

TNPSC Model Questions with Answers
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Subject: SCIENCE

TEST CODE: S-Q-1

Note: If the Questions has SAMACHEER Reference, its Std and Chapters are specified in the Braces.

1. The Symbol of SI Unit for “Amount of Substance” is

- a. mol
- b. mole
- c. molecular
- d. Cd

Answer: a. mol

Here the keyword is ‘Symbol’. The Symbol of SI Unit for Amount of Substance is mol whereas the SI Unit of Amount of Substance is mole.

2. The instrument used to measure the altitude of an object is

- a. Ammeter
- b. Altimeter
- c. Anemometer
- d. Audiometer

Answer: b. Altimeter

Altimeter is mostly used in aircrafts. Ammeter measures the strength of Electric current. Anemometer measures force and velocity of wind and its directions. Audiometer measures the intensity of Sound.

3. The Wood Furniture are coated with which chemical to protect from Termite destruction

- a. Copper sulphate
- b. Sodium Nitrate
- c. Plaster of Paris
- d. Zinc chloride

Answer: d. Zinc chloride

Copper sulphate is used as insecticide and in electric cells. Sodium Nitrate is a fertilizer. Plaster of paris is mainly used in Statues and in surgery purposes.

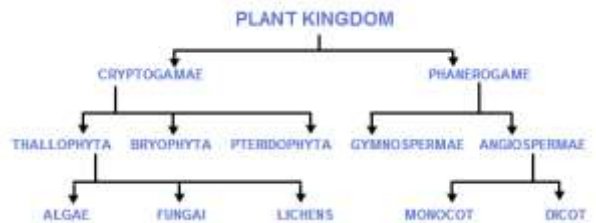
4. Consider ‘Thalophyta’ in the classification of Plant Kingdom

- I. This is the largest group of the Plant Kingdom
- II. The body of the plants in this group are not differentiated into root, stem and leaves.

Choose the correct statement

- a. I only
- b. II Only
- c. I and II
- d. None

Answer: c. I and II



5. Cellular Respiration in plants takes place as

- Plant uses Oxygen and Produces Carbon dioxide
- Plant uses Carbon dioxide and Produces Oxygen
- Plant uses both Oxygen and Carbon dioxide and produces water
- None of the above

Answer: a. Plant uses Oxygen and Produces Carbon dioxide.

It is very important to note that, Photosynthesis is different and Respiration is different. For the process of Photosynthesis, plants intake Carbon dioxide from the atmosphere and uses it with water in presence of Sun Light and the products of Photosynthesis are Glucose, Water and Oxygen.

Normally Respiration denotes the movement of Oxygen into the body of organism (inhale) and release of Carbon dioxide.

Cellular Respiration is the process of reaction of Oxygen with Glucose in the cells of the organisms to produce Energy, Water and Carbon dioxide (this Carbon dioxide is released out).

Hence for respiration, the plants too need Oxygen. Usually, plants uses the Oxygen produced from Photosynthesis process for its respiration instead of getting from atmosphere. The excess Oxygen after using for respiration is given out to the atmosphere. This is generally said as Plants intake Carbon dioxide and gives out Oxygen.

6. According to Buoyant force, When object is immersed in a fluid (liquid or gas), it experiences an apparent loss of weight which is equal to the

- Weight of the Object itself
- Weight of the Fluid
- Combined weight of the Object and Fluid
- None of the above

Answer: b. Weight of the fluid

The Buoyant force is also called as Archimedes' principle as it was said by him. According to it, When a body is immersed in a fluid, (liquid or gas) it experiences an apparent loss of weight which is equal to the weight of the fluid displaced. The reason for the apparent loss of weight we know is the buoyant force.

(Std 9 - Liquids)

7. The Electrical cell converts,

- Mechanical Energy into Electrical Energy
- Electrical Energy into Mechanical Energy
- Chemical Energy into Electrical Energy
- All the above.

Answer: c. Chemical Energy into Electrical Energy.

An electric cell has two different metal plates called electrodes kept inside a chemical called electrolyte. Due to chemical reaction, one plate develops a positive charge and the other plate develops a negative charge and produces electric current.

8. In Agricultural practices, the method of Irrigation in which the water is allowed to enter the field through channels made between the two rows of crops is known as

- a. Basin Irrigation
- b. Drip Irrigation
- c. Sprinkler Irrigation
- d. Furrow Irrigation

Answer: d. Furrow Irrigation

(Std 8 – Crop production and management)

The Furrow irrigation method is used in crops like Sugarcane, Banana, Paddy.



