

**Standard 9****SCIENCE**

Time: 1.30 Hrs.

Marks: 50

I. Choose the correct answer:**8×1=8**

- 1) SI unit of temperature is
 - a) Fahrenheit
 - b) Joule
 - c) Celsius
 - d) Kelvin
- 2) Calorie is the unit of
 - a) heat
 - b) work
 - c) temperature
 - d) food
- 3) Speed of sound in air is _____.
 - a) 330 m/s
 - b) 340 m/s
 - c) 3×10^8 m/s
 - d) 300 m/s
- 4) A phenomenon in which an element exists in different modification in same physical state is called
 - a) isomerism
 - b) allotropy
 - c) catenation
 - d) crystallinity
- 5) Graphene is one atom thick layer of carbon obtained from
 - a) diamond
 - b) fullerene
 - c) graphite
 - d) gas carbon
- 6) The age of a dead animal can be determined by using an isotope of _____.
 - a) Carbon
 - b) Iodine
 - c) Phosphorous
 - d) Oxygen
- 7) Which Indian variety of honey bee is commonly used for apiculture?
 - a) Apis dorsata
 - b) Apis florea
 - c) Apis mellifera
 - d) Apis indica
- 8) The symbiotic association of fungi and vascular plants is
 - a) Lichen
 - b) Rhizobium
 - c) Mycorrhizae
 - d) Azotobacter

II. Answer ANY 6 questions: [Q.No. 10 is compulsory]**6×2=12**

- 9) Differentiate convection and radiation.
- 10) An iron ball requires 5000J heat energy to raise its temperature by 20k. Calculate the heat capacity of iron ball.
- 11) Through which medium sound travels faster, iron or water? Give reason.
- 12) Write all possible isomers of C_2H_6O .
- 13) What are called Anaesthetics?
- 14) **Fill in the blanks:**
 - i) Painkiller drugs are called _____.
 - ii) _____ is a chemical used in finger print analysis.
- 15) What are the types of vegetable garden?
- 16) Mention any two mushroom preservation methods.

III. Answer ANY 4 questions: [Q.No. 19 is compulsory]**4×4=16**

- 17) Explain convection in daily life.
- 18) Explain how does SONAR work?
- 19) a) What is the wavelength of a sound wave in air at $20^\circ C$ with a frequency of 22 MHz?
b) You and your friend are on the moon. Will you be able to hear any sound produced by your friend?
- 20) What is catenation? How does carbon form catenated compounds?

21) a) **Match it:**

- | | | |
|-------------------------|---|--------------------------------|
| 1. Corrosion prevention | - | Large surface area |
| 2. Hyperthyroidism | - | Identification of cancer cells |
| 3. Nanoparticle | - | Electroplating |
| 4. Nanorobotics | - | Iodine - 131 |

b) What is Radio Carbon Dating?

22) Enumerate the advantages of vermicompost over chemical fertilizer.

IV. Answer all questions:

2×7=14

23) a) Why do people prefer wearing white clothes during summer?

b) List the applications of sound.

(OR)

a) Why are one-time use and throw away plastics harmful?

b) Explain the types of dyes based on their method of application.

24) a) List the medicinal importance of honey.

b) Farmyard manure and Sheep manure - Differentiate.

(OR)

a) Give an account of different types of fish ponds used for rearing fishes.

b) Write any four medicinal plants.
