

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Photogrammetry & Remote Sensing (PEGI 2002)

Semester: III

Programme: B.Tech GSE

Time: 03 hrs.

Max. Marks: 100

Instructions: Attempt any two questions from Section C.

SECTION A

S. No.		Marks	CO
Q 1	a) How low contrast images happen? Give reasons?	2	CO2
	b) Which part of the spectrum is reflected /scattered the most by green vegetation?	2	CO1
Q 2	Explain the following terms: i) Plumb Line and ii) Principal Point	2+2	CO5
Q 3	Give two good reasons, why overlaps are being done in stereoscopic photogrammetry	4	CO5
Q 4	What are vegetation indices? Explain NDVI and why we need to calculate NDVI?	4	CO1
Q 5	Differentiate between point operations and local operations in image enhancement.	4	CO2

SECTION B

Q6	a) Differentiate between a DEM and a DSM.	2	CO1
	b) What are the differences between photogrammetry and remote sensing?	3	CO2
	c) List the parameters of inner orientation of camera?	3	CO5
Q 7	a) How would you calculate the height of an object from its shadow?	4	CO5
	b) An aerial camera has a focal length of 35 mm; the altitude of the plane is 800m above sea level, the average ground elevation above sea level is 100m, express the scale of the photograph as a representative fraction?	4	CO5
Q 8	How scale is an important criteria in aerial photographs? How is the scale used to make measurements of objects in the aerial photographs?	8	CO5
Q 9	Explain the term Band Rationing? Describe its importance as an image enhancement technique with a suitable example?	2+6	CO3
Q 10	Distinguish between low pass filters and high pass filters?	8	CO4

SECTION-C (Attempt any TWO questions)

Q 11	a) Describe the different categories of photogrammetry according to the types of photographs and sensing systems used?	10	CO5
	b) Describe the advantages/ disadvantages of both supervised and unsupervised classifications.	10	CO3
Q 12	a) Explain relief displacement? What are certain causes leading to relief displacement?	5	CO5
	b) What do you mean by image enhancement? Differentiate between Linear Contrast enhancement and Histogram Equalization	15	CO3
Q 13	What is spatial filtering? Describe the image convolution process with suitable diagrams?	20	CO3