

(6 pages)

Reg. No. :

Code No. : 30066 E Sub. Code : GMPH 6 B

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2020.

Sixth Semester

Physics – Main

Major Elective — ENERGY PHYSICS

(For those who joined in July 2012 – 2015)

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL the questions.

Choose the correct answer :

1. Which of the following is not a renewable source?

- | | |
|------------------|-----------------|
| (a) Solar energy | (b) Biomass |
| (c) Hydro | (d) Geo thermal |

2. The gaseous fuel is obtained from
- (a) bio gas (b) bio mass
- (c) both (a) and (b) (d) none
3. ————— is used in Solar Power.
- (a) Photovoltaic cell
- (b) Chemical cell
- (c) Wood
- (d) None
4. Which state has maximum solar power yield?
- (a) Tamil Nadu (b) Assam
- (c) Rajasthan (d) Gujarath
5. ————— is caused as Bio gas.
- (a) Bio ethanol (b) Bio methane
- (c) Bio diesel (d) None
6. The percentage of CO₂ in Biomethane is
- (a) 30 – 40 (b) 32 – 43
- (c) 35 – 45 (d) 55 – 60

7. The periodic rise and fall of water in sea is
- (a) Tides (b) Flood
- (c) Ebb tide (d) None
8. Wind velocity is measured using
- (a) Hydrometer
- (b) Slew Meter
- (c) Gyroscope
- (d) Anemometer
9. The method for producing Hydrogen and Oxygen from water is
- (a) Combustion (b) Electrolysis
- (c) Exothermic (d) None
10. Which of the following is a green house gas?
- (a) Methane (b) Mercury
- (c) Uranium (d) None

PART B — ($5 \times 5 = 25$ marks)

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

Each answer should not exceed 250 words.

11. (a) Demonstrate the statistical details of conventional energy sources.

Or

- (b) Write notes on different energy sources.

12. (a) Write about the renewable energy sources.

Or

- (b) Write notes on solar cooker.

13. (a) Explain about Bio-mass energy in detail

Or

- (b) Describe the method of separation of ethanol from wood.

14. (a) Write about ocean thermal energy conversion (OTEC).

Or

- (b) Write notes on energy from waves.

15. (a) Explain how hydrogen is used as a fuel.

Or

- (b) Explain global warming in detail.

PART C — ($5 \times 8 = 40$ marks)

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

Each answer should not exceed 600 words.

16. (a) Explain the sources of commercial energy and their reserve in the world.

Or

- (b) Explain the merits and demerits of nuclear energy.

17. (a) Describe solar energy in detail.

Or

- (b) Explain the functioning of solar ponds.

18. (a) Explain the process of obtaining energy from Biomass.

Or

- (b) Write down the merits and demerits of Biomass energy.

19. (a) Explain the process of Geothermal energy conversion.

Or

- (b) Explain the process of harvesting energy from waves.

20. (a) Describe the impact of non-conventional energy sources.

Or

- (b) Explain Nuclear energy in detail.
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