

Reg. No.:



Name:

University of Kerala

W8062

First Semester FYUGP Degree Examination, December 2025

Multi-Disciplinary course

PHYSICS

UK1MDCPHY104 - Physics of Everyday Appliances

Academic Level: 100-199

2025-Admission

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions

Qn No.	Question	CL	CO
1	Name the primary gas used inside a fluorescent lamp tube	RE	1
2	Expand BEE.	RE	1
3	Outline one advantage of using a microwave oven over conventional cooking methods.	UN	3
4	Explain why ceramic plates, plastic and glass remain cool in an oven	UN	3
5	Describe the function of brushes in a DC motor	UN	5
6	Differentiate concave and convex mirrors	UN	2

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	Distinguish Polar from nonpolar molecules	UN	3
8	Write the importance of f-number in a camera	UN	2
9	Apply the role of thermal conductivity in the efficiency of a woodstove	AP	3
10	Apply your ideas to explain how the depth of focus affects image quality in small diameter and large diameter lenses?	AP	2

Part C. 28 Marks.Time:60 Minutes (Cognitive Level:Apply(AP)/Analyse(AN)/Evaluate(EV)/Create(CR)) Long Answer.7 marks each.Answer all 4 Questions choosing among options * within each question

Qn No.	Question	CL	CO
11	A)	AP	3, 3

Qn No.	Question	CL	CO
	Demonstrate how an air conditioner cools the indoor air OR B) Demonstrate the three heat transferring processes		
12	A) Investigate the variations in the luminous efficacy of electric light sources OR B) Analyze advantages and limitations of each type of discharge lamp for specific lighting applications	AN	5, 5
13	A) Evaluate the performance of BLDC fan compared to conventional ceiling fan. OR B) Assess the working principle of mercury vapor lamps and their applications	EV	5, 5
14	A) Compose the criteria to differentiate various mirrors and lenses OR B) Plan the selection of eyeglasses for the correction of various vision defects	CR	2, 2