Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EE-702-GS

B.E. VII Semester

Examination, December 2020

Grading System (GS)

Utilization of Electrical Energy

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the designing of circular heating element for electric heating.

   b) Explain electron beam welding method.

2. State the main requirements for an ideal traction system. What are the various traction systems in practice in our Country? Explain.

3. a) What are the advantages of electric heating? Give the classification of various electric heating methods along with their working principles.

   b) Explain high frequency eddy current heating.

4. a) Enumerate various desirable requirements to satisfy a braking system. Also describe regenerative braking system.

   b) Discuss the suitability of motors for traction duties.

5. a) Give Faraday's laws of electrolysis.
   b) List the applications of electrolysis.

6. a) Discuss how load conditions and insulating materials lised affect the size of motor selected.
   b) What are relative merits and demerits of various types of electric braking.

7. a) What is an electric drive? Classify various types of electric drives and discuss their merits and demerits.
   b) What is meant by load equalization? Explain how this is achieved in electrical industry.

8. Write short notes on any two of the following:
   a) Single phase power frequency A.C. traction
   b) Factors affecting specific energy consumption
   c) Principle and special application of dielectric heating

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