

Class VIII Session 2023-24
Subject - Science
Sample Question Paper - 7

Time Allowed: 3 hours

Maximum Marks: 80

General Instructions:

1. The question paper consists of 34 questions and is divided into four sections, A, B, C and D.
2. All questions are compulsory.
3. Section A comprises question numbers 1 to 15. These are multiple choice questions carrying one mark each. You are to select one most appropriate response out of the four provided options.
4. Section B comprises question numbers 16 to 22. These are SAQs carrying two marks each.
5. Section C comprises question numbers 23 to 31. These are SAQs carrying four marks each.
6. Section D comprises question numbers 32 to 34. These are SAQs carrying five marks each.

Section A

1. Ploughing is a method of preparing soil. It is beneficial as [1]
 - a) All of these
 - b) helps roots of penetrate deeper
 - c) helps roots to breathe easily
 - d) it removes weeds
2. Which physical process occurs in the sky that converts the nitrogen gas to nitrogen compounds? [1]
 - a) Eclipses
 - b) Cloud formation
 - c) Lightning
 - d) Precipitation
3. In India, the organization which advises people on how to save petrol and diesel while driving is: [1]
 - a) Indian Oil Institute of Petroleum Management
 - b) National Petroleum Authority
 - c) Petroleum Conservation Research Association
 - d) Petroleum Warfare Department
4. Which of the following is not a combustible substance? [1]
 - a) Glass
 - b) Alcohol
 - c) Straw
 - d) Camphor
5. The medicine Atropine is obtained from- [1]
 - a) From animals
 - b) from water
 - c) Vegetation
 - d) From minerals
6. Some popular activities that are dependent upon biodiversity are: [1]
 - a) gardening
 - b) herbarium

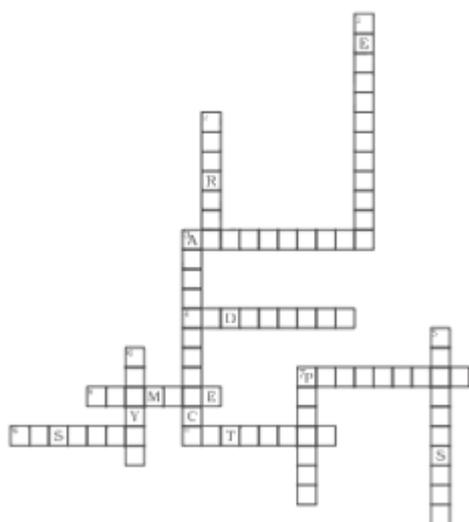
- c) aquarium
d) all of these
7. Internal fertilisation occurs [1]
a) Outside male body
b) Outside female body
c) In female body
d) In male body
8. We should not use drugs as they are _____. [1]
a) Banned by government
b) Addictive
c) Very costly
d) Not available easily
9. Perpendicular force acting per unit area is called: [1]
a) Energy
b) Thrust
c) Work
d) Power
10. In a large commercial complex, there are four ways to reach the main road. One of the paths has loose soil, the second is laid with polished marble, the third is laid with bricks and the fourth has a gravel surface. It is raining heavily and Paheli wishes to reach the main road. The path on which she is least likely to slip is [1]
a) bricks
b) loose soil
c) gravel
d) polished marble
11. Frictional force is necessary in [1]
a) Playing carom
b) Accelerating the car
c) Using matchstick
d) Pushing heavy load
12. A person rings a metallic bell near a strong concrete wall. He hears the echo after 0.3 s. If the sound moves with a speed of 340 m/s. The wall is far from him? [1]
a) 51 m
b) 11 m
c) 30 m
d) 102 m
13. In the process of refining copper metal a thin plate of pure copper is connected to [1]
a) Anode end
b) Connecting wires
c) Electrolyte
d) Cathode end
14. What makes the balloon inflated when placed in hot water? [1]
a) Increased temperature makes the balloon heavy
b) Increase temperature increase the pressure
c) Increase temperature make the balloon lighter
d) Increased temperature makes the balloon softer
15. Which of the following phenomenon is based on the persistence of vision principle? [1]
a) Hemophilia
b) Myopia
c) Colour blindness
d) Cinematography

Section B

16. Give two difference between coke and coal? [2]
17. Give two examples of each: [2]

- a. Natural fuels
- b. Fossil fuels

18. A new species X is introduced in a forest. How is it likely to affect the local species of that area? [2]
19. Word game: Use the clues to work out the words. [2]



