

A Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)

T. E. (EEP) OLD Examination

End Semester Examination

EE 305 : Estimation, Testing and Maintenance

“ Verify the course code and check whether you have got the correct question paper “

Time: Three Hours

Max. Marks: 60

12.2.NOV.2016

N.B:- 1. Solve any five questions. 2. Figures to the right indicate full marks

3. Assume suitable data if necessary and state it clearly 4. Use of non-programmable calculator is allowed

- Q1 A factory hall 36 mX20 m is to be illuminated so as to get an illumination of 20 candle /m² on a working plane. [12]
Assume space- height ratio =1.3
Mounting height =3m
Utilisation factor =0.5
Depreciation factor (DF) =75%
Luminous efficiency =15 lumen/Watt
Find the number of lamps and wattage of each lamps.
- Q2 a) Two similar lamps having uniform intensity of 500 C.P. in all directions below the horizontal are mounted at a height of 4 metres. What must be the maximum spacing between the lamps so that the illumination on the ground mid-way between the lamps shall be at least one half the illumination directly under the lamps. [06]
- b) Explain construction and working of sodium vapour lamp [06]
- Q3 a) An 11 kv overhead line is to be erected for feeding a substation at a distance of 5 km which has to be feed the following connected L.T. load. Determine the size of conductor and rating of transformer. Load : i) Lighting 210 Kw single phase ii) Fans ,air conditioner 66 Kw single phase iii) Industrial 200 Kw three phase [06]
- b) Explain maintenance schedule for Induction motor as per IS codes [06]
- Q4 a) Explain maintenance schedule for power transformer as per IS codes [06]
- b) Explain routine, preventive and breakdown maintenance implemented for electrical equipment [06]
- Q5 a) Explain the following test carried out on insulation [06]
1) flash point test
2) crackle test
- b) Explain indoor and outdoor illumination schemes. [06]
- Q6 Write a short note on following (any three) [12]
i) Phasing out test of three phase transformer..
ii). Maintenance schedule for synchronous motor
iii) Law of illumination..
iv) Polarity test on three phase transformer.
