

Code No. : 20398 E Sub. Code : CNPH 32

U.G. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Physics

Non Major Elective — APPLIED PHYSICS

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Which of the following is an example for primary energy source?
- (a) Solar energy
(b) Wind energy
(c) Coal energy
(d) None

7. Which of the following is not a green house

- (a) CO₂ (b) CH₄
(c) CFC (d) H₂

8. Solar radiation consists of

- (a) Infra-red region
(b) Ultraviolet region
(c) Both (a) and (b)
(d) None of these

9. "Earth day" is celebrated on

- (a) 1st December
(b) 5th June
(c) 22nd April
(d) 1st January

10. Taj Mahal at Agra may be damaged by

- (a) Sulphur dioxide (b) Chlorine
(c) Hydrogen (d) Oxygen

2. Conventional energy source are also known as

- (a) Conventional (b) Non-commercial
(c) Non-conventional (d) None

3. Fossil fuel is also known as

- (a) Lubricating fuel (b) Liquid fuel
(c) Solid fuel (d) Mineral fuel

4. The percentage of global fossil fuel reserves are found in India is

- (a) 20% (b) 17%
(c) 6.85% (d) 4%

5. Biomass is a ————— energy source.

- (a) Renewable (b) Non renewable
(c) Thermal (d) None

6. In biogas mixture containing ————— % of CO₂.

- (a) 30 to 40 (b) 10 to 15
(c) 5 (d) 2

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PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Describe about conventional energy source.

Or

- (b) Write down the advantages of renewable energy source.

12. (a) Describe the types of power in Fossil fuels.

Or

- (b) Write briefly statistical details in fossil fuels.

13. (a) Write a short note on Biomass energy.

Or

- (b) Write any five advantages and disadvantages of biomass energy.

14. (a) Describe the operations of a solar pond.

Or

- (b) Write the principle for a solar cell.

15. (a) Explain the advantages of geothermal energy.

Or

- (b) State the principle of wind energy conversion.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Write an essay about various forms of energies.

Or

- (b) Write an essay about renewable and conventional energy sources.

17. (a) Discuss about the various availability of energy resources.

Or

- (b) Write briefly application of fossil fuels.

18. (a) Write an essay about the generation of biomass energy.

Or

- (b) Explain about Deena Bandhu model gas plant.

19. (a) Write briefly notes for applications of solar energy.

Or

- (b) Explain its merits and limitations for a solar cooker.

20. (a) Write an essay about geo thermal energy.

Or

- (b) Describe the principle and working of OTEC system.