

## **COMMON MISTAKES/MISCONCEPTIONS**

1. Qn: Name one vertebrate which has a shell.

Wrong answer (X) : Snail/Cowrie/Oyster.

Correct answer (✓): Tortoise /turtle/terrapin

Comment: *Snails cowries and oysters have shells but don't have they are vertebrates which have shells.*

2. Qn: Which type of fertilization do birds undergo?

Wrong answer (X) : external fertilization

Correct answer (✓): Internal fertilization.

Comment: *The fusion of male and female gametes in birds takes place inside the body of a female animal and this is called internal fertilization. However external fertilization takes place outside the body of a female animal e.g in amphibians and fish.*

3. Qn: Why is a rat grouped under mammals?

Wrong answer (X) : A rat is warm blooded/has an endoskeleton/it has a backbone.

Correct answer (✓): A rat has fur on its body/ A rat has mammary glands like all the mammals.

Comment: *The question demands for main characteristics common to only mammals.*

4. Qn: To which class of vertebrates does a frog belong?

Wrong answer (X) : Coldblooded vertebrates.

Correct answer (✓): Amphibians.

Comment: *Vertebrates are grouped into five classes i.e. Mammals, Birds, Reptiles, amphibians and fish so being cold blooded does not give a specific class of a given animals.*

5. Qn: Name the structure a millipede uses for breathing.

Wrong answer (X) : Moist skin

Correct answer (✓): Spiracles

Comment: *Millipedes breathe through tiny pore-like holes located at the lower part of their bodies called spiracles.*

### COMMON MISTAKES/MISCONCEPTIONS

1. Qn: Give one importance of bacteria in the environment.

Wrong answer (X) : Bacteria helps in the formation of soil.

Correct answer (✓): Bacteria help in the formation of soil.

Comment: *Bacteria is a plural word.*

Note: *Fungi is also a plural word and fungus is singular.*

2. Qn: How are gills useful to mushroom?

Wrong answer (X) : For breathing

Correct answer (✓): Gills produce and store spores.

Comment: *Gills that are used for breathing are found in fish but gills of a mushroom are used to produce and store spores.*

3. Qn: Name one skin disease caused by a fungus:

Wrong answer (X) : Ring worms

Correct answer (✓): Ring worm

Comment: *Always take note of certain spellings because omission addition of spaces and certain letters changes their meaning.*

4. Qn: Mention any one condition necessary for bacteria to multiply.

Wrong answer (X) : Oxygen

Correct answer (✓): Presence of water (moisture) food /warmth.

Comment: *Oxygen can be condition necessary for only a certain group of bacteria to multiply but not all kinds of bacteria.*

Some bacteria can respire even in the absence of oxygen e.g anaerobic bacteria

## **COMMON MISTAKES/MISCONCEPTIONS**

**Qn:** By what process does heat travel through gases?

**Wrong answer (X) :** By radiation

**Correct answer (✓) :** By convection

**Comment:** *Radiation is the movement of heat energy in form of waves through an empty space or vacuum while convection is the bulk movement of heated molecules of fluids and gases in form of currents.*

**Qn:** Which type of energy is possessed by timber tied on a packed lorry?

**Wrong answer (X) :** Kinetic energy

**Correct answer (✓) :** Potential energy

**Comment:** *Potential is the energy in a body due to its resting position while kinetic is the energy in a body due to its motion(movement)*

**Qn:** Name the standard units for measured weight.

**Wrong answer (X) :** Gram

**Correct answer (✓) :** Newton

**Comment:** *Weight like all other forces is measured in Newtons but mass is measured in kg though its basic units are grammes.*

**Qn:** How does a guitar produce sound?

**Wrong answer (X) :** By plucking it.

**Correct answer (✓) :** By vibration of its strings when plucked.

**Comment:** *Sound is basically produced from the vibration of a given object (instrument).*

**Qn:** Give any one effect of heat loss on matter.

**Wrong answer (X) :** Makes matter expand /increases temperature of mater.

**Correct answer (✓) :** Heat loss makes matter cool condense freeze contract



### COMMON MISTAKES/MISCONCEPTIONS

1. Qn: Name one non-flowering plant that reproduces by means of spores.

Wrong answer (X) : Mushrooms / puffballs / Toadstools.

