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SEAT No. :

P40

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APR-17/BE/Insem. - 44

B.E. (Electrical)

ILLUMINATION ENGINEERING

(2012 Pattern) (Elective - IV(c))

Time :1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Neat diagrams wherever necessary.*
- 2) *Figures to the right indicate full marks.*
- 3) *Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
- 4) *Assume suitable data, if necessary.*

Q1) With neat diagram explain the optical system of human eye. Also state importance of rods and cones present in retina. **[10]**

OR

Q2) a) Explain generation of light. **[4]**
b) What are good and bad effects of lighting? **[6]**

Q3) With suitable diagram explain working of any two lamps **[10]**

- a) High pressure mercury vapour lamp
- b) Low pressure mercury vapour lamp
- c) Neon lamp
- d) Metal halide lamp

OR

Q4) a) What is stroboscopic effect? How it can be avoided? **[4]**
b) What are different materials used in manufacturing lamps? Explain any four in brief. **[6]**

Q5) a) Explain role of igniters in metal halide lamps. Explain various types of igniters. **[10]**

OR

Q6) a) Define luminaries as per IEC and state requirement of luminaries. **[6]**
b) Explain any four types of lighting fixtures according to photometric usages. **[4]**

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