

U.G. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023.

Third Semester

Physics

Non Major Elective – APPLIED PHYSICS

(For those who joined in July 2021 – 2022)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. \_\_\_\_\_ is the example for secondary energy source.
- (a) coal (b) natural gas  
(c) nuclear energy (d) wind energy

2. Conventional energy source are also known as
- (a) commercial  
(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 CO<sub>2</sub>.
- (a) 30 to 40 (b) 10 to 15  
(c) 5 (d) 2

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7. Solar cooker's are
- (a) used to heat water  
(b) used to heat air  
(c) used to cool water  
(d) used to cool air
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) 1<sup>st</sup> December  
(b) 5<sup>th</sup> June  
(c) 22<sup>nd</sup> April  
(d) 1<sup>st</sup> January
10. Taj Mahal at Agra may be damaged by
- (a) Sulphur dioxide  
(b) Chlorine  
(c) Hydrogen  
(d) Oxygen

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) State conventional and non conventional energy sources. Explain.
- Or
- (b) Write down the advantages of renewable energy source.
12. (a) State 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.

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[P.T.O.]



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

Or

(b) Describe the basic components of wind energy conversion system.

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.

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

Or

(b) Explain the constructional and working of Deenbandhu Biogas plants with diagram.

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

Or

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

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

Or

(b) What are the types of OTEC power plants? Describe their working.

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