

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No.....

EX-501 (GS)**B.E. V Semester**

Examination, December 2017

Grading System (GS)**Utilization of Electrical Energy***Time : Three Hours**Maximum Marks : 70*

- Note:** i) Total number of questions are eight.
 ii) Attempt any five questions.
 iii) All questions carry equal marks.

1. a) What is Flood Lighting? Explain the projectors used and also describe factors used in flood lighting calculations. 6
 b) A lamp of 500watts having m.s.c.p. of 1,000 is suspended 2.7 metres above the working plane. Calculate : 8
 i) Illumination directly below the lamp at the working plane.
 ii) Lamp efficiency
 iii) Illumination at a point 2.5 metres away on the horizontal plane from vertically below the lamp.
2. a) List the types of lighting schemes. Explain the factors to be considered for designing the lighting scheme. 7
 b) Explain the working of fluorescent tube with the help of circuit diagram giving the function of various parts. 7
3. a) State the advantages of electric heating over other types of heating. 7
 b) What is Induction Heating? Explain high frequency induction furnace with its advantages. 7

[2] <http://www.a2zsubjects.com>

4. a) What is Electroplating? Explain the operations involved in electroplating. 7
 b) Explain carbon arc welding with applications. Also compare AC and DC welding. 7
5. a) Discuss the suitability of series motors for traction duties with the help of characteristics curves. 7
 b) What is Tractive Efforts? Explain tractive effort for the propulsion of train. 7
6. a) Explain adhesive weight and coefficient of adhesion in an electric traction system. 7
 b) Explain the criteria for selecting motors for various industrial drives. 7
7. a) Explain the calculation of electrical loads for air conditioning. 7
 b) What is Load Equalization? Explain its importance. 7
8. a) What do you mean by Performance of Vehicles? Explain in detail. 8
 b) Write short notes on: 6
 i) Energy consumption
 ii) Configuration of electrical vehicles.
