

**WINTER BREAK HOMEWORK**

**CLASS: IX**

**SUBJECT: SCIENCE**

**SUBJECT TEACHER: K.TEJPAL SINGH**

- 1 Which of the following is not a fish**  
a.Shark                      b.Rohu                      c.Whale                      d.Electric Ray
- 2 Pinus and Cycas belongs to the group**  
a.Angiosperms              b.Gymnosperms              c.Bryophytes              d.Pteridophytes
- 3 The formula of Calcium phosphate is**  
a.  $\text{CaPO}_4$                       b.  $\text{Ca}(\text{PO}_4)_2$                       c.  $\text{Ca}_3(\text{PO}_4)_2$                       d.  $\text{Ca}_2(\text{PO}_4)_3$
- 4 The combining capacity of an element is called**  
a. Valency                      b. Atomicity                      c. Atomic number                      d. Valence electrons
- 5 When force acts in opposite direction the work done is**  
a. Positive                      b. Zero                      c. negative                      d. infinity
- 6 Water stored in a dam possesses**  
a. No energy                      b. kinetic energy                      c. potential energy                      d. electrical energy
- 7 Octopus, Pila and Unio belongs to the phylum**  
a. Echinodermata              b. Mollusca                      c. Arthropoda                      d. Annelida
- 8 Give one striking characteristic feature of the phylum Arthropoda.**
- 9 Distinguish between an atom and an ion.**
- 10 Distinguish between an anion and cation.**
- 11 What are polyatomic ions? Give two examples.**
- 12 Give the Latin name and chemical symbol for the following**  
a. Iron                      b. Sodium                      c. Potassium                      d. Gold
- 13 Write chemical formulae of :**  
a. Sodium oxide                      b. Calcium chloride                      c. Magnesium hydroxide
- 14 State Archimedes' principle and write its two applications.**
- 15 Give reason a piece of iron sinks whereas a huge log of wood floats in water.**
- 16 Derive an expression for kinetic energy.**
- 17 An electric bulb of 60 W is used for 6 h per day. Calculate the 'units' of energy consumed in the month of December by the bulb.**
- 18 List two similarities and two differences between amoeba and euglena.**
- 19 List in tabular form any three distinguishing features between the animals belonging to the ave group and mammalian group.**
- 20 What is the system of scientific naming of organisms called? State two important conventions followed while giving such names.**
- 21 Define density and relative density.**
- 22 Give reason: -Knife and tools have sharp edges.**
- 23 Distinguish between: -**
  - 1)                      Monocot and Dicot.
  - 2)                      Gymnosperm and Angiosperm
  - 3)                      Cryptogam and Phanerogams.
- 24 Which division of plant kingdom is known as amphibians? Why?**

**WINTER BREAK HOMEWORK**

**CLASS: VI B**

**SUBJECT: SCIENCE**

**SUBJECT TEACHER: K.TEJPAL SINGH**

I) Identify the venation and types of root systems

S. NO	NAME OF THE PLANT	VENATION	ROOT SYSTEM
1	Maize		
2	Banyan tree		
3	Mango tree		
4	Grass		
5	China rose plant		

I) **Answer the following questions-**

1. Why do predators have eyes in the front and the prey on the sides?
2. Why camel is called the ship of the desert?
3. How is a frog adapted to live both on land and water?
4. Which features enable a cactus to live in a desert?
5. If you tie a scale on your arm with a cloth, are you able to bend your elbow? Explain.
6. How is a bird's body adapted to fly?
7. Name the colored part of a flower and explain its function.
8. Why do the flowers which bloom at night have a strong scent?
9. How can you predict the type of root system of a plant by observing its leaf?
10. What do you mean by acclimatization?
11. What are luminous objects? Give one example.
12. How are shadows formed?
13. What are the three things needed to form a shadow?

II) **Match the following**

Column I

Rats and snakes

Lion

Deer

Dolphins and whales

Camel

Frogs

Column II

(a) Predator

(b) Live both on land and in water

(c) Stay in burrows deep in the sand

(d) Prey

(e) Breathe through blowholes

(f) Can live without water for many days

III) Name the following:

1. Two rainwater harvesting techniques
2. The two processes through which water vapor enters the air.
3. Two adverse effects of floods.
4. Two adverse effects of drought.
5. Two factors leading to shortage of usable water on the earth.

IV) Fill in the blanks:

1. A freely suspended \_\_\_\_\_ always points in the north-south direction.
2. Similar poles of two magnets always \_\_\_\_\_ each other.
3. Bar magnet is an example of \_\_\_\_\_ magnet.
4. A magnetic \_\_\_\_\_ is used for finding geographic direction.

V) Name the following:

- (i) The source of electricity.
- (ii) The two terminals of a cell.
- (iii) An electrical appliance that uses electric cement.
- (iv) An electrical gadget to break an electric circuit.
- (v) Name the person who invented the cell and the one who invented the electric bulb.