

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 31383

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Elective

Electrical and Electronics Engineering

01UEE903 - NON-CONVENTIONAL ENERGY RESOURCES

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is the need for renewable energy sources?
2. State the world energy use.
3. What is flat plate solar collectors?
4. What is solar heating?
5. State environment aspects of wind energy.
6. What is wind data?
7. What is photosynthesis in bio-mass?
8. List out factors affecting generation of bio-gas.
9. What is geothermal field?
10. Name various wave energy conversion devices.

PART - B (5 x 16 = 80 Marks)

11. (a) State various renewable energy availability in India. (16)

Or

(b) Describe various types of renewable energy sources. (16)

12. (a) Explain various types of concentrating collectors. (16)

Or

(b) Describe with block diagram working of solar thermal power plant. (16)

13. (a) Derive the expression for wind energy estimation. (16)

Or

(b) Explain construction and working of vertical axis wind turbine. (16)

14. (a) With diagram explain working of KVIC digester bio-gas gas plant. (16)

Or

(b) With block diagram describe production of ethanol from sugar cane. (16)

15. (a) With diagram explain single basin tidal power plant . (16)

Or

(b) Explain working of hydrogen fuel cell system. (16)