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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

MID TERM EXAMINATION – AUGUST 2024

Semester & AY: Odd Semester: 2023-24

Course Code: CIV 826

Course Name: Geospatial Data Processing Essentials

Program & Sem: PhD, II Sem

Date: 12-08-2024

Time: 09.30am to 11.00am

Max Marks: 50

Weightage: 25%

Instructions:

- (i) Read questions carefully and answer accordingly.
- (ii) Scientific and Non-programmable calculator permitted

Part A

Answer any three Questions.

(3Qx10M=30M)

1. Identify and explain the key features and capabilities of Pix4D Matic. How do these features compare to other photogrammetry software? (C.O.No.1)[Comprehension]
2. Discuss the system requirements for Pix4D Matic. Why is it important to meet these requirements before installation? (C.O.No.1)[Comprehension]
3. Describe the primary objectives and outcomes expected from Geospatial Data Processing using a photogrammetry software. How do these objectives align with industry needs?
(C.O.No.1)[Comprehension]
4. Detail the workflow for generating a dense point cloud in Pix4D Matic. What factors influence the quality of the point cloud? (C.O.No.2)[Comprehension]

Part B

Answer any one Question.

(1Qx20M=20M)

5. (a) Explain the initial steps in setting up a new project in Pix4D Matic, including image import and quality report generation. How do these steps ensure project accuracy?
(C.O.No.1)[Comprehension]
(b) Using the urban planning case study, describe how Pix4D Matic is utilized from project inception to initial processing. What specific challenges might arise in this context?
(C.O.No.1)[Comprehension]

6. (a) Explain the process of creating and texturing a 3D model in Pix4D Matic. How does this process differ from simpler photogrammetric techniques?(C.O.No.2)[Application]
- (b) Discuss the importance of Ground Control Points (GCPs) in photogrammetry. How does Pix4D Matic facilitate the use of GCPs to improve accuracy?
(C.O.No.2)[Application]