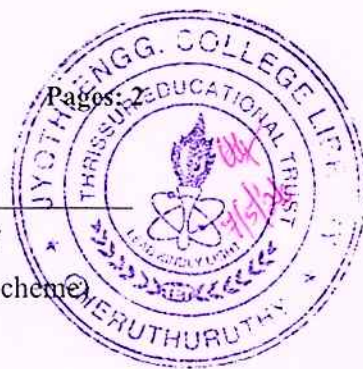




Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S7 (S, FE) (FT/WP/S5PT) Examinations May 2026 (2019 Scheme)

Course Code: EET463

Course Name: ILLUMINATION TECHNOLOGY

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

Marks

- | | | |
|----|---|-----|
| 1 | Explain different types of glare and methods to reduce glare in lighting. | (3) |
| 2 | Describe the significance of colour temperature in lighting design. | (3) |
| 3 | Explain the principle of lux meter and its applications. | (3) |
| 4 | Define luminous flux and luminous intensity with their units. | (3) |
| 5 | Write a short note on coefficient of utilization and its influencing factors. | (3) |
| 6 | Explain the principles of interior lighting design considering illumination and uniformity. | (3) |
| 7 | What are the types of flood lighting projectors and their beam angle classifications? | (3) |
| 8 | Discuss the main objectives of street lighting design. | (3) |
| 9 | State the specific lighting needs for monument and statue illumination. | (3) |
| 10 | What are the important considerations in auditorium lighting? | (3) |

PART B

Answer any one full question from each module, each carries 14 marks.

Module I

- | | | |
|----|---|-----|
| 11 | a) Discuss the concept of luminous efficacy and compare it across different artificial light sources. | (7) |
| | b) Describe the stroboscopic effect and its impact on lighting applications. | (7) |

OR

- | | | |
|----|--|-----|
| 12 | a) Explain the working and construction of a fluorescent lamp. | (7) |
| | b) Discuss supplementary lighting and its uses in modern lighting systems. | (7) |

Module II

- | | | |
|----|--|-----|
| 13 | a) Describe the Inverse Square Law and Lambert's Cosine Law with examples. | (7) |
| | b) Explain the use of photometric bench in measuring luminous intensity. | (7) |

OR

- 14 a) Draw and explain Rousseau's Diagram for illumination calculations. (7)
b) Explain the calculation of illumination at a point due to two light sources of given intensity separated by a given distance. (7)

Module III

- 15 a) Explain DLOR, ULOR, and LOR and how they influence lighting design. (7)
b) Explain how to calculate the number of lamps required to illuminate a hall with given dimensions and lighting parameters. (7)

OR

- 16 a) Discuss four common luminaire types used in interiors. (7)
b) Explain the Lamp Lumen Method of interior lighting design with an example. (7)

Module IV

- 17 a) What are the principles and parameters for designing efficient street lighting? (7)
b) Discuss the types and classification of floodlights. (7)

OR

- 18 a) Explain how to design a flood lighting scheme for a building façade with given dimensions and illumination levels. (7)
b) Describe the zones and corresponding illuminance levels in tunnel lighting. (7)

Module V

- 19 a) Discuss lighting requirements in hospitals, including wards and operating theatres. (7)
b) Explain the key principles behind aesthetic and accent lighting techniques. (7)

OR

- 20 a) Describe important considerations for auditorium lighting design. (7)
b) Explain factors to be considered in monument lighting design. (7)
