



Reg. No.:

Name:

University of Kerala

W7062

Third Semester FYUGP Degree Examination, November 2025

Discipline Specific Core Course

PHYSICS

UK3DSCPHY203 - Heat, Magnetism and Geophysics

Academic Level: 200-299

2024 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	State Weins Displacement law	RE	4
2	Name a planet in the solar system that has no satellites.	RE	1
3	Outline the uses of magnetic maps.	UN	3
4	Define the term density?	UN	2
5	Explain the limitation to Rayleigh-Jeans Law.	UN	4
6	Explain the use of seismograph.	UN	1

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	Summarize the difference between Earth's inner and outer core in terms of their role in magnetism.	UN	3
8	Explain thermal conductivity and give its unit.	UN	4
9	Illustrate the methods to measure the temperature of the atmosphere of Earth.	AP	2
10	Draw the layered structure of Earth's Interior	AP	1

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	2, 2

Qn No.	Question	CL	CO
	<p>Illustrate with a schematic how our Earth is protected from harmful solar wind and cosmic radiation from external space.</p> <p>OR</p> <p>B)</p> <p>Compare the roles of ionosphere and magnetosphere in atmosphere</p>		
12	<p>A)</p> <p>Examine the relationship between Earth's rotation and the creation of its magnetic field.</p> <p>OR</p> <p>B)</p> <p>Analyse different elements of Earth's magnetism and hence obtain the relationship between dip and horizontal intensity.</p>	AN	3, 3
13	<p>A)</p> <p>Compare the ideas of gravitational force, gravitational acceleration and gravitational potential.</p> <p>OR</p> <p>B)</p> <p>Evaluate how the gravitational potential varies at points inside and outside a solid sphere</p>	EV	1, 1
14	<p>A)</p> <p>Formulate an experiment to determine the thermal conductivity of a poor conductor.</p> <p>OR</p> <p>B)</p> <p>Design an instrument to measure the temperature of Sun</p>	CR	4, 4