

Reg. No.:



Name:

W8097

University of Kerala
First Semester FYUGP Degree Examination, December 2025
Multi Disciplinary Course
PHYSICS
UK1MDCPHY104 PHYSICS OF EVERYDAY APPLIANCES
Academic Level: 100-199
2024 Admission

Time: 1 Hour 30 Minutes

Max. Marks: 42

Part A.

6 Marks. Time: 6 Minutes. (Cognitive Level: Remember/Understand)

Objective Type. 1 Mark Each. Answer All Questions

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
1.	Define focal length of a lens	Remember	2
2.	Write examples for simple harmonic motion	Remember	1
3.	In LEDs, explain the basic process that produces light	Understand	1
4.	Discuss one method to improve the quality of a camera lens	Understand	2
5.	Define heat	Understand	3
6.	Define the term thermal conductivity	Understand	3

Part B.

8 Marks. Time: 24 Minutes. (Cognitive Level: Understand/Apply) Short

Answer. 2 Marks Each. Answer All Questions

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
7.	Explain the need for energy savings according to BEE standards	Understand	1
8.	Write down the lens equation and explain each term in the equation	Understand	2
9.	Explain the four strokes of internal combustion engine	Understand	3
10.	Explain the difference between transverse wave and longitudinal wave	Understand	1

Part C.

28 Marks. Time: 60 Minutes. (Cognitive Level: Apply/Analyse/Evaluate/Create)

Long Answer. 7 marks each. Answer all 4 Questions, choosing among options* within each question.

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
11.	A. i. Explain the working of Laser ii. Discuss the applications of Laser OR B. i. Explain the working of fluorescent lamp ii. Write the advantages of fluorescent lamps over incandescent lamp	Understand	1
12.	A. i. Describe a real image ii. Explain the effect of lens diameter in focusing an image OR B. Describe how human eye forms image on retina	Understand	2
13.	A. Explain the working of a microwave oven. OR B. Discuss various heat transfer methods with examples	Understand	3
14.	A. i. Describe BLDC motors ii. Discuss the practical applications of BLDC motors OR B. i. Explain fundamental and higher order modes ii. Discuss sympathetic vibrations with example.	Understand	1