Correct answer (✓): Moss / Ferns / Horsetails / algae.

Comment: A plant must have chlorophyll but mushrooms and other fungi lack chlorophyll so that they are not plants.

2. Qn: How do coniferous plants reproduce?

Wrong answer (X) : By means of spores.

Correct answer (✓): By means of seeds.

Comment: Conifers are a group of non-flowering plants that reproduce by means of seeds stored in cones.

3. Qn: How do moss plants feed?

Wrong answer (X) : They feed saprophytically.

Correct answer (✓): By making their own food / Through photosynthesis.

Comment: All plants on earth have chlorophyll which enable them to make their own food which they feed on.

4. Qn: How are black-jack seeds dispersed?

Wrong answer (X) : By hooks

Correct answer (✓): By animal dispersal / By animals.

Comment: Hooks as a response is an adaptation but not a way or method of dispersal.

5. Qn: Give one way flowers are adapted to self dispersal.

Wrong answer (X) : Their anthers are longer than the stigma.

Correct answer (✓): Their stamens are usually longer than the pistils (styles).

Comment: The anther is a short and small part of a stamen so it does not grow tall but rather its filament may.

**THEME: SCIENCE IN HUMAN ACTIVITIES AND HUMAN OCCUPATIONS.**

### **COMMON MISTAKES/MISCONCEPTIONS**

**1. Qn: Name any one type of poultry.**

**Wrong answer (X) :** broilers, layers.

**Correct answer (✓):** Chicken, hen, ducks.

**Comment:** *Broilers, layers are types of chicken but not types of poultry.*

**2. Qn: Write any one system used in rearing poultry.**

**Wrong answer (X) :** Battery cage, Fold pen.

**Correct answer (✓):** Battery (cage), Fold (pen)

**Comment:** *Battery cage is repetition so as fold pen therefore either say battery system or cage system.*

### **COMMON MISTAKES/MISCONCEPTIONS**

1. Qn: State the main causes of pellagra in weaning babies.

**Wrong answer (X) :** Lack of vitamin B<sub>2</sub> in the diet.

**Correct answer (✓):** Lack of vitamin B<sub>3</sub> in the diet.

**Comment:** *Lack of vitamin B<sub>2</sub> in a child's diet leads to ariboflavinosis. Painful cracks on the corners of the mouth, lips and scaly patches on the head are common signs of vitamin B<sub>2</sub> deficiency.*

2. Qn: Give two uses of food to the human body.

**Wrong answer (X) :** makes people happy / It is a habit.

**Correct answer (✓):** Promotes proper growth/health/ gives energy.

**Comment:** *Happiness and habits are social factors and reasons for eating food but they are not scientific uses of food.*

3. Qn: Give one sign of poor feeding in adults.

**Wrong answer (X) :** General body weakness.

**Correct answer (✓):** General loss of body weight / scaly skin.

**Comment:** *General body weakness is a system of a diseases but not a sign.*

4. Qn: Mention any one example of a vulneral group of people.

**Wrong answer (X) :** Lame/Blind

**Correct answer (✓):** Babies/Breast feeding mother /Elderly.

**Comment:** *Lame or blind people are necessarily vulnerable since they are just having one or two of their body parts not function well.*



### **COMMON MISTAKES/MISCONCEPTIONS**

1. Qn: Which type of change occurs when ice melts?

Wrong answer (X) : Melting.

Correct answer (✓): physical change.

Comment: *Melting is a physical change of state but not a type of change as required by the question. Types of changes are biological physical and chemical changes.*

2. Qn: Which type of change takes place when an egg breaks?

Wrong answer (X) : chemical change.

Correct answer (✓): Physical change

Comment: Chemical changes lead to the formation of new permanent substances yet When an egg breaks there is no new permanent substance formed.