Roll No. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. / B. Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, JULY/DEC 2024

Geoinformatics, VII Semester, Regulation 2019

GI 5012 PLANETARY REMOTE SENSING

Time: 3hrs Max.Marks: 100

CO 1	To identify the components of Solar System and understand the payloads of related exploratory missions.
CO 2	To understand the mineralogy and petrology of terrestrial planets.
CO 3	To describe the exo –endogenic process of Planetary Atmosphere.
CO 4	To apply Remote Sensing Techniques for Planetary Surface Analysis
CO 5	To describe the various past and present planetary missions.

BL – Bloom's Taxonomy Levels

(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1	What are Magellanic Clouds?	2	1	1
2	What is red shifted galaxy?	2	1	2
3	Describe the atmospheric characteristics of Mars.	2	2	1
4	Differentiate between terrestrial and non-terrestrial planets.	2	2	2
5	What do you mean by anorthosites?	2	3	1
6	Reason out the formation of impact crater.	2	3	2
7	Write down the objectives of Space Lander.	2	4	1
8	Why the lunar south pole is targeted for exploration?	2	4	2
9	What do you mean by absolute age dating of planetary surfaces?	2	5	1
10	What is continuum in reflectance spectra?	2	5	2

PART- B (5 x 13 = 65 Marks)

(Restrict to a maximum of 2 subdivisions)

Q. No	Questions	Marks	CO	BL
11 (a) (i)	Discuss in detail about the Star Temperature and Star Clusters.	8	1	L3
(ii)	Describe the Time line of Big Bang Theory.	5	1	L3
	OR			
11 (b) (i)	Explain in detail about the various stages of Star evolution.	8	1	L3
(ii)	How will you determine the distance in space using stellar parallax?	5	1	L3
12 (a) (i)	Explain in detail about the interior stratification and crustal formation in terrestrial planets.	8	2	L3
(ii)	Give the neat sketch of earth interior with its crustal surface composition.	5	2	L3
	OR			
12 (b) (i)	Write about the function and physical characteristics of wandering Star.	8	2	L3
(ii)	Write about the various heating process of evolving terrestrial planets.	5	2	L3

13 (a)	Discuss in detail about the evolution and various geological events of Moon.	**13**	3	L4
	OR			
13 (b)	Explain in detail about the characteristics of Lunar surface and its atmosphere.	**13**	3	L4
14 (a)	List and describe the payload characteristics of Chandrayaan 2 mission.	**13**	4	L4
	OR			
14 (b)	Explain in detail about the orbital maneuver and Hohmann transfer of Mars Orbiter Mission.	**13**	4	L4
15 (a)	How will you determine and justify the age of the planetary surface using CSFD technique.	**13**	5	L5
	OR			
15 (b)	Discuss in detail about the geological mapping of craters in terrestrial planets with case study.	**13**	5	L5

PART- C (1 x 15 = 15 Marks)

(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16.	Explain in detail about the extraction of mineral characteristics of planetary surfaces using hyperspectral data.	**15**	1,2,3, 4,5	L5,L6