



## Standard 10

## SCIENCE

Time: 1.30 Hrs.

Marks: 50

## I. Choose the correct answer:

8×1=8

- 1) The minimum distance between the sources of sound and the obstacle to hear the echo, should be  
a) 17m                      b) 20m                      c) 25m                      d) 50m
- 2) Artificial radio activity was discovered by  
a) Bequerel                      b) Irene Curie                      c) Roentgen                      d) Nelis Bohr
- 3) Isotope in used for the treatment of cancer.  
a) Radio Iodine                      b) Radio Cobalt                      c) Radio Carbon                      d) Radio Nickel
- 4) Rectified sprit is an aqueous solution which contains about \_\_\_\_\_ of ethanol.  
a) 95.5%                      b) 75.5%                      c) 55.5%                      d) 45.5%
- 5) The bestway of direct dating fossils of recent origin is by  
a) Radio carbon method                      b) Uranium lead method  
c) Potassium - argon method                      d) Both a and c
- 6) Pusa Komal is a disease resistant variety of \_\_\_\_\_.  
a) Sugarcane                      b) Rice                      c) Cow pea                      d) Maize
- 7) Tobacco consumption is known to stimulate secretion of adrenaline. The component causing this could be  
a) Nicotine                      b) Tannic acid                      c) Curcumin                      d) Leptin
- 8) World 'No Tobacco Day' is observed on  
a) May 31                      b) June 6                      c) April 22                      d) October 2

## II. Answer ANY 6 questions:

6×2=12

## [Question No. 11 is compulsory]

- 9) Why does sound travel faster on a rainy day than on a dry day?
- 10) Write any three features of natural and artificial radioactivity.
- 11) If the pH of a solution is 4.5. What is its POH?
- 12) Why is Archaeopteryx considered to be a connecting link?
- 13) Name two maize hybrids rich in amino acid Lysine.
- 14) Differentiate between outbreeding and inbreeding.
- 15) What is Metastasis?
- 16) What are the various routes by which transmission of HIV takes place?

## III. Answer ANY 4 questions:

4×4=16

## [Question No. 18 is compulsory]

- 17) a) What do you understand by the term 'Ultrasonic Vibration'?
- b) State uses of Ultrasonic Vibrations.
- c) Name three animals which can hear Ultrasonic Vibrations.

- 18) a) If A is a radioactive element which emits an  $\alpha$  (alpha) - particle and produces  ${}_{104}\text{Rf}^{259}$ . Write the atomic number and mass number of the element A.
- b) What is the average energy released from a single fission process?
- 19) Differentiate soaps and detergents.
- 20) How does pH play an important role in everyday life?
- 21) What are the effects of hybrid vigour in animals?
- 22) Natural Selection is a driving force for evolution - How?

**IV. Answer ALL questions:****2×7=14****[Draw diagrams wherever necessary]**

- 23) a) What is nuclear reactor?
- b) Explain its essential parts with their functions.
- (OR)**
- a) What is called homologous series? Give any of three its characteristics.
- b) Name the simplest Ketone and give its structural formula.
- 24) a) How do you differentiate homologous organs from analogous organs?
- b) Define Ethnobotany. **(OR)**
- Suggest measures to overcome the problems of an alcoholic.
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