

Total No. of Questions : 8]

SEAT No. :

PC2408

[6354]-525

[Total No. of Pages : 2

B.E. (Electrical Engineering)

ILLUMINATION ENGINEERING

(2019 Pattern) (Semester - VIII) (Elective - VI) (403151B)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Figures to the right indicate full marks.
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Assume suitable additional data, if necessary.
- 5) Use of non-programmable calculator is allowed.

Q1) a) Write a short note on. [4]

- i) Coefficient of utilization
- ii) Beam angle.

b) What Factors should be considered for design of indoor illumination scheme. [6]

c) What is Polar Curve ? Describe its types. State its significance. [8]

OR

Q2) a) Explain in brief about Lumen Method. [4]

b) What is Beam angle and Field angle? What are types of light loss factor. [6]

c) What are different components of flux are considered in zonal cavity method? Explain each of them. [8]

Q3) a) What points are considered while designing illumination installation for Educational institute? [3]

b) Explain following special purpose lighting scheme [6]

- i) Decorative lighting
- ii) Swimming Pool lighting

c) State and explain the advantages of good illumination schemes. [8]

OR

Q4) a) Classify Road according to BIS. [3]

b) Explain illumination scheme for health care centres & hospitals. [6]

c) Define following terms [8]

Luminous flux Mean spherical Candle power, Space to height ratio, Utilisation factor.

P.T.O.

- Q5) a)** Explain following terms with respect to road lighting- [4]
- i) Uniformity ratio
  - ii) Field of vision
- b) What are the key factors in designing an outdoor illumination scheme? Explain each in brief. [6]
- c) Write a note on lighting provision for college libraries in Educational institutes [8]

OR

- Q6) a)** With suitable diagram explain isolux diagram for designing outdoor illumination scheme. [4]
- b) What are the objectives of road Lighting. Give the details of road lighting codes in India? [6]
- c) With suitable diagram explain Beam lumen method for designing outdoor illumination scheme. [8]

- Q7) a)** What is use of non lighting lamps. [3]
- b) What are intelligent LED Fixtures. Explain any 1 in detail? [6]
- c) Explain in detail Natural light conducting? [8]

OR

- Q8) a)** Give applications of Organic lighting system. [3]
- b) Explain construction & working of Fiber optic cables. State its 2 types. [6]
- c) Explain working of LASERS arrangement with suitable diagram. State types of LASERS. [8]

