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**PRESIDENCY UNIVERSITY**

**Bengaluru**

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| **Ph.D. Course Work End Term Examinations – JAN-FEB 2025** |
| **Date:** 31- 01- 2025 **Time:** 09:30 am – 12:30 pm |

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| **School:** SOE | **Program:** Ph.D. | |
| **Course Code :** CIV826 | **Course Name :** Geospatial Data Processing Essentials | |
| **Semester**: | **Max Marks**:100 | **Weightage**: 50% |

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| --- | --- | --- | --- | --- | --- |
| **CO - Levels** | **CO1** | **CO2** | **CO3** | **CO4** | **CO5** |
| **Marks** | **20** | **40** | **40** |  | **-** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Do not write anything on the question paper other than roll number.*

**Part A**

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| --- | --- | --- | --- | --- |
| **Answer ALL the Questions. Each question carries 10 marks. 6Q x 10M=60Marks** | | | | |
| **1** | Describe the primary objectives and outcomes expected from Geospatial Data Processing using a photogrammetry software. How do these objectives align with industry needs? | **10 Marks** | **L2** | **CO1** |
| **2** | Give the workflow for generating a dense point cloud in Pix4D Matic. What factors influence the quality of the point cloud? | **10 Marks** | **L2** | **CO2** |
| **3** | 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. | **10 Marks** | **L2