Physics (New Book) - FSC Part 1 Physics Chapter 4 Short Questions Preparation

Q1. What is 'Aquifer'?`

Ans 1: Aquifer is a layer of rock holding water that allows water to percolate through it with pressure.

Q2. What is a machine ? Discuss the input and output and efficiency of a mechanical machine ?

Ans 1: **Machine:**A machine is a thing or device with the help of which we can do more work than we can do by hands.
Input of Mechanical machine: The amount of work dine on a machine by a given effort force is known as input of machine.
Input = effort *effort arm
Input = P*d
Output of Mechanical Machine: The amount of work done by a machine on the load (weight) is known as output of the machine
output = load * load arm
output = w*d
Efficiency: The ratio of output and input of a machine is known as efficiency
Efficiency: Output / input
n = w*d/ p*d

Q3. Discuss the work done by a variable force ?

Ans 1: Consider a body of mass 'm' allowed to move from point 'A' to 'B' under the action of variable force

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Q4. What is Salter's duck?

Ans 1: Salter's duck is a device which can be used to utilize the water waves energy and to generate electricity .It consists of two parts

1. Duck float
2. Balance float

The wave energy makes duck float move relative to the balance float. The relative motion of the duck float is then used to run electricity generators.

Q5. Name some non- conventional energy sources.

Ans 1: Some of the non-conventional energy sources are:

- Energy from tides
- Energy from waves
- Energy from biomass
- Energy from waste products
- Solar Energy
- Geothermal Energy

Q6. Explain briefly about residual heat of the earth.

Ans 1: Hot igneous rocks within 10km of earth's surface are present in molten form They conduct heat energy from interior part of the earth. The temperature of these rocks is 200° C or more.

Q7. What are renewable & non-renewable energy sources? Give example of each .

Ans 1: Renewable energy is derived from natural processes that are replenished constantly . Such as wind tides etc.
Non-renewable energy source is a source that does not renew itself. Such as coal, natural gas etc.

Q8. Define and explain work ?

Ans 1: **Work:**The scalar product of force and displacement is known as work.
Explanation: Consider a force 'F' is acting on a body of mass 'm' and moves it form point 'A' to point 'B' through a displacement 'd'
Work = Force * displacement
W = F*d cosO

Q9. What are non-conventional energy sources? Describe briefly.

Ans 1: The energy sources which are not very common theses days are called non- conventional energy sources. Some of the non-conventional energy sources are :

1. Energy from tides
2. Energy from waves
3. Energy from biomass
4. Energy from waste products
5. Solar Energy
6. Geothermal Energy

Q10. What sort of energy is in the following?
(A) Compressed spring (b) Water in high dam

Ans 1: a) A compressed spring has Elastic Potential Energy stored in it.
B) Water in a high dam has Gravitational potential Energy in it.
