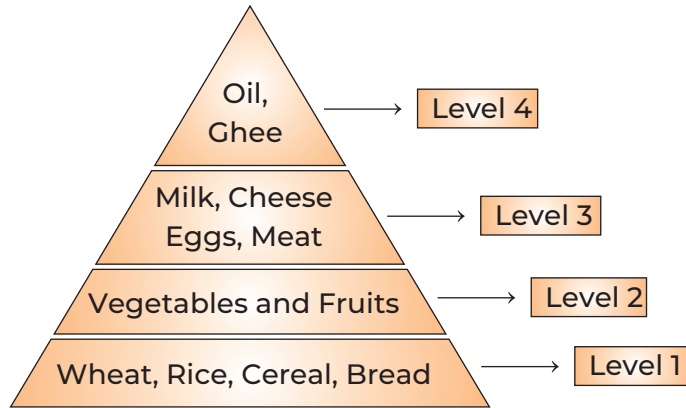
- (a) A-Condensation
 - (b) B-Precipitation
 - (c) C-Evaporation
 - (d) All of these
28. Read the list of animals given below.

- | | |
|--------------|--------------|
| I. Fox | II. Ostrich |
| III. Monkeys | IV. Lizard |
| V. Mouse, | VI. Snake, |
| VII. Cat, | VIII. Duck, |
| IX. Crow, | X. Elephants |

How many of these animals given birth to young ones?

- (a) I, III, V, VII and X
- (b) II, IV, VI, VIII and IX
- (c) II, IV, VI, VIII and X
- (d) I, III, V, VII and IX

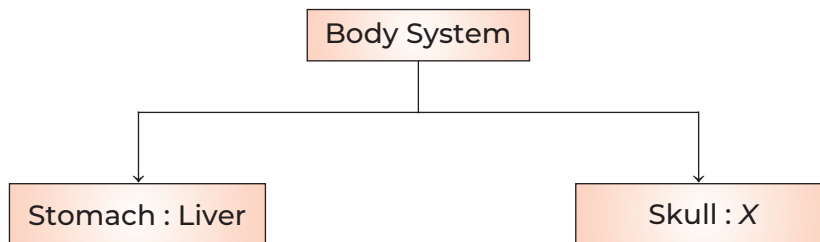
29. The given diagram depicts the pyramid of food.



Which of the following table representing different levels and the main constituents in the food items of that level is true?

Level 1	Level 2	Level 3	Level 4
(a) Carbohydrates	Vitamins and mineals	Proteins	Fats
(b) Fats	Carbohydrates	Proteins	Vitamins and minerals
(c) Vitamins and minerals	Fats	Carbohydrates	Proteins
(d) Proteins	Vitamins and minerals	Fats	Carbohydrates

30. Look at the given classification table



Which of the following can X be?

- (a) Ribcage
- (b) Lung
- (c) Brain
- (d) Ureter

31. Refer to the figure given below



Which of the following statement is incorrect for X?

- I. It changes the direction of force.
- II. It is a complex machine.
- III. It increases the force that has to be applied on the load.

Codes

- (a) I and II
- (b) Only 1
- (c) I and III
- (d) II and III

32. Read the conversation happening between three friends.

Ashima - Your hair is so greasy today.

Anita - I like the fragrance of your soap.

Ankita- Shhh class is going on don't make noise.

Which among the following options is correct match that identify the senses used by the girls?

- (a) Touch Sight Hearing
- (b) Taste Touch Sight
- (c) Touch Smell Hearing
- (d) Taste Sight Touch

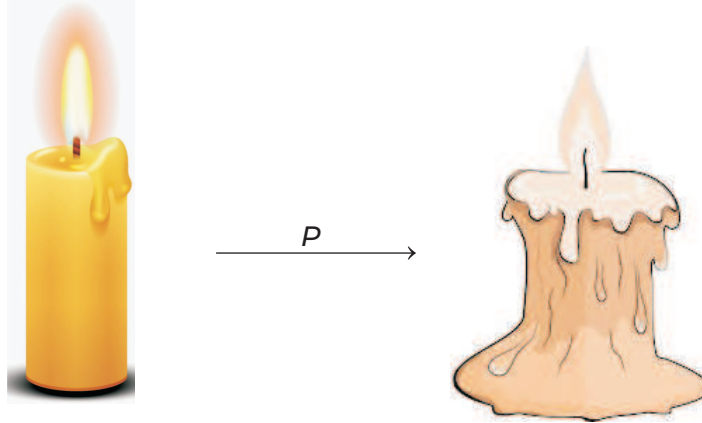
33. Ayesha tested the various properties of 4 different materials. Her results are noted in table given below.

Properties	A	B	C	D
Lustrous	✓	x	✓	x
Conductor	✓	x	✓	x
Insulator	x	✓	x	✓

Select the option that correctly identify any two of these materials.

- (a) A–silver, C–wood
- (b) A–gold, B–plastic
- (c) A–aluminium, D–chalk
- (d) B–silver, D–wood

34. The change *P* occurring in the figure given below is



- (a) Boiling
 (b) Melting
 (c) Freezing
 (d) Condensation

35. Match vitamins with their uses.

A. Vitamin-A	1. Makes teeth and bones strong.
B. Vitamin-B	2. Makes gums strong and heals wounds faster.
C. Vitamin-C	3. Good for muscles and nerves.
D. Vitamin-D	4. Keeps eyes and skin healthy.

