LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – **ZOOLOGY**

SECOND SEMESTER – **APRIL 2023**

PZO2ME01 – REMOTE SENSING AND BIORESOURCE MANAGEMENT

Date: 10-05-2023   Dept. No.   Max. : 100 Marks
Time: 01:00 PM - 04:00 PM

SECTION A – K1 (CO1)

	Answer ALL the questions	**(5 x 1 = 5)**
1.	**Answer the following**	
a)	Comment on electromagnetic waves.	
b)	Name the types of remote image sensing techniques.	
c)	Define the term Remote Sensing	
d)	State the significance of GRACE.	
e)	Differentiate GIS from GPS.	

SECTION A – K2 (CO1)

	Answer ALL the questions	**(5 x 1 = 5)**
2.	**MCQ**	
a)	**Which of the following remote sensing sensors is commonly used for monitoring vegetation?** a) Synthetic Aperture Radar (SAR) b) Thermal Infrared (TIR) c) Visible and Near Infrared (VNIR) d) Light Detection and Ranging (LiDAR)	
b)	**Which of the following is not a principle of remote sensing?** a) Interaction of energy with satellite b) Electromagnetic energy c) Electro-magnetic spectrum d) Interaction of energy with atmosphere	
c)	**If the mapping units are aggregated then the accuracy.** a) Decreases b) Remains same c) Increases d) Doubles	
d)	**A passive sensor uses:** (a) Sun as the source of energy (b) Flash light as a source of energy (c) Its own source of energy (d) None of these	
e)	**Remote sensing techniques make use of the properties of emitted, reflected or diffracted by the sensed objects:** (a) Electric waves (b) Sound waves (c) Electromagnetic waves (d) Wind waves	

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	SECTION B – K3 (CO2)	
	Answer any THREE of the following	**(3 x 10 = 30)**
3.	Give an example to illustrate how a remote sensing system works.	
4.	Summarize the emerging issues and challenges in conservation of soil.	
5.	Discuss the role of remote sensing in energy management.	
6.	Illustrate the different types of platforms used in remote sensing.	
7.	Explain the problems and objectives in remote sensing field work methods.	

	SECTION C – K4 (CO3)	
	Answer any TWO of the following	**(2 x 12.5 = 25)**
8.	Classify the bioremediation process with illustrations.	
9.	Evaluate how data collection and reference material influences the accuracy of the project.	
10.	Interpret the structure and function of forest ecosystem with remote sensing system.	
11.	Summarize the spectral reflectance curve for vegetation.	

	SECTION D – K5 (CO4)	
	Answer any ONE of the following	**(1 x 15 = 15)**
12.	Explain the spectroscopy types based on object and spectrum interaction.	
13.	Summarize the applications of remote sensing in C, N, P cycle.	

	SECTION E – K6 (CO5)	
	Answer any ONE of the following	**(1 x 20 = 20)**
14.	Discuss principle, component, types and applications of remote sensing with illustration.	
15.	Predict how remote sensing can be used for bioresource management. Provide an example and its significance.	

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