

(6 pages)

Reg. No. :

**Code No. : 20330 E Sub. Code : JMPH 6 B/
SEPH 6 B**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Sixth Semester

Physics

Major Elective — ENERGY PHYSICS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is a non-renewable resource?
 - (a) Coal
 - (b) Forests
 - (c) Water
 - (d) Wild life

2. Which of the following is the odd one out?
- (a) Petroleum (b) Hydro electricity
(c) Coal (d) CNG
3. Which energy source is the largest sourced used India?
- (a) CNG (b) LPG
(c) Coal (d) Bio gas
4. Which of the following is the ultimate source of energy for us?
- (a) LPG (b) Nuclear
(c) Solar (d) CNG
5. Common energy source in Indian Villages is
- (a) Electricity
(b) Coal
(c) Sun
(d) Wood and animal drug

6. Horizontal axis and vertical axis are the types of
- (a) Nuclear reactor (b) Wind mills
 - (c) Biogas reactor (d) Solar cell
7. Boiling water reactor and pressurized water reactors are
- (a) Nuclear reactor (b) Solar reactor
 - (c) Thermal reactor (d) Biogas reactor
8. Lignite, bituminous and anthracite are different ranks of
- (a) Nuclear fuel (b) Coal
 - (c) Natural gas (d) Biogas
9. The value of solar constant is
- (a) 1347 w/m^2 (b) 1357 w/m^2
 - (c) 1367 w/m^2 (d) 1388 w/m^2
10. The following type of energy is stored as latent heat
- (a) Thermal energy (b) Chemical energy
 - (c) Electrical energy (d) Mechanical energy

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What are renewable and non-renewable energy resources?

Or

- (b) Explain in detail about the Conventional Energy Resource?

12. (a) Write few examples of the applications of solar energy.

Or

- (b) Write a short notes on Solar Water Heater.

13. (a) What are the types of solar cell?

Or

- (b) Explain the photovoltaic technology in brief.

14. (a) Write briefly about the various Biomass resources available in earth.

Or

- (b) Explain the construction and working of biogas.
15. (a) What is the basic principle of wind energy conversion and mention the any three application?

Or

- (b) What are the advantages and limitation of tidal power generation?

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss about the energy conservation and efficiency in detail.

Or

- (b) Explain in details about the conventional and non-conventional energy resources.

17. (a) Explain the different types of Solar Collectors.

Or

- (b) Explain the construction and working of Solar Cooker.

18. (a) What are the advantage and disadvantages of PV Solar Energy Conversion?

Or

- (b) What are the application of solar photovoltaic systems?

19. (a) What is agasifier? Explain its classification and functioning in detail.

Or

- (b) Write briefly about the various Biomass resources available in earth.

20. (a) Explain the fuel cells and application of fuel cells.

Or

- (b) Define Wave energy explain the energy and power from waves.