Codes

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

OMR SHEET

1	a	b	c	d	2	a	b	c	d	3	a	b	c	d	4	a	b	c	d
5	a	b	c	d	6	a	b	c	d	7	a	b	c	d	8	a	b	c	d
9	a	b	c	d	10	a	b	c	d	11	a	b	c	d	12	a	b	c	d
13	a	b	c	d	14	a	b	c	d	15	a	b	c	d	16	a	b	c	d
17	a	b	c	d	18	a	b	c	d	19	a	b	c	d	20	a	b	c	d
21	a	b	c	d	22	a	b	c	d	23	a	b	c	d	24	a	b	c	d
25	a	b	c	d	26	a	b	c	d	27	a	b	c	d	28	a	b	c	d
29	a	b	c	d	30	a	b	c	d	31	a	b	c	d	32	a	b	c	d
33	a	b	c	d	34	a	b	c	d	35	a	b	c	d					

Answers with Hints

1. (c) The tiny bumps on the surface of tongue are called taste buds. Which help to identify different taste of food.
2. (c) The process of photosynthesis requires raw materials like CO_2 , water and convert them to food in the presence of sunlight and chlorophyll.
3. (b) By comparing both the picture, we get that air occupies space.
4. (a) Fishes and snakes do not have hairs on their bodies rather they have scales on their bodies. These scales help in the respiration process. Cow, goat and tiger are mammals and they have hair on their bodies. These hairs are used to warm their bodies and also for protection.
5. (b) In soap solution, the molecules will not be very closely packed and in random. Thus, figure (b) correctly depicts the arrangement of soap molecules.
6. (a) Salting is the preservation technique where large amount of salt is added to food items. It can preserve food for longer period of time.
7. (b) Moon is not a planet because it does not orbits around the Sun, but moves around a planet.
8. (a) Metallic minerals are those minerals from which we get metals. Iron, silver, copper, etc., are metals which we get from their metallic minerals or ores.
9. (b) Citrus fruits (e.g. Oranges, mausambi) and vegetables (e.g. Lemon) are rich sources of vitamin-C. Hence, this will help the patient to overcome deficiency of vitamin-C.
10. (c) In human beings , each jaw contains 16 teeth, thus, 32 in total. The type of teeth found in mouth are 4 incisors (bitting and cutting), 2 canines (piercing and tearing) and 4 premolars and 6 molars for each (chewing and grinding).
11. (d) A plant can utilise its prepared food in its growth and in repairing its damaged parts. Rest of the food is stored as starch, which animals and humans consumes.
12. (d) A slide represents an inclined plane on which a load can be pushed or pulled. (a) (b) and (c) are all levers, i.e. a beam or rod that rests at a point around which it moves.
13. (a) Seasons are caused due to revolution of the Earth around the Sun and its tilted axis. When North-pole is tilted towards Sun as shown in the figure, it will have summer season and South-pole will have winter season.
14. (c) The leaves of *Cactus* plants are modified into thorns but their stems are green and waxy. Which participate in the process of photosynthesis and prepares food for plant.
15. (b) The sign is for indicating weather forecast of a thunderstorms through the day.
16. (d) Statements II is incorrect. The correct form of this statement is polar regions are cold throughout the year. They receive sunlight for only 3 months in a year.
17. (c) If a person has accidentally ingested poison, we should immediately make him vomit out. This empties the stomach and remove the consumed substances.
18. (a) All these animals do not have a backbone. Another name for such animals is invertebrates.
19. (d) Mars is known as the red planet and it has two Moons. Hence, option (d) is correct.
20. (a) Here, the flow chart represent the life cycle of butterfly, where S will be represented by the adult butterfly.

- 21.** (b) The plant which has CO_2 , water and sunlight available can perform photosynthesis. The ideal condition for this is provided in set up (b) only.
- 22.** (d) We should wear helmet while riding a motorcycle for our safety.
- 23.** (a) Here, X is liver. Y is small intestine where final digestion of all food components and absorption of digested food occurs.
- 24.** (c) Firstly we should tie a clean cloth around the wound, when a person bleeding badly and then take him to the doctor.
- 25.** (c) Sublimation (1) changes solid to gas on heating, freezing (2) changes liquid to solid on cooling and evaporation (3) changes liquid to vapour at high temperature.
- 26.** (c) The digestion process gets completed in the small intestine from where the nutrients released from food is circulated in the body cells.
In large intestine, where from the undigested waste, water and some salts are absorbed.
Thus, X-small intestine and Y-large intestine.
- 27.** (d) The correct labelling should be
A-evaporation is a process in which water from the lakes, rivers evaporates and turns into water vapour.
B-condensation is a process in which water vapours condenses to form clouds.
C-precipitations is a process by which the clouds is ready to give shower of water droplets.
- 28.** (a) The animals who give birth to young ones are called viviparous. e.g. Fox, monkeys, mouse, cats, elephants, etc.
- 29.** (a) **Level-1** Food is rich in carbohydrates.
Level-2 Food is rich in vitamins and minerals.
Level-3 Food is rich in proteins.
Level-4 Food is rich in fats.
- 30.** (a) Stomach and liver both are part of digestive system same as skull and ribcage both are part of skeleton system.
- 31.** (d) The given figure is a pulley. It is a simple machine, which enable us to use a lasser force to overcome a larger one. Thus, statements II and III are incorrect for pulley.
- 32.** (c) The senses involved are (i) Touch-touching the hair identifies the greasy feeling in hair. (ii) Smell-nose receive the sense of smell. (iii) Hearing - ears detect the noise in our surroundings.
- 33.** (b) 'A' can be gold as they are lustrous and good conductor of electricity while 'B' can be plastic which are non-lustrous and are insulator.
- 34.** (b) The process in which solid changes to liquid on heating is called melting. In the given picture a solid candle melts on heating. Hence, P represents melting process.
- 35.** (b) Vitamin-A keeps eyes and skin healthy.
Vitamin-B good for muscles and nerves.
Vitamin-C makes gums strong and heals wounds faster.
Vitamin-D makes teeth and bones strong.