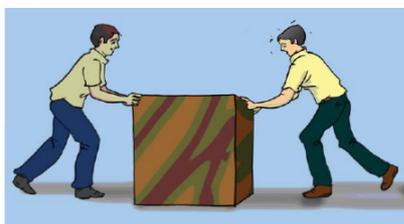
Across

- 3. Protruding voice box in boys
- 4. Glands without ducts
- 7. Endocrine gland attached to brain
- 8. Secretion of endocrine glands
- 9. Pancreatic hormone
- 10. Female hormone

Down

- 1. Male hormone
- 2. Secretes thyroxine
- 3. Another term for teenage
- 5. Hormone reaches here through blood stream
- 6. Voice box
- 7. Term for changes at adolescence

20. Fig. shows two boys applying force on a box. If the magnitude of the force applied by each is equal, will the box experience any force of friction? [2]



21. What effect does the current produce when it flows through a conducting solution? [2]
22. How many times is a ray of light reflected by two plane mirrors placed parallel and facing each other? [2]

Section C

23. Write criteria for selecting good and healthy seeds. [4]
24. Following are the methods of food preservation. What are the principles on which they are based? [4]
- a. Freezing
 - b. Using chemical preservatives

- c. Canning and vacuum packing
 - d. Pasteurization
 - e. Drying
25. Forest fire produces a lot of air pollution. Write in brief about the reasons for forest fires. [4]
26. Explain briefly the male reproductive system? [4]
27. a. What is meant by atmospheric pressure? What is the cause of atmospheric pressure? [4]
b. Why are our bodies not crushed by the large pressure exerted by the atmosphere?
28. Draw a diagram: [4]
a. Soft sound and a louder sound.
b. High pitch and low pitch.
29. Manthan wants to electroplate his key chain with nickel to prevent rusting, for this electroplating, answer the following: [4]
i. Name the electrolyte
ii. Name the cathode
iii. Give the reaction at the cathode
iv. Give the reaction at the anode.
30. Suggest some tips for a quake safe building. [4]
31. What is a periscope? How many mirrors are there in a periscope? Write two uses of periscope. [4]

Section D

32. **Read the text carefully and answer the questions:** [5]

Anuj is telling Shashi the story of coal. He told that about 300 million years ago the earth had dense forests in low-lying wetland areas. Due to natural processes, like flooding, these forests got buried under the soil. As more soil deposited over them, they were compressed. The temperature also rose as they sank deeper and deeper. Under high pressure and high temperature, dead plants got slowly converted to coal. As coal contains mainly carbon, the slow process of conversion of dead vegetation into coal.



- (i) Minerals are
- a) inexhaustible natural resources
 - b) all of these
 - c) natural resources
 - d) exhaustible natural resources
- (ii) Conversion of dead vegetation into coal is called
- a) natural gas
 - b) carbonisation
 - c) coal gas
 - d) distillation
- (iii) Products obtained by the process of destructive distillation are
- a) coke, coal-tar, coal gas
 - b) paraffin wax, bitumen

- c) petrol, diesel, kerosene
- d) compressed natural gas
- (iv) These resources are present in unlimited quantity in nature and are not likely to be exhausted by human activities are called _____.
- (v) When heated in air, coal burns and produces mainly carbon dioxide gas.
 - a) True
 - b) False

33. **Read the text carefully and answer the questions:** [5]

Anita has to write a paragraph about the changes occur at puberty she wrote the following paragraph. There are various changes that occur in the body at the time of puberty when we reach adolescent like change in voice, increase height, pimple appears, Reaching Mental, Intellectual and Emotional Maturity, change in body shape and development of sex organ with all these changes secondary sexual characters also appear. Testes and ovaries are the reproductive organs. They produce the gametes, that is, sperms and ova.

- (i) The male hormone is called:
 - a) Testosterone
 - b) Thyroxine
 - c) Insulin
 - d) Estrogen
- (ii) The female hormone is called
 - a) Adrenaline
 - b) Estrogen
 - c) None of these
 - d) Testosterone
- (iii) The production of sex hormones is under the control of another hormone secreted from an endocrine gland called
 - a) Pancreas
 - b) Thyroid gland
 - c) Adrenal gland
 - d) Pituitary gland
- (iv) Hormones are chemical substances. These are secretions from _____.
- (v) At puberty, milk secreting glands or mammary glands develop inside the breasts.
 - a) True
 - b) False

34. **Read the text carefully and answer the questions:** [5]

Rena wants to understand how sound are produced through vocal cord so she performed following activity

