

Reg. No.:



Name:

University of Kerala

U9330

Second Semester FYUGP Degree Examination, April 2025

Multi-Disciplinary course

PHYSICS

UK2MDCPHY102 - Beyond the Sky

Academic Level: 100-199

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	List out the importance of astronomy	RE	1
2	Name the comet that appears every 76 years.	RE	2
3	Describe stellar magnitudes	UN	1
4	Explain the formation of a neutron star.	UN	4
5	Describe a solar wind	UN	3
6	Explain, how the Earth, Moon, and Sun align during a solar eclipse.	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	Explain the working principle of radio telescopes	UN	2
8	Compare brightness and luminosity	UN	1
9	Use H-R diagram to explain the position and temperature of red giants	AP	4
10	Compare Kuiper belt and Oort cloud	AP	3

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) Illustrate the different phases of solar eclipse OR B) Use the principle of optics to show that reflecting telescopes are more suitable than refracting telescopes for astronomical observations	AP	2, 2
12	A) Categorize the final stages of stars depending on their mass. OR B) Analyze the Harvard Classification of stars and obtain its spectral type	AN	4, 4
13	A) Evaluate the role of a Supernova in the evolution of a neutron star. OR B) Evaluate the importance of the Hertzsprung-Russell (H-R) diagram in understanding stellar evolution.	EV	4, 4

Qn No.	Question	CL	CO
14	A) Generate a schematic diagram and justify how the different phases of the Moon are visible from Earth. OR B) Construct the working principle of optical telescopes and their role in astronomical observations.	CR	2, 2