CBCS SCHEME

USN | | | | | | | | | |

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Energy and Environment

Time: 3 hrs.   Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1   a. Discuss word energy scenario, with respect to production and consumption using relevant statistics. **(10 Marks)**
     b. Explain primary energy demand in India by fuel with sector wise comparison. **(10 Marks)**

OR

2   a. Outline with brief explanation the factors effects the India's energy development. **(10 Marks)**
     b. Explain:
         (i)   The Rajiv Gandhi Grameena Vidyutikaran Yojana (RGGVY)
         (ii) Deen Dayal Upadhyana Grama Jyoti Yojana (DDUDJY)
         (iii) Energy Production in India – Coal (only) **(10 Marks)**

Module-2

3   a. A power plant of 200 MW installed capacity has following particulars:
         Capital cost = Rs.16,000/KW installed
         Interest and Depreciation = 12%
         Annual load factor = 60%
         Annual capacity factor = 54%
         Annual Running Charges = Rs.200 × 10^6
         Energy consumed by power plant auxiliaries = 6%
         Calculate the cost of power generation per KWh. **(10 Marks)**
     b. Explain:
         (i)   Objective of Energy Management
         (ii) Audit
         (iii) Sample Report Content of Energy Audit **(10 Marks)**

OR

4   a. Discuss 10 steps methodology for detailed Energy Audit. **(10 Marks)**
     b. With a neat diagram, explain:
         (i)   Hydrostorage (pumped storage)
         (ii) Fly wheel **(10 Marks)**

Module-3

5   a. Discuss how oxygen cycle is utilized in the eco system. **(10 Marks)**
     b. Discuss:
         (i)   Food
         (ii) Food web
         (iii) Ecological pyramid **(10 Marks)**

OR

6	a. Discuss how carbon cycle is utilized in the eco system.	(10 Marks)
	b. Described grassland eco system. What are its types?	(10 Marks)

Module-4

7	a. Enumerate the water pollution causes and its effects. Mention control measures that can be initiated for mitigating the same.	(10 Marks)
	b. Discuss Solid Waste Management Techniques (SWMT).	(10 Marks)

OR

8	a. Discuss the role of an individuals in prevention of pollutions.	(10 Marks)
	b. Elaborates the causes, effects and control measures of:	
	(i) Soil pollution	
	(ii) Noise pollutions	(10 Marks)

Module-5

9	a. Discuss any two case studies related to pollution of environment in detail.	(10 Marks)
	b. Explain sources of Air Pollution.	(10 Marks)

OR

10	Write short notes on:	
	a. Global warming	(05 Marks)
	b. Acid Rain	(05 Marks)
	c. Ozone layer depletion	(05 Marks)
	d. Forest Conservation Act	(05 Marks)

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