(AUTONOMOUS)

BSe DEGREE EXAMINATION MAY 2018
(Sixth Semester)

Branch - PHYSICS

CORE ELECTIVE - II ALTERNATE ENERGY RESOURCES

Time Three Hours Maximum : 75 Marks

SECTION-A (20 Marksl
Answer ALL questions
ALL questions earn' EQUAL marks (10x2 = 20)

1 List any two renewable sources of energy.
2 Write any four differences between renewable and non renewable sources.
3 Write the various applications of solar cells.
4 What is meant by diffuse radiation?
5 Write short note on biogas.
6 Why the biomass energy is called as carbon neutral?
7 Define geothermal energy.
8 What are the limitations of wind energy?
9 Why hydrogen can be used as a fuel vehicles?
10 What are the main components of fuel cell?

SECTION - B (25 Marksl
Answer ALL Questions
ALL Questions Carry EQUAL Marks (5x5 = 25)

11 a What are the prospects of renewable energy sources in India?
OR
b Explain briefly the types of energy based on usage pattern.

12 a What are the advantages and disadvantages of photo voltaic solar energy conversion?
OR
b Write notes on solar pond.

13 a What are the factors affecting biogas generation?
OR
b Mention some organic materials used in bio-mass plant.

14 a Write a note on geothermal energy in power production.
OR
b Why a tall tower is essential for mounting a horizontal axis wind turbine?

15 a How is energy stored in hydrogen?
OR
b What are the main components of fuel cell?

SECTION - C (30 Marks)
Answer any THREE Questions
ALL Questions Carry EQUAL Marks (3x10 = 30)

16 What is the status of non-conventional energy sources in India and what is their future prospectus?

17 Write notes on (i) Solar pumping (ii) Solar cooking.

18 What are biomass conversion technologies? Draw a schematic diagram to explain.

19 Explain about the vertical wind mills with neat sketch.

20 Describe the principle of working of a fuel cell with reference to H_2 - 0_2 cell.

Z-Z-Z END