CODE: 17CD02109

M. Tech I Year I Semester Regular Examinations, February 2018

SOLID STATE LIGHTING AND CONTROL
(PE & D)

Time : 3 hours Max Marks : 60

Answer all **five** units. (5 x 12 = 60 Marks)

UNIT-I

1. Briefly explain the following terms:
i) Internal quantum efficiency ii) External quantum efficiency iii) Injection efficiency iv) feeding efficiency v) Light extraction efficiency vi) Radiant efficiency

OR

2. With suitable sketch explain light escape cones and its relevance in LED design

UNIT-II

3. Discuss different methods for generation of white lights in LED. Bring out the advantages and disadvantages of each method

OR

4. Discuss CIE x-y chromaticity diagram

UNIT-III

5. With neat circuit diagram and waveform explain boost converter

OR

6. With the help of equations and waveforms explain output voltage ripple in a buck converter

UNIT-IV

7. Bring out the advantages and disadvantages of OLED. Also list its applications

OR

8. What do you understand by AC LED? Explain its working principle. How is it different from DC LED?

UNIT-V

9. Discuss LED applications in
i) Traffic Lights
ii) Automatic Signage

OR

10. Write short notes on:
i) LED applications on Alphanumeric Displays
ii) LED application on Full color video displays

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