

FORMATIVE ASSESSMENT I**Q.PAPER**

MARKS-30

TIME- 70 MINUTES

Instructions:

- Questions : 1 to 5 – 1 Mark each
- Questions : 6 to 9 – 2 Marks each
- Questions : 10 to 13 – 3 Marks each
- Question 14 – 5 Marks

1. Name the component of sunlight, exposure to which may cause skin cancer.
2. Flowing water possess which type of energy.
3. Name one place in India where wind energy power station is installed.
4. What is a solar panel?
5. What type of energy transformation takes place during winding of spring of a clock?
6. Write two differences between renewable and non – renewable sources of energy.
7. What is the principle of solar cooker? Name two types of solar cooker.
8. Name any two types of harmful nuclear radiations emitted during nuclear fission.
9. What is thermal power plant? Where it is preferably situated?
10. What is the principle of solar cooker? Give two limitations and two advantages of solar cooker.
11. Name the fuel for hydro power plant. Mention two advantages and disadvantages of producing electricity at the hydro power plant.
12. Explain why:
 - a) It is difficult to burn a piece of wood fresh from a tree.
 - b) Pouring dry sand over the fire extinguishes it.
 - c) It is difficult to use hydrogen as source of energy.
13. What are the different types of energies obtained from sea? Explain.
14.
 - a) What is a principle of Biogas?
 - b) Explain it working in brief.
 - c) Draw a labelled diagram of biogas.

HOTS QUESTIONS (SOLVED)

1. Name the materials used for making solar cells.
A. Silicon, Germanium and Selenium
2. What fraction of solar energy reaches the earth's surface?
A. 47%

3. Name the process that produces a large amount of energy in the sun.
A. Nuclear fusion
4. Why is biogas called a clean fuel?
A. Because it- (i) leaves no ash (ii) does not cause pollution (iii) does not produce any poisonous gas.

HOTS QUESTIONS (UNSOLVED)

1. What is the use of black painted surface in solar heating devises.
2. Why are bio gas plants considered to be boon to the farmers? Give reason.
3. Hydroelectricity generated at a dam may be considered another form of solar energy. Why?
4. How is the slurry left over after the generation of biogas in biogas plant used?
5. Why is charcoal considered to be a better fuel than wood?
6. Why a solar cooker cannot be used for frying or making chapattis?
7. In parabolic reflector type coolers, even temperature up to 180°C - 200°C can be attained. How?
8. Modern chulahs are more efficient than traditional chulahs. Why?
9. How is hydro energy converted into electrical energy?
10. Explain, why only a part of the solar energy that strikes the upper regions of atmosphere reaches the surface of the earth?

ENERGY

ORAL QUESTIONS (CONVERSATION TYPE)

1.
 - a) What is a good source of energy?
 - b) Name one good source of energy.
 - c) It is a renewable source of energy?
 - d) Is it conventional or non – conventional source of energy?
 - e) What other name is give to it?
 - f) What is a fossil fuel?
 - g) Name any other two fossil fuels.
2.
 - a) Which is the ultimate source of all forms of energy?
 - b) Can you explain?
 - c) Name some renewable source of energy arising due to sun.
 - d) Name some non – renewable source of energy arising due to sun.
 - e) Why is the energy contained in fossil fuels considered due to sun's energy?

- f) Name any source of energy not influenced by sun's energy.
3. a) What is the principle of nuclear energy?
- b) What are the kinds of nuclear reaction?
- c) Which of these can be used for destructive purposes?
- d) Which of these can be used to produce energy for common use?
- e) What is nuclear fission?
- f) Name two substances which are easily fissionable.
- g) What are these substances called?
- h) What is this phenomenon of breaking up of radioactive isotopes called?
- i) Name the rays emitted.

ORAL QUESTIONS

1. Which component of solar radiations produces heat?
2. Name a form of energy that can be harnessed from the oceans.
3. Name the main component of biogas.
4. Name a fuel which is considered cleaner than CNG.
5. What is common between an atom bomb and a nuclear reactor?
6. What is the main transformation of energy during working of a windmill?
7. What are the conditions to achieve nuclear fusion?

QUIZ

1. I am a force that cannot be created but my form may be changed.
2. I am an important part of the system that transforms that transforms K.E. / P.E. into electrical energy.

3. I have been used to produce energy for a long time and my origin is in the remains of plants and animals.
4. I used to be thrown away as a waste material for centuries. But I am given an honourable name and a useful work to perform.
5. I have a huge body capable of eating water from any source with a decorative head called Hydroelectric power station.
6. I resemble a fossil fuel but find use as self sustained source of energy especially in rural areas.
7. I produce a chain of reactions each step capable of producing tremendous amount of energy.
8. I am associated with nuclear reactions but deliver heat in critical conditions.
9. I am the lightest fuel with a large potential as a source of energy.
10. I deliver hot springs with taking any energy from man – made sources or sun.

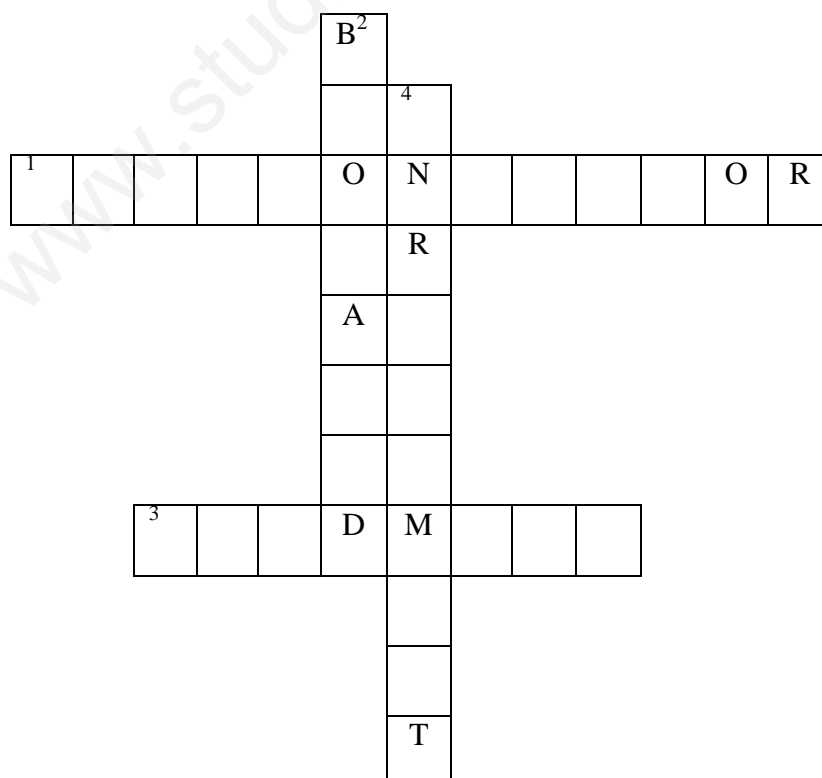
PUZZLES

1. ⇒ **Across**

1. A type of metal that allows only partial current to pass (13)
3. A device to harness kinetic energy of wind (8)

⇓ **Down**

2. Vegetable and animal waste (7)
4. Process to increase percentage of fissionable material (10)



2. ⇒ **Across**

1. Trapped energy inside earth (10)

2. A substance which slows down the speed of neutrons in nuclear reactor (9)

⇓ **Down**

3. Liquid fossil fuel (9)

5. Isotope commonly used in nuclear reactor (7)

