

Class: X
Subject: physics
Topic: Sources of Energy
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

1. The world faces an energy crisis because _____.
- A. World demand for energy will increase
 - B. World oil production will peak and begin to decline
 - C. Shortages and the resulting escalation of prices can shock the economic and political order
 - D. All of the above

Ans. D

2. Solar energy stored in material such as wood, grain, sugar, and municipal waste is called _____.

- A. Fossil fuels
- B. Biomass
- C. Geothermal energy
- D. Natural Gas

Ans. B. Biomass

3. Which of the following energy sources does not produce carbon dioxide?

- A. Oil
- B. Uranium
- C. Coal
- D. Natural Gas

Ans. B

4. Nuclear energy is derived by _____.

- A. Combustion of atoms of U 235
- B. Fission of atoms of U 235
- C. Fusion of atoms of U 235
- D. The breaking of U 235 bonds

Ans. C

5. Burning of which of the following fuels produces the least amount of carbon dioxide per unit of energy?

- A. Coal
- B. Oil
- C. Natural Gas
- D. All of these produce same amount of carbon dioxide per unit of energy.

Ans. C

6. The world has the least amount of which of the following fuel types?

- A. Oil
- B. Coal
- C. Uranium
- D. There are roughly equal amounts of each of these fuels

Ans. A

7. Which of the following rock types would most likely be the best oil reservoir?

- A. Granite
- B. Shale
- C. Sandstone
- D. Salt

Ans. C (Sandstone)

8. A permeable rock that contains hydrocarbon fluids and gasses is called a(n) _____

- A. Oil trap
- B. Source Bed
- C. Oil reservoir
- D. None of these

Ans. C

9. Energy resources derived from natural organic materials are called _____.

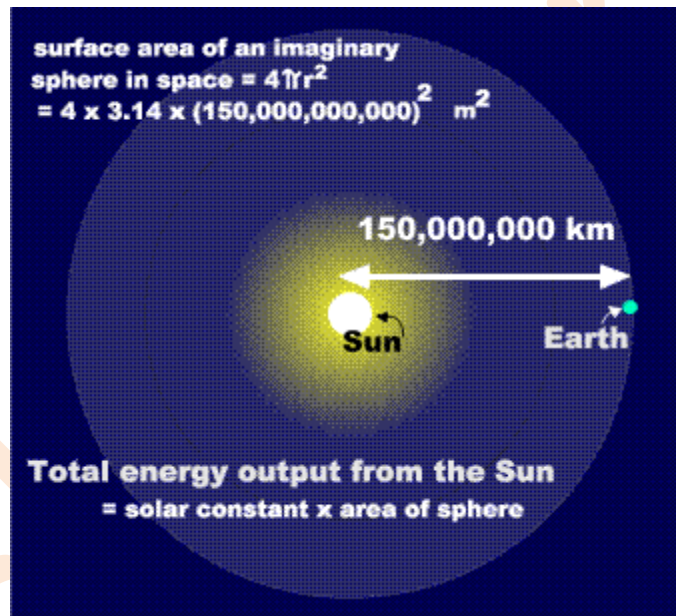
- A. Geothermal energy resources
- B. Fossil fuels
- C. Biomass
- D. All of these

Ans. B

10. How much energy from sun reaches to earth's surface? Given that energy released by the sun is 3.8×10^{26} joule/second, distance between the earth and the sun is 1AU and radius of the earth is 6400km.

- A. 3.8×10^{24} joule/second
- B. 3.8×10^{26} joule/second
- C. 1.7×10^{17} joule/second
- D. 1.7×10^{26} joule/second

Ans. C. (Find the energy falling per unit area on earth and multiply with the earth's cross-section area to get the total energy falling)



11. The wavelength of _____ is less than that of violet rays.

- A. ultraviolet rays
- B. red rays
- C. infrared rays
- D. green rays

Ans. A

12. A thin wafer of _____ converts solar radiation in to electricity.

- A. Sodium
- B. Strontium
- C. Stibium
- D. Selenium

Ans. D (Selenium is 14th group element)

13. What is used generally as connecting material in solar panels?

- A. Silicon
- B. Silver
- C. Selenium
- D. Germanium

Ans. B

14. How much electricity does the largest wind-farm at Kanyakumari generates?

- A. 200 MW
- B. 300 MW
- C. 400 Mw
- D. 500 MW

Ans. B (300 MW)

15. Which of the following is not a product obtained by decomposition of wood?

- A. Coal tar
- B. Coal gas
- C. Charcoal
- D. Wood pulp

Ans. D

16. The calorific value of biogas is _____ kJ/g.

- A. 30 - 35
- B. 35 - 40
- C. 40 - 45
- D. 45 - 50

Ans. B (35-40)

17. The number of carbon atoms in hydrocarbon molecule of kerosene is _____.

- A. 5 - 8
- B. 8 - 11
- C. 10 - 14
- D. 12 - 16

Ans. C (10 -14)

18. What is the required temperature to expedite thermonuclear fusion reaction?

- A. 10^6 K
- B. 10^8 K
- C. 10^9 K
- D. 10^{10} K

Ans. A

19. In India, about _____ % of total power is generated by using nuclear energy.

- A. 3
- B. 5
- C. 7
- D. 9

Ans. A. 3%

20. Which of the following is not associated with solar energy?

- A. Fossil fuel
- B. Hydel energy
- C. Geothermal energy
- D. Wind energy

Ans. B. Hydel Energy