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Code No: AEE503



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

MODEL QUESTION PAPER

B.Tech VI Semester End Examinations (Regular), April-2020

Regulations: IARE-R16

ENERGY AUDIT AND MANAGEMENT

(EEE)

Time: 3 hours

Max. Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT - I

MARKS

1. a) List out the objective of energy management. Why these objectives are so important and how does it help for attaining goals? [7M]
b) What are the needs of energy audit and management? Explain its importance. [7M]
2. a) Explain bench marking. What are its different methods? Why generally we do bench marking? [7M]
b) Write about plant energy performance. How this helps in audit process? Can we have an idea of overall performance of plant by this. [7M]

UNIT – II

3. a) In India at present which energy is more contributing for our requirements? Write about different energy sources. What are the merits and demerits of them? [7M]
b) Write any basic energy facts. Explain each in detail. By having better understanding of this facts what is the credit we get. [7M]
4. a) Explain about energy audit report. What are the main things in it? What are the general we get out of this audit? [7M]
b) Write about facts, figures and impression of energy or fuel. Discuss the present energy scenario in India and world. [7M]

UNIT – III

5. a) Why do you motivate employees? How it helps in development of organization and promoting active participation of employees? [7M]
b) What is marketing communication plan? What are the obstacles' in this process? Why training for employees is needed? [7M]
6. a) What is the role of communication in marketing? Market communication is gaining its importance what could be the reason in present trend? [7M]
b) What is employee motivation in HRM? Why the big companies will give more importance to HRs rather than small companies. [7M]

UNIT – IV

7. a) Write about energy efficiency. Discuss first and second laws of energies and also describe the part of thermal first law. [7M]
b) Write about process flow. Explain the role of it in audit. Will the flow helps in giving energy flow. [7M]
8. a) What is Management Information System? Discuss in detail about various roles of management. [7M]
b) Explain about energy modeling. What is the importance of energy modeling? What is the main contribution of it to audit? [7M]

UNIT – V

9. a) Explain in detail about different types of measuring instruments. Discuss its importance? [7M]
b) Write in detail about desirable qualities of measuring instrument. [7M]
10. a) What are Lux meters? Discuss in detail about Stroboscope? [7M]
b) Explain in detail about WPitot Tube. Write about manometer? [7M]



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COURSE OBJECTIVES:

The course should enable the students to:

I	Outline the principles and objectives of energy management.
II	Illustrate the techniques, procedures, evaluation and energy audit reporting.
III	Devise energy policy planning and implementation.
IV	Analyze energy balance sheet and management information System.

COURSE OUTCOMES (COs)

CO 1	Conceptual knowledge of the need and approach of energy audit and management.
CO 2	Capability to integrate various options and assess the business and policy environment regarding energy conservation and energy auditing
CO 3	Advocacy of strategic and policy recommendations on energy conservation and energy auditing
CO 4	Knowledge of energy balance and information management
CO 5	Discuss the instruments required for energy auditing

COURSE LEARNING OUTCOMES:

Students, who complete the course, will have demonstrated the ability to do the following:

AEE503.1	Demonstrate knowledge on auditing practices, management measures and economics of energy.
AEE503.2	Analyze auditing practices, management measures and economics of energy.
AEE503.3	Design an appropriate energy management measures in commercial and industrial applications.
AEE503.4	Provide feasible solutions for problems associated with energy auditing and management through proper investigation and interpretation of data.
AEE503.5	Use appropriate techniques for energy auditing and management.
AEE503.6	Solve energy auditing and management problems with societal relevance.
AEE503.7	Consider environment and sustainability in energy auditing and management.
AEE503.8	Follow relevant rules and regulations in practicing energy audit and management.
AEE503.9	Communicate effectively on energy audit in written and graphical forms.
AEE503.10	Consider financial issues in energy audit and management.
AEE503.11	Devise energy policy planning and implementation.
AEE503.12	Analyze energy balance sheet and management information System.
AEE503.13	Know about Instruments for audit and monitoring energy and energy savings, types and accuracy.
AEE503.14	Knowledge on marketing and communicating training and planning.
AEE503.15	Explore the knowledge and skills of employability to succeed in national and international level competitive examinations.

MAPPING OF SEMESTER END EXAMINATION TO COURSE LEARNING OUTCOMES:

SEE QUESTION NO.	COURSE LEARNING OUTCOMES			BLOOMS TAXONOMY LEVEL
1	a	AEE503.1	Demonstrate knowledge on auditing practices, management measures and economics of energy.	Remember
	b	AEE503.1	Demonstrate knowledge on auditing practices, management measures and economics of energy.	Understand
2	a	AEE503.2	Analyze auditing practices, management measures and economics of energy.	Remember
	b	AEE503.3	Design an appropriate energy management measures in commercial and industrial applications.	Remember
3	a	AEE503.6	Solve energy auditing and management problems with societal relevance.	Understand
	b	AEE503.4	Provide feasible solutions for problems associated with energy auditing and management through proper investigation and interpretation of data.	Remember
4	a	AEE503.10	Consider financial issues in energy audit and management.	Understand
	b	AEE503.9	Communicate effectively on energy audit in written and graphical forms.	Remember
5	a	AEE503.14	Knowledge on marketing and communicating training and planning.	Remember
	b	AEE503.14	Knowledge on marketing and communicating training and planning.	Remember
6	a	AEE503.14	Knowledge on marketing and communicating training and planning.	Understand
	b	AEE503.14	Knowledge on marketing and communicating training and planning.	Remember
7	a	AEE503.10	Consider financial issues in energy audit and management.	Remember
	b	AEE503.10	Consider financial issues in energy audit and management.	Understand
8	a	AEE503.12	Analyze energy balance sheet and management information System.	Remember
	b	AEE503.13	Know about Instruments for audit and monitoring energy and energy savings, types and accuracy.	Understand
9	a	AEE503.13	Know about Instruments for audit and monitoring energy and energy savings, types and accuracy.	Remember
	b	AEE503.13	Know about Instruments for audit and monitoring energy and energy savings, types and accuracy.	Remember
10	a	AEE503.13	Know about Instruments for audit and monitoring energy and energy savings, types and accuracy.	Understand
	b	AEE503.13	Know about Instruments for audit and monitoring energy and energy savings, types and accuracy.	Remember

Signature of Course Coordinator
Dr. Mule Laxmidevi Ramanaiah, Associate Professor

HOD, EEE