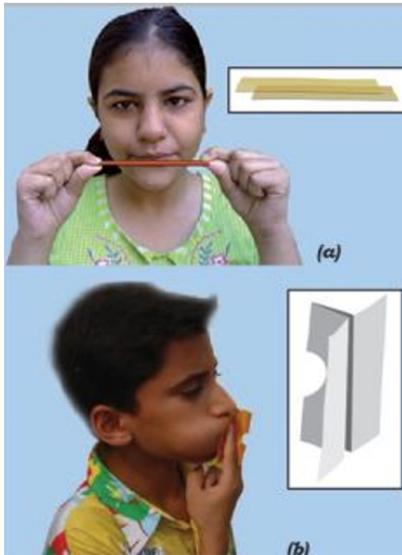
Step 1 - Take two rubber strips of the same size.

Step 2 - Place these two pieces one above the other and stretch them tight.

Step 3 - Now blow air through the gap between them. As the air blows through the stretched rubber strips, a sound is produced.

Step 4 - You can also take a piece of paper with a narrow slit and hold it between your fingers.

Step 5 - . Now blow through the slit and listen to the sound.



- (i) The voice box is also called as
- a) Stomach
b) Larynx
c) Mouth
d) Heart
- (ii) Cochlea is a part of
- a) air pollution
b) hearing organ
c) muscular organ
d) sound producing organ
- (iii) The hearing range of human ear is
- a) 20 Hz to 20,000 Hz
b) more than 20,000 Hz
c) less than 20 Hz
d) 20 Hz to 25,000 Hz
- (iv) Two _____ are stretched across the voice box or larynx in such a way that it leaves a narrow slit between them for the passage of air.
- (v) Muscles attached to the vocal cords can make the cords tight or loose.
- a) True
b) False

Solution

Section A

1. **(a)** All of these
Explanation: All of these
2. **(c)** Lightning
Explanation: When lightning takes place in the sky during a thunderstorm, a high temperature is produced in the atmosphere and nitrogen gas combines with oxygen to form nitrogen compounds.
3. **(c)** Petroleum Conservation Research Association
Explanation: In India, the Petroleum Conservation Research Association (PCRA) advises people on how to save petrol/diesel while driving.
4. **(a)** Glass
Explanation: Those substances which do not burn are called a non-combustible substance. Some of the non-combustible substances are stone, glass, cement, soil, sand, iron nails, etc.
5. **(c)** Vegetation
Explanation: Atropine occurs naturally in a number of plants of the nightshade family, including deadly nightshade (belladonna), Jimson weed, and mandrake. It was first isolated in 1833, and is on the World Health Organization's List of Essential Medicines. It is available as a generic medication.
6. **(d)** all of these
Explanation: Gardening, aquarium, and herbarium are some popular activities that are dependent upon biodiversity of plants and animals.
7. **(c)** In female body
Explanation: Internal fertilization occurs inside the female body. Male gamete is transferred inside the female body during copulation where gametes fuse to produce zygote.
8. **(b)** Addictive
Explanation: We should not use drugs as drugs are addictive in nature as a person start using it, it becomes difficult to give up the same that ruin the family and health.
9. **(b)** Thrust
Explanation: The perpendicular force acting per unit area is called Thrust. S.I. unit of thrust is Newton.
10. **(c)** gravel
Explanation: Gravel because the contact area is rough thus the friction is more.
11. **(c)** Using matchstick
Explanation: Frictional force is necessary in using matchstick. When matchstick is strike with matchbox friction is caused due to which heat is generated. The phosphorous in matchstick catch fire.
12. **(a)** 51 m
Explanation: 51 m
13. **(d)** Cathode end

Explanation: Electrolytic refining is used to refine copper metal. A thin plate of pure copper is connected to cathode and thick impure copper plate to anode.

14.

(b) Increase temperature increase the pressure

Explanation: When a balloon is placed in hot water it gets inflated as an increase in temperature inside the balloon leads to an increase in air pressure inside the balloon and the volume of air on heating and it occupies a bigger space which leads to expansion and the balloon inflates.

15.

(d) Cinematography

Explanation: Cinematography is based on the principle of persistence of vision. Colour blindness, hemophilia, and myopia are defects of vision.

Section B

16. i. Coal is a natural occurring substance whereas Coke prepared material with few impurities and high Carbon content, usually made from Coal.

ii. Coal has a Volatile matter content whereas Coke has relatively very low Volatile matter content which suits it for a better fuel.

