

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,**  
**LONERE – RAIGAD – 402 103**  
**Winter Semester Examination – December – 2019**

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<b>Branch: M.Tech. (Electrical Power System)</b>	<b>Semester: II</b>
<b>Subject: - Energy Management and Auditing (MTEE205C/MTEPS205C)</b>	
<b>Date: - 20/12/2019</b>	<b>Marks: 60</b>
	<b>Time: 3 Hrs.</b>

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**Instructions to the Students**

1. Each question carries 12 marks.
2. Attempt any five questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

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- |   | <b>(Marks)</b> |
|---|----------------|
| <b>Q.1. Write notes on following topics</b>   | <b>(12)</b>    |
| a.) Energy Audit of Buildings.  |                |
| b.) Considerations in implementing energy conservation programmes.                          |                |
| <b>Q.2. a) State the operation of utility monitoring and control system.</b>                | <b>(06)</b>    |
| b) Which are the HVAC conditions and quantities to be monitored or controlled?              | <b>(06)</b>    |
| <b>Q.3. a) Discuss energy-efficient motors with measures adopted for energy efficiency.</b> | <b>(08)</b>    |
| b) Draw the Sankey diagram of an induction motor with neat label.                           | <b>(04)</b>    |
| <b>Q.4. Write the short notes on following.</b>   | <b>(12)</b>    |
| a) Multitasking solid-state meters.   |                |
| b) The use of instrument transformers with watt-hour and demand meters.                     |                |
| c) Paralleling of current transformers.   |                |
| <b>Q.5. Attempt any one sub-question of the following.</b>                                  |                |
| a) Discuss the basic terms in lighting system and features in details.                      | <b>(12)</b>    |
| b) Explain classification of cogeneration systems.  | <b>(12)</b>    |
| <b>Q.6. a) Explain the method of life cycle costing?</b>                                    | <b>(06)</b>    |
| b) Write short notes on   | <b>(06)</b>    |
| i.) Return on Investment (ROI).   |                |
| ii.) Time Value of Money.   |                |
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