

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI			
(END SEMESTER EXAMINATION)			
CLASS:	M.Tech		SEMESTER : II
BRANCH:	Remote Sensing		SESSION : SP/22
SUBJECT: RS 511: AERIAL AND SATELLITE PHOTOGRAMMETRY & IMAGE INTERPRETATION			
TIME:	2 hrs		FULL MARKS: 50
<b>INSTRUCTIONS:</b> <b>1. The question paper contains 5 questions each of 10 marks and total 50 marks.</b> <b>2. Attempt all questions.</b> <b>3. The missing data, if any, may be assumed suitably.</b> <b>4. Before attempting the question paper, be sure that you have got the correct question paper.</b> <b>5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.</b>			

- Q.1(a) Is image interpretation justified for delineation of lithology? Support your answer with reasons. [2]
- Q.1(b) How are faults different from joints? Illustrate the difference. [2]
- Q.1(c) How may photogrammetry be considered as a useful tool in Oceanographic studies? [2]  
Cite an example.
- Q.1(d) Explain giving examples what kind of landuse/landcover in aerial images can be distinguished with the element of Image Interpretation 'Circular Size'. [4]
- Q.2(a) Explain the importance of Parallax in photogrammetry. [3]
- Q.2(b) What is a stereogram? Explain any one of its uses in medical science. [3]
- Q.2(c) Classify aerial photographs according to their optical axis and illustrate with appropriate figures. [4]
- Q.3(a) What will be the focal length of a camera required to take aerial photo of scale 1:1000 at a flying height of 1500m above the ground? [1]
- Q.3(b) Derive the equation to estimate Relief Displacement analytically. [2]
- Q.3(c) What is orthorectification? Explain with diagram. [3]
- Q.3(d) What is epipolar geometry? Where it is useful? [4]
- Q.4(a) What is main difference in the data acquisition modes in aerial and satellite based approaches? [3]
- Q.4(b) What is B/H ratio? What is the acceptable range of B/H? [3]
- Q.4(c) Explain with illustrations: Interior orientation, Exterior orientation and Relative orientation. [4]
- Q.5(a) Classify UAVs based on their range and uses. [5]
- Q.5(b) Specially during the online mode of education, where conventional Laboratories are not accessible, which software can be opted to process the drone acquired images. Give the capabilities of the software. [5]

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