Examination Nov/Dec 2019

H-450

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-450
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Mechanical) (Sem-I)
Elective-I: Energy Conservation and Management
[OLD]

[Time: Three Hours]   [Max. Marks:80]

Please check whether you have got the right question paper.

N.B.: 1) Solve any two questions from each Section.
2) Figures to the right indicate full marks.
3) Q.5 and Q.10 are compulsory.
4) Assume suitable data, if necessary.

Section -A

Q.1	a) What is energy conservation and its importance?	06
	b) Explain with example Clean Development Mechanism (CDM)?	07
Q.2	a) Explain with examples the primary energy resources.	06
	b) Explain with examples commercial and non-commercial energy.	07
Q.3	a) What are the various energy conservation opportunities in boilers and steam distribution systems?	06
	b) Explain the energy conservation with reference to the compressed air systems and pumps?	07
Q.4	a) What is cogeneration, explain the principle with example?	06
	b) Explain briefly the factors for selection and control strategies for the cogeneration systems.	07

Q.5   Write short notes on the following.(Any two)

	a) Techno-economic advantages of cogeneration technology	07
	b) Kyoto Protocol	07
	c) Energy Pricing	07

Section- B

Q.6	a) Explain Demand Side Management (DSM).	06
	b) What is Load scheduling and its need to schedule the load?	07
Q.7	a) Explain the types of energy audit.	06
	b) Enlist energy audit instruments. Explain with neat sketch any two in detail.	07
Q.8	a) Explain various energy audit approaches.	06
	b) Explain energy audit of sugar industry.	07

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Q.9	a)	Explain life cycle cost with example.	06
	b)	What are simple payback period and internal rate of return?	07

Q.10 Write short notes on the following: .(Any two)

	a)	Return on investment	07
	b)	Power factor improvement	07
	c)	Variable speed drive	07