

Reg. No.:



Name:

University of Kerala

U9328

Second Semester FYUGP Degree Examination, April 2025

Multi-Disciplinary course

PHYSICS

UK2MDCPHY100 - Archaeo Physics

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 the limitations of radiocarbon dating	RE	3
2	Memorize the mass number of radioactive carbon used in radiocarbon dating	RE	2
3	Infer the challenges archaeologists face in excavation.	UN	1
4	Summarize the importance of geophysical method	UN	4
5	Describe radioactivity.	UN	2
6	Describe the dating method used for the dating of Iron materials	UN	3

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	Contrast the approaches of prehistoric archaeology and historical archaeology	UN	1
8	Describe Ground Penetrating Radar	UN	4
9	Illustrate the four radioactive series and mention the parent and end products in each series	AP	2
10	Predict any four relative dating techniques	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 terms, decay constant, half-life and average life as applied to a radioactive substance. Determine the relation between them OR B) If 10% of a radioactive metal decays in 5 days, calculate the amount of material left after 20 days.	AP	2, 2
12	A) Categorize the properties of α , β and γ -rays. OR B) Analyse the significance of the law of disintegration and half life in determining the age of ancient materials.	AN	2, 2

Qn No.	Question	CL	CO
13	A) Judge the sampling process dendrocronogy in Archeology . OR B) Evaluate the application of radioactive isotope in archaeology with an example	EV	3, 2
14	A) Create a detailed overview of the differences between relative dating and absolute dating techniques with suitable examples. OR B) Generate the principle of Radioactivity. Solve the half life period of radium, if 1 gram of radium is reduced by 2.1 mg in 5 years by α -decay.	CR	3, 2