17. Two examples are:

a. Natural fuels- coal, wood

b. Fossil fuels- petroleum, natural gas

18. The introduction of a new species may affect the existence of local species due to competition.

19. **Across**

3. ADAM'S APPLE

4. ENDOCRINE

7. PITUITARY

8. HORMONE

9. INSULIN

10. ESTROGEN

Down

1. TESTOSTERONE

2. THYROID

3. ADOLESCENCE

5. TARGET SITE

6. LARYNX

7. PUBERTY

20. No, the box will not experience any force of friction because the force applied by both the boys is equal. Thus, the net (total) force on the box will be zero. As a result, there will be zero force of friction.

21. The passage of an electric current through a conducting solution causes chemical reactions. As a result, bubbles of gas are formed, deposits of metal on electrodes may be seen and changes of colour of solution may occur, depending on what solutions and electrodes are used. These are some of the chemical effects of the electric current.

22. The ray is reflected infinite number of times between the two plane mirrors placed parallel to each other.



Section C

23. The following are the criteria for selecting good and healthy seeds:

- Seed should be healthy meaning, it should be free from infections (by bacteria, viruses, insects, nematodes etc.)
- Seeds should have a good percentage of germination.
- Seeds should be sown at the right depth in the soil.
- Seeds should be sown at the correct distance from each other so that there is no overcrowding (if sowing is done very near to each other) or wastage of space (if sowing is done very far from each other).
- Seeds should undergo fungicide treatment to prevent seed-borne diseases.
- Seeds should have enough amount of water for its germination as seeds do not germinate in dry soil.

24. i. Freezing - Microbes do not multiply and their enzymes become inactive at low temperature.

- ii. Using chemical preservatives -The chemicals act as antioxidants, i.e., they remove oxygen from the food item, which do not allow microbes to grow.
- iii. Canning and vacuum packing - High temperature kills microbes and their growth is prevented in vacuum.
- iv. Pasteurization - Heating kills bacteria and low temperature prevents their multiplication.
- v. Drying - In the absence of warmth and moisture bacteria stop growing.

25. Reasons for forest fires are:

- i. At high temperatures, sometimes dry grass catches fire which spreads throughout the forest.
- ii. Campfire may also be a reason.
- iii. Due to the spark of lightning from the sky.
- iv. The use of fires by villagers to ward off wild animals.
- v. Fire lit intentionally by people living around forests for recreation.
- vi. Fires started accidentally by careless visitors to forests. When they throw away lighted cigarettes in the forest.
- vii. The friction of bamboos due to high wind velocity and rolling stones.

26. The male reproductive system consists of the organs for the formation of gametes or basically referred to as sperms and organs for the transport of sperms to the female body.

The male reproductive organs include the following:-

- o A pair of testes.
- o Two sperm ducts.
- o And penis.

Testes produce the male gametes called as sperms.

Millions of sperms are produced by testes.

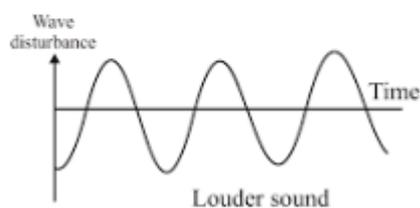
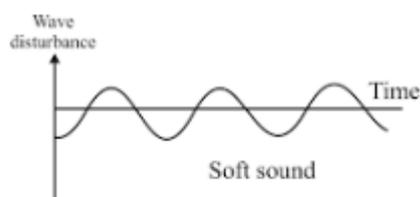
Though sperms are small in size but each has a head, a middle piece, and a tail.

27. a. The layer of air above the earth is called atmosphere. The air has weight, so it exerts a pressure on the surface of the earth, which is called atmospheric pressure.

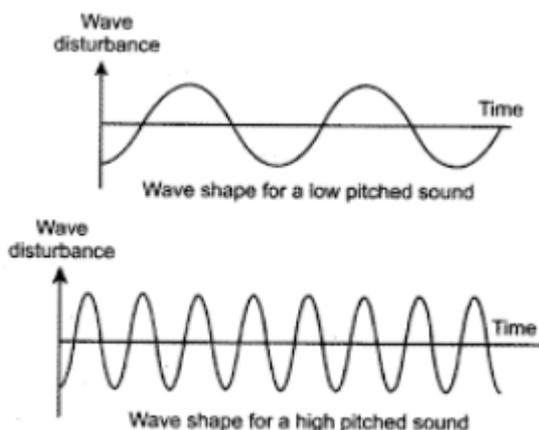
Atmospheric pressure is due to the weight of air present in the atmosphere above us. It acts in all directions.

b. Our body has blood which flows in every cell through blood vessels. Our blood itself exerts a pressure that is greater than the atmospheric pressure. Since atmospheric pressure from outside our body is balanced by the blood pressure acting from inside, we donot get crushed.

