

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2023

B.Tech-VII Semester

COURSE CODE (CREDITS): 22B1WCE731 (3)

MAX. MARKS: 25

COURSE NAME: REMOTE SENSING AND GEOMATICS

COURSE INSTRUCTORS: AKASH BHARDWAJ

MAX. TIME: 1 Hour 30 Minutes

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1. (a) What are the fundamental principles of image enhancement in digital image processing, and why is it important? (3 marks) [CO 3]

(b) Explain band interleave by line digital image data format. (2 marks) [CO 2]

Q2. (a) What are ground control points (GCPs) in the context of remote sensing and geospatial applications? Explain the two basic strategies for fitting images to maps by giving example of GCPs. (4 marks) [CO 2,3]

(b) Differentiate between Geometric and Radiometric errors in remote sensing with suitable examples. (3 marks) [CO 1]

Q3. (a) Explain roll, pitch and yaw with suitable figures. (3 marks) [CO 3]

(b) Enlist the factors governing image interpretation. (2 marks) [CO 2]

Q4. (a) What are the different elements of image interpretation? How these elements of image interpretation help in identifying and classifying objects or features in aerial or satellite imagery? (4 marks) [CO 1,3]

(b) What is a spectral reflectance curve? How can spectral reflectance curves be applied for assessing the health of vegetation or water quality in natural ecosystems? (4 marks) [CO 1,2]
