

KOMARASAMY GOUNDER MAT.HR.SEC.SCHOOL - KURUMANDUR

MONTHLY TEST - AUGUST -2023

X - STANDARD

SCIENCE

TIME : 1.30 HOURS

SCIENCE = UNIT : 6 & 22

MAXIMUM MARKS : 50

PART - A

I.CHOOSE THE CORRECT ANSWER :

10 X 1 = 10

1. Proton-Proton chain reaction is an example of ____.

- a) Nuclear fission b) α - decay c) Nuclear fusion d) β - decay.

2. aprons are used to protect us from gamma radiations.

- a) Lead oxide b) Iron c) Lead d) Aluminium

3. isotope is used for the treatment of cancer.

- a) Radio Iodine b) Radio Cobalt c) Radio Carbon d) Radio Nickel

4. In which of the following, no change in mass number of the daughter nuclei takes place

- i) α decay ii) β decay iii) γ decay iv) neutron decay

- a) (i) is correct b) (ii) and (iii) are correct
c) (i) & (iv) are correct d) (ii) & (iv) are correct.

5. The charge of the α rays ____.

- a) $2e$ b) $-e$ c) 0 d) none of these.

6. The gas released from vehicles exhaust are:

- i) carbon monoxide ii) Sulphur dioxide
iii) Oxides of nitrogen:

- a) (i) and (ii) b) (i) and (iii) c) (ii) and (iii) d) (i), (ii) and (iii)

7. A renewable source of energy is:

- a) petroleum b) coal c) nuclear fuel d) trees

8. An inexhaustible resources is:

- a) wind power b) soil fertility c) wild life d) all of the above

9. Global warming will cause

- a) raise in level of oceans b) melting of glaciers
c) sinking of islands d) all of these

10. The technique to harness the water energy is ____

- a) hydropower b) electrical energy
c) tidal energy d) hydraulic fracturing

PART - BILANSWER ANY FIVE OF THE FOLLOWING :5 X 2 = 10QUESTION NUMBER "14" IS COMPULSORY.

11. Name any two wildlife conservation initiatives in India.
12. What are the advantages of using biogas?
13. What are the consequences of deforestation?
14. List any three activities based on the 3R approach to conserve natural resources.
15. Which hazardous radiation is the cause for the genetic disease?
16. State the number of protons, electrons neutrons and nucleons in ${}_{4}\text{Be}^9$ atom.
17. Calculate the amount energy released when a radioactive element undergoes fusion and results in a mass defect of 4g.

PART - C

III. ANSWER ANY FOUR OF THE FOLLOWING :

4 X 4 = 16

QUESTION NUMBER "23" IS COMPULSORY.

18. Enumerate the importance of forest.
19. How will you prevent soil erosion?
20. Explain the convention method of waste water treatments.
21. Write any three features of natural and artificial radioactivity.
22. Define the following :
 - i) critical mass. ii) one roentgen
23. Determine X and Y in the following transformations.
 - (i) ${}_{4}\text{Be}^9 + \alpha \rightarrow X$
 - (ii) ${}_{92}\text{U}^{235} + {}_0\text{n}^1 \rightarrow {}_{50}\text{Ba}^{141} + Y + 3{}_0\text{n}^1$

PART - D

IV. ANSWER THE FOLLOWING :

2 X 7 = 14

24. i) What is a nuclear reactor? Explain its essential parts with their functions.
- ii) What is stellar energy?

Or

Mention the applications of radio isotopes in agriculture and industries and archeological research.

25. i) How does rainwater harvesting structures recharge groundwater?
 - ii) What are the consequences of soil erosion?
- Or
- i) Write the different Methods of solid wastes disposal.
 - ii) Give the various steps to conserve non-renewable resource.