

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: MSC
BRANCH: GEOINFORMATICS**

**SEMESTER : III
SESSION : MO/2022**

**SUBJECT: GI603 AERIAL, SATELLITE, UAV BASED PHOTOGRAMMETRY & APPLICATION
TIME: 3:00 Hours**

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Separate End Lap from Side Lap with an appropriate figure. [CO4, BL3] [2]
Q.1(b) Analyze the geomorphological conditions for a radial drainage pattern. [CO4,B4] [3]
Q.1(c) Explain the elements of visual photointerpretation. [CO2, BL2] [5]
- Q.2(a) Classify aerial photographs based on angle of coverage. [CO4, BL1] [2]
Q.2(b) Relief displacement is an error on an aerial photograph. How is it removed? [CO2, BL4] [3]
Q.2(c) Explain Parallax. How is it useful in photogrammetry? [CO3, BL2] [5]
- Q.3(a) Explain Perspective Projection and Orthographic projection? [CO4, BL2] [2]
Q.3(b) Explain Epipolar Geometry using Diagram. How it will help you? [CO2, BL2] [3]
Q.3(c) Explain Positive Relief Displacement and Negative Relief Displacement using a Diagram. [CO2,BL2] [5]
- Q4 Explain the Following (using diagram/equations/texts)
- Q.4(a) Satellite Data Acquisition Geometry [CO2,BL4] [2.5]
Q.4(b) B/H Ratio [CO2,BL5] [2.5]
Q.4(c) RPC [CO2,BL5] [2.5]
Q.4(d) Ortho Rectification [CO2,BL5] [2.5]
- Q.5(b) From aerial photography to UAV, trace the shift historically from traditional photogrammetry to digital photogrammetry. Give any two advantages and disadvantages of both. [CO1,BL5] [5]
Q.5(c) How has applications in agriculture change from traditional agriculture applications. After the use of UAV in photogrammetry. [CO1,BL5] [5]

:::22/11/2022:::E