

04

BE - sem - VII - old - Electrical

EMD

10/12/15

**QP Code : 2157****(3 Hours)****Total Marks : 100****N.B:** (1) Q.1 is compulsory.

(2) Attempt any four questions out of remaining six questions.

(3) Assume suitable data if necessary and justify the same.

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|--------|--|----|
| 1. (a) | What are various features of energy efficient motors.  | 10 |
| (b)    | What are various types of enclosures for motor.  | 5  |
| (c)    | What is specific magnetic and electric loading in transformer.   | 5  |
| 2. (a) | Derive the output equation of three phase transformer.   | 10 |
| (b)    | Derive output equation of induction motor.   | 10 |
| 3. (a) | Discuss the no load current calculation in transformer.  | 10 |
| (b)    | Discuss the magnetization current calculation in induction motor.  | 10 |
| 4. (a) | Discuss the various types of windings used in transformes.   | 10 |
| (b)    | Discuss the designing of wound rotor.  | 10 |
| 5. (a) | Derive the equation for leakage reactance of a two winding transformer.                                  | 10 |
| (b)    | Discuss the various modifications in the design of induction motor.                                      | 10 |
| 6. (a) | Discuss the various cooling methods in transformer.  | 10 |
| (b)    | What are desired properties of insulating materials. State the insulating materials used in transformer. | 10 |
| 7. (a) | Discuss the total resistance calculation procedure in transformer.                                       | 10 |
| (b)    | Discuss the designing of squirrel cage rotor.  | 10 |

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