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| **CLASS REVISION TEST-3**  **SCIENCE - PHYSICS** | | | | | |
| **EX.NO** |  | **AD.NO** |  | **GRADE** | **X-LAVENDER** |
| **DATE** | **12/11/19** | **MARKS** | **60** | **TIME** | **2 Hrs** |

**SECTION - A**

**I. Choose the correct answer:- 7x1=7**

1. Solar energy is the universal source of energy. It is converted into chemical energy by

a. photovoltaic cells b. solar cooker

c. solar concentrators d. green plants

2. Which of the following is employed for harnessing the potential energy of surface water stored in a reservoir?

a. Thermal power plant b. Nuclear power plant

c. Tidal power plant d. Hydroelectric power plant

3. For nuclear reactor, 48 kJ of energy is produced per minute. If the energy released per fission is 3.2 x 10-11 J, then the number of fission which would be twaking place in a reactor per second is

a. 5 x 1014 b. 2 x 1014 c.52 x 1013 d. 2.5 x 1013

4. What sector of Indian economy consumes most of the nation’s pertroleum?

a. residential b. commercial c. industrial d. transportation

5. Ocean thermal energyis due to

a. energy stored by waves in the ocean

b. temperature difference at different levels in the ocean

c. pressure difference at different levels in the ocean

d. tides arising out in the ocean

6. Which is the ultimate source of energy?

a. Water b. Sun c. Uranium d. Fossil fuels

7. The main constituent of bio-gas is

a. methane b. carbon dioxide

c. hydrogen d. hydrogen sulphide

**II. Fill in the blanks:- 3x1=3**

8. When wood is burnt in a limited supply of oxygen …………… is left behind as residue.

9. Bio-gas contains ………………. % methane.

10. The internal heat of an earth is known as …………….. energy.

**III. Assertion and Reason:- 3x1=3**

**In the following questions, a statement of assertion is followed by a statement of reason. Mark the correct choice as:**

a. If both assertion and reason are true and reason is the correct explanation of assertion.

b. If both assertion and reason are true but reason is not the correct explanation of assertion.

c. If assertion is true but reason is false.

d. If both assertion and reason are false.

**11.** **Assertion :** Solar heating devices are painted black.

**Reason :** Black bodies are good absorbers of heat, so temperature rises quickly.

**12. Assertion :** Bio-gas is also known as Gobar gas.

**Reason :** Nuclear power is used because it cannot be controlled.

**13.** **Assertion :** U235 nucleus, by absorbing a slow neutron undergoes unclear fission with the

evolution of a significant quantity of heat.

**Reason :** During nuclear fission a part of the original mass of U235 is lost gets converted into

heat.

**Answer in a word:- 6x1=6**

14. Name any two elements which are used for fabrication of solar cells.

15. Mention the minimum velocity of wind required for obtaining electric power with a wind mill generator.

16. What are hot spots inside earth’s crust?

17. What do you mean by fuel?

18. Name any two characteristics which you look for in a good fuel.

19. Write the name of the substance whose vapours are used to run the turbine of ocean thermal energy plant.

**SECTION - B**

**V. Answer the following questions:- 7x3=21**

20. Burning of fossil fuels is cause of global warming. Give reason in support of this statement.

21. List the products of combustion of fossil fuels. State the harmful effects of products on environment.

22. Out of two solar cookers, one was covered with a plane glass slab and the other was left open. Which of the two solar cookers will be more efficient and why?

23. Out of elements A and B with mass number 2 and 235 respectively, which one is suitable for

i. fuel of a nuclear reactor ii. making a hydrogen bomb.

Name the nuclear reaction involved in each case. Write one difference between two types of reactions.

24. Biomass has been used as fuel since ancient times. How has it been modified to function as a more efficient fuel in recent past?

25. What is biomass? Name the reaction that takes place in the biogas plant. Write the main constituents if biogas. List two reasons for considering the biogas an ideal fuel for domestic use.

26. What is a wind energy farm? Mention the steps involved in generating electricity from such farms.

**SECTION - C**

**VI. Answer the following questions briefly:- 5x4=20**

27. Compare and contrast fossil fuels and the Sun as direct source of energy.

28. State the principle of working of an ocean thermal energy power conversion plant. Explain how the plant works? Write one essential condition for it to operate properly.

29. Distinguish between renewable and non-renewable sources of energy. Also give an example of each of these resources.

30. List any three hazards of nuclear waste.

31. What is geothermal energy?