Furrow Irrigation

Basin irrigation: In this method the field is just filled with water. (e.g Paddy)

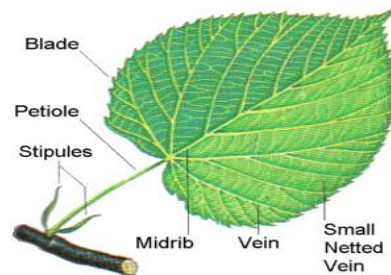
Sprinkler irrigation: This irrigation is used where the soil cannot retain water for a long time. Here the water is sprinkled by sprinklers. e.g. Lawn

Drip irrigation: In this irrigation the water falls drop by drop directly at the position of the roots, so it is called drip irrigation. It is the best method to save water. It helps to irrigate grapes, banana, brinjal, etc.

9. The openings in the Leaves, through which the air and water comes out is called as

- a. Petiole
- b. Stipules
- c. Stomata
- d. Vein

Answer: c. Stomata



10. The 'Bose-Einstein condensate' State of Matter (5th state of matter) will be as

- a. Super heated gaseous
- b. Normal heated gaseous
- c. Super cooled solids
- d. Normal cooled solids

Answer: c. Super cooled solids

(Std 7 – Matter in our surrounding)

The matter (particles) exists in 5 different states. The first three are Solid, Liquid and Gas. Fourth State of Matter 'Plasma' is a super heated gaseous State. Fifth State of Matter 'Bose-Einstein condensate' is a super cooled Solid.

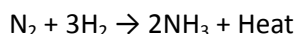
11. The Chemical reaction in which the Heat is evolved as an byproduct is known as

- Exothermic Reaction
- Endothermic Reaction
- Redox Reaction
- Combustion Reaction

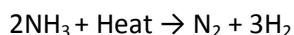
Answer: a. Exothermic Reaction

(Std 10 – Chemical Reaction)

The chemical reactions which take place with the evolution of heat energy are called exothermic reactions.



The chemical reactions which take place with the absorption of heat energy are called endothermic reactions.



The Chemical Reaction in which both the Oxidation and Reduction takes place is called as Redox Reaction.

12. The middle layer in the structure of Skin Tissue is

- Hypodermis
- Epidermis
- Dermis
- Follicle

Answer: c. Dermis

(Std 9 – Human Body Organ System)

The skin is like an envelope and its complex structure is divided into three layers of tissues: 1.Epidermis 2.Dermis 3.Hypodermis

Epidermis is the upper layer of the skin. The outermost layer consists of flat, thin and

scale - like dead cells. It is separated from the dermis by the basement membrane.

The dermis is the middle layer. It is thick but elastic. The dermis consists of nerves, blood vessels, hair follicles, sweat glands and sebaceous glands (oil glands). Sweat glands separate sweat from the blood.

It is the innermost layer of the skin. It is thick and contains large amounts of adipose tissue.

13. Consider the following properties

- It is main source is combustion of fuels
- It reacts with hemoglobin in human blood and reduces the affinity of Oxygen with hemoglobin and this may lead to death.

Which Gas has the above properties?

- Carbon monoxide
- Carbon dioxide
- Nitrogen oxides
- Sulphur dioxide

Answer: a. Carbon monoxide

(Std 8 – Air, Water and Soil Pollution)

Carbon dioxide leads to Global warming. Nitrogen oxides from automobile exhaust cause acid rain. Sulphur dioxide causes irritation in the eyes, lung cancer and asthma.

14. The World Health Organisation defines adolescence as the period of life between

- 9 and 18 years of age
- 11 and 18 years of age
- 11 and 19 years of age
- 13 and 19 years of age

Answer: c. 11 and 19 years of age

(Std 8 – Reaching the age of adolescence)

15. Match the following Vitamins and their deficiency disease

- A. Vitamin A - 1. Beri - Beri
- B. Vitamin K - 2. Scurvy
- C. Vitamin B₁ - 3. Haemorrhage
- D. Vitamin C - 4. Nyctalopia

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

Answer: d. 4 3 1 2

Table 9.1

Vitamin	Source	Functions (essential for)	Deficiency diseases
1. Vitamin A	Oil, fish, liver egg, milk, butter and corns	Eye and lungs	Night blindness
2. Vitamin D	Animal fat, milk, ghee, butter	Bones and teeth formation	Rickets
3. Vitamin E	Vegetable, milk, egg yolk and vegetable oils	Sex glands	Haemolysis & sterility
4. Vitamin K	Liver, spinach, cauliflower, green tomatoes	Blood clotting	Haemorrhage
5. Vitamin B ₁	Cereals, wheat, carrot, milk	Nervous system	Beri-beri
6. Vitamin B ₂	Cereals, milk, egg, liver	Eyes, skin, blood	Slow growth, sore eyes
7. Vitamin B ₃	Meat, fish, cereals, peanuts	Gum and tongue	Inflammation of the tongue and lateral margins of tongue and gums become swollen and red
8. Vitamin C	Lemon, grapes, tomatoes, oranges, apples and vegetables healing	Gums and wound	Scurvy

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