18U510 (Pages: 2) Name: ……...

Reg. No…….

FIFTH SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2020

(CUCBCSS-UG)

(Regular/Supplementary/Improvement)

CC15U PH5 D01 - NON-CONVENTIONAL ENERGY SOURCES

(Physics - Open Course)

(2015 Admission onwards)

Time: Two Hours Maximum: 40 Marks

Section A (One Word Questions)

Answer ***all*** questions. Each question carries 1 mark.

1. What is the fundamental effect that is used in the conversion of solar energy to heat energy?
2. In solar pond, solar energy is stores as _____
3. Give a factor that determines the output of a wind energy converter
4. Which gas is the major component of biogas?
5. What is the common waste product of a fuel cell?
6. Write any one disadvantage of wave energy?

(6 x 1 = 6 Marks)

Section B (Short Answer Type)

Answer all questions in one or two sentences. Each question carries 2 marks.

7. What is the working principle of solar cooker?
8. What are the causes for local winds?
9. List two methods for obtaining energy from biomass?
10. What are the basic components of a tidal power plant?
11. Give one example each for primary and secondary battery?

(5 x 2 = 10 Marks)

Section C (Paragraph Type)

Answer any four questions. Each question carries 4 marks.

12. With schematic explain the working of a Pyranometer
13. What do you meant by photovoltaic effect? What are the advantages of photovoltaic power conversion system?
14. With the help of a diagram, explain horizontal axis type wind power generator.
15. Discuss a method for converting wave energy to mechanical energy.
16. What you meant by a battery? Discuss the working principle of a battery

17. Discuss different solid, liquid and gaseous biofuels?

(4 x 4 = 16 Marks)

Section D (Essay Type)

Answer any one question. The question carries 8 marks.

18. Explain the principle of ocean thermal energy conversion. Discuss the open cycle OTEC system.
19. Briefly explain:
    a) Solar Furnace
    b) Solar Distillation
20. Briefly explain different geothermal sources of energy.

(1 x 8 = 8 Marks)

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