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# JSUNIL TUTORIAL

P U N J A B I C O L O N Y G A L I 0 1

## Sample Questions in Science

1. Metals generally have the following physical properties:

- A. They are conducting
- B. They have luster
- C. They are hard
- D. They are ductile

Mercury has been classified as a metal because of the properties

- 1. B and C
- 2. D and B
- 3. A and B
- 4. A and D

2. Alina was asked to list the causes of air pollution. She made the following list:

- A. Burning of coal
- B. Burning of Liquefied Petroleum Gas
- C. Burning of Compressed Natural Gas
- D. Occurrence of ozone at low altitude

Which are the correct causes in this list?

- 1. Only A
- 2. A and B
- 3. A, B and C
- 4. All the four

3. In some countries it is compulsory to install smoke detectors in all buildings. If you have to install a smoke detector in a room, where would you install it?

1. Near a window, a few feet from the floor
2. Near an electric switch board, about 4 feet from the floor
3. Near or on the ceiling
4. Near the floor

4. Graphite is very soft as compared to other substances because

1. Carbon atoms are arranged in hexagonal structure
2. Carbon atoms are arranged in such way that they form flat layers
3. Linkages between atoms within a layer of graphite are weak
4. Linkages between atoms of two layers are weak

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5 -7. **Direction:** Read the given paragraph and answer the questions that follow:

In any cell, nucleus controls cellular activities and ribosomes are the sites of protein synthesis.

While lysosomes are bags of digestive enzymes, energy formation takes place in the mitochondria.

5. Which cells are likely to possess the highest numbers of mitochondria?

1. hair cells
2. skin surface cells
3. red blood cells
4. muscle cells

6. A cell is able to survive when

1. nucleus may be removed but cytoplasm is intact
2. cytoplasm may be removed but nucleus is intact

3. both cytoplasm and nucleus are intact

4. cytoplasm is lost but nucleus and cell membrane are intact

7. Which cells are likely to show much lysosomal activity?

1. damaged cells

2. gland cells

3. hair cells

4. skin cells

8. The teacher asked Alisha to perform an experiment on refraction of light using a glass slab.

Alisha, being a smart girl, decided to make the light of a torch incident as parallel rays on the face AB as shown in the diagram.

What would happen to the light?

1. The light will be completely reflected from the face AB

2. The light will spread as it enters the glass slab and will come out from faces BC and AD

3. The light will converge as it enters the slab and all the rays will meet at a point

4. The light will neither spread nor converge and come out of the face CD as parallel rays

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9. Examine the following statements:

A. When two bodies are rubbed against each other, the charges are created.

B. When two bodies are rubbed against each other, charges in these bodies are redistributed.

C. When two bodies are rubbed against each other, similar charges appear on each

D. When two bodies are rubbed against each other, dissimilar charges appear on both. The

correct statements are:

1. All four

2. None

3. Only A and C

4. Only B and D

10. Ahmed was advised by an architect to make outer walls of his house with hollow bricks. The correct reason is that such walls

1. make the building stronger
2. help keep the inside cooler in summers and warmer in winters
3. prevent seepage of moisture from outside
4. protect the building from lightning

11. In which of the seeds shown in the diagram will the root grow downwards?

1. in A
2. in A & B
3. in A, B & C
4. in A, B, C & D

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12. Which term is used for a relationship between two organisms living together, one of which can trap energy from the sun and absorb a certain gas from air, while the other can not, but is able to supply water and minerals?

1. saprophytic
2. parasitic
3. symbiotic
4. commensal

13. A man ate only rice, eggs and fish in all his meals. What will be the consequences of such a diet?

1. no energy to do anything
2. frequent constipation

3. hungry all the time

4. unhealthy teeth

14. Three of the five major types of Primary air pollutants are non-metal oxides. Which of the following is list of Primary air pollutant?

1. Carbon monoxide, Nitric oxide and Phosphorus Penta oxide

2. Carbon monoxide, Nitric oxide and Sulphur oxides

3. Phosphours Penta oxide, Nitric oxide and Sulphus oxide

4. Sulphur oxide, Nitric oxide and Carbon Monoxide

15. For which purpose do the two organisms live together in a symbiotic relationship?

1. nutrition

2. respiration

3. excretion

4. reproduction

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### **Solutions to Questions in Science**

#### **Q.No. Key Rationale**

1. 3 Mercury is considered as a metal because it has luster and conducting properties. So the alternative 3 is the answer.

2. 4 Burning of coal, LPG, CNG and occurrence of ozone at low altitude are causes of air pollution. It is a misconception that CNG does not pollute air. But it is true that as compared to other fuels it pollutes very little. Since all the causes are correct, the answer is alternative 4.

3. 3 As the hot air becomes lighter, it rises up. Therefore a smoke detector near or on the ceiling will detect smoke faster than if it is

installed at any other place in a room. The correct alternative, therefore, is 3.

4. 4 Graphite is very soft because linkage between atoms of two layers of graphite is very weak as compared to other substances. The answer lies at alternative 4.

5. 4 Muscles cell will possess the highest number of mitochondria because they need more energy to work properly as compared to remaining types of cells. The answer, therefore, is 4.

6. 3 Both cytoplasm and nucleus are essential for survival of a living cell. The key, therefore, is 3.

7. 1 The rest of the questions you may reason out yourself.

8. 4

9. 4

10. 2

11. 4

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12. 3

13. 2

14. 4

15. 1