28. a.



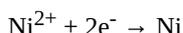
b.



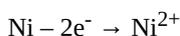
29. i. Nickel Sulphate is the electrolyte

ii. Key chain is the cathode.

iii. Reaction at the cathode:



iv. Reaction on anode:



30. **Following provisions make a quake safe building:**

- Buildings should be made quake proof. Engineers and architects are the experts who can give suitable advice in this regard.
- Light-weight materials should be used for making buildings in earthquake prone areas.
- Cupboards should be fixed to the walls so that they do not fall on someone during an earthquake.
- People should be made to practice drills for earthquake. Such drills should be frequently organized in schools and at public places.
- In case of an earthquake, you should hide under a table or any other similar structure. If you are in bed, then keep a pillow over your head and do not move out of the bed. If you are in an open area, try to move away from buildings and other structures.
- Proper installation of fire-fighting equipments should be ensured in buildings. Fire due to short circuit and gas leakage is quite common during an earthquake.

31. It is a long tubular device through which a person can see objects that are out of the direct line of sight.

There are two plane mirrors in the periscope.

Uses of Periscope:

- i. A Periscope is used to see over the heads of crowd. (say, as in a football match)
- ii. A Periscope is used by soldiers sitting in a trench (or bunker) to observe the enemy activities outside (over ground).
- iii. A Periscope is used by a navy officer sitting in a submarine to see ships over the surface of water in the sea.

Section D

32. **Read the text carefully and answer the questions:**

Anuj is telling Shashi the story of coal. He told that about 300 million years ago the earth had dense forests in low-lying wetland areas. Due to natural processes, like flooding, these forests got buried under the soil. As more soil deposited over them, they were compressed. The temperature also rose as they sank deeper and deeper. Under high pressure and high temperature, dead plants got slowly converted to coal. As coal contains mainly carbon, the slow process of conversion of dead vegetation into coal.



- (i) **(d)** exhaustible natural resources
Explanation: exhaustible natural resources
- (ii) **(b)** carbonisation
Explanation: carbonisation
- (iii) **(a)** coke, coal-tar, coal gas
Explanation: coke, coal-tar, coal gas
- (iv) 1. Inexhaustible Natural Resources
- (v) **(a)** True
Explanation: True

33. Read the text carefully and answer the questions:

Anita has to write a paragraph about the changes occur at puberty she wrote the following paragraph.

There are various changes that occur in the body at the time of puberty when we reach adolescent like change in voice, increase height, pimple appears, Reaching Mental, Intellectual and Emotional Maturity, change in body shape and development of sex organ with all these changes secondary sexual characters also appear. Testes and ovaries are the reproductive organs. They produce the gametes, that is, sperms and ova.

- (i) **(a)** Testosterone
Explanation: Testosterone
- (ii) **(b)** Estrogen
Explanation: Estrogen
- (iii) **(d)** Pituitary gland
Explanation: Pituitary gland
- (iv) 1. endocrine glands
- (v) **(a)** True
Explanation: True

34. Read the text carefully and answer the questions:

Rena wants to understand how sound are produced through vocal cord so she performed following activity

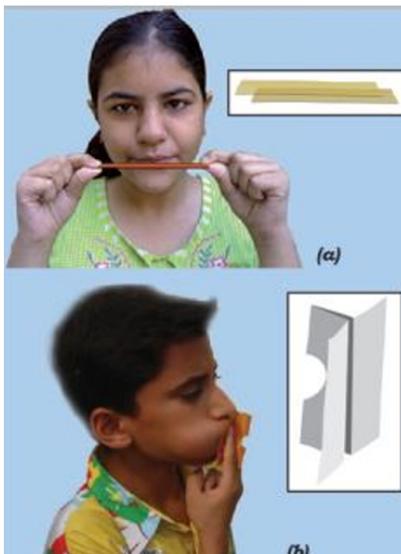
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Step 4 - You can also take a piece of paper with a narrow slit and hold it between your fingers.

Step 5 - . Now blow through the slit and listen to the sound.



- (i) **(b)** Larynx
Explanation: Larynx
- (ii) **(b)** hearing organ
Explanation: hearing organ

(iii) (a) 20 Hz to 20,000 Hz

Explanation: 20 Hz to 20,000 Hz

(iv) 1. Vocal cords

(v) (a) True

Explanation: True