

Chapter Test Question Paper
Class X
Subject: Physics
Topic: Sources of Energy

Maximum Marks: 75 Marks

Time Allowed: 1 hours

The Chapter Test is a self-evaluation test to be given only after completion of the chapter.

Marking Scheme: +3 for Correct Response, -1 for wrong response

- Q1. Which of the following is a renewable source of energy?
(A) Coal (B) Natural gas (C) Wood (D) Petroleum
- Q2. The purpose of the glass cover on top of a box-type solar cooker is to
(A) allow one to see the food being cooked (B) allow more sunlight into the box
(C) prevent dust from entering the box (D) reduce heat loss by radiation
- Q3. A solar panel is made by combining a large number of
(A) solar cookers (B) solar cells
(C) Solar water heaters (D) solar concentrators
- Q4. To work properly, wind-electric generators need wind speeds of at least about
(A) 1.5 km/h (B) 15 km/h (C) 150 km/h (D) 150 m/h
- Q5. The site of a hydroelectric plant should be chosen carefully because it.
(A) produces a large amount of carbon monoxide and carbon dioxide
(B) produces a large amount of electricity
(C) affects the organisms of the region
(D) is expensive
- Q6. Electricity from the ocean can be generated based on utilising
(A) kinetic energy of the waves but not stored thermal energy
(B) stored thermal energy but not kinetic energy of the waves
(C) kinetic energy of the waves as well as stored thermal energy
(D) neither kinetic energy of the waves nor stored thermal energy
- Q7. Which energy is not derived from the sun?
(A) Nuclear energy (B) Wind energy
(C) biomass energy (D) ocean wave energy
- Q8. Which of the following is not biomass?
(A) Sun (B) Rice husk
(C) wood (D) cattle dung
- Q9. The condition for producing biogas is
(A) air but not water (B) water but not air
(C) Air and water (D) neither air nor water

Q10. Geothermal energy is feasible in regions that

- (A) are near the sea
(B) have thermal plants
(C) have coal mines
(D) are over hot spots in the crust

Q11. A solar water heater cannot be used to get hot water on

- (A) A Sunny day
(B) a cloudy day
(C) a hot day
(D) a windy day

Q12. Which of the following is not an example of a bio-mass energy source?

- (A) Wood
(B) gobar- gas
(C) Nuclear Energy
(D) Coal

Q13. Most of the sources of energy we use represent stored solar energy. Which of the following is not ultimately derived from the Sun's energy?

- (A) geothermal energy
(B) wind energy
(C) nuclear energy
(D) bio-mass.

Q14. Which of the following is renewable source of energy?

- (A) Coal
(B) Natural gas
(C) Sun light
(D) Uranium

Q15. The source of energy in a hydro power station is:

- (A) Coal
(B) Water
(C) Sunlight
(D) Diesel

Q16. Which of these is used to run turbines in thermal power plants?

- (A) Water
(B) Air
(C) Steam
(D) Ice

Q17. A renewable source of energy is

- (A) exhaustible
(B) non-replenishable
(C) limited
(D) inexhaustible

Q18. The word energy crisis stands for

- (A) Energy destruction
(B) Energy creation
(C) Conversion of energy from usable form to less usable form
(D) None of these

Q19. Device that converts the potential energy of flowing water into electricity is

- (A) Solar cooker
(B) Thermal power plant
(C) Hydro power plant
(D) Bio-gas plant

Q20. The major source of energy in India is

- (A) Nuclear
(B) Petroleum
(C) Hydro
(D) Coal

- Q21. Bio-gas is produced in a bio-gas plant, by decomposition of complex compounds of the cow-dung slurry. This process is done by : Microorganism in the
- (A) Presence of Oxygen
 - (B) Absence of Oxygen
 - (C) Presence of N₂
 - (D) None

- Q22. Limitations in harnessing the kinetic energy of flowing water in hydro power plants is/are:
- (A) The speed of flowing water should higher than 15 km/hr
 - (B) The dams can be constructed only in a limited number of places
 - (C) The dams need a high level of maintenance
 - (D) No limitations

Comprehension - Q 23 to Q 25

The solar energy reaching unit area at outer edge of the earth's atmosphere exposed perpendicularly to the rays of the sun at the average distance between the sun and earth is known as the solar constant. It is estimated to be approximately 1.4 KJ per second per square metre or 1.4 KW/m². A rocket is flying at the outer edge of Earth's atmosphere. Sun rays are incident perpendicularly on the metal surface of rocket of area 10 m².

- Q23. Solar energy incident on metal surface in 10 sec. is
- (A) 1.4 KJ
 - (B) 14 KJ
 - (C) 140 KJ
 - (D) None
- Q24. In how much time will metal surface receive 42 KJ of solar energy.
- (A) 3 sec
 - (B) 30 sec
 - (C) 300 sec
 - (D) None
- Q25. Solar energy received by unit area of metal surface in 10 sec. ñ
- (A) 1.4 KJ
 - (B) 14 KJ
 - (C) 140 KJ
 - (D) None

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	C	D	B	B	C	C	A	A	B	D
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	B	C	C	C	B	C	B	A	A	D
Que.	21	22	23	24	25					
Ans.	B	B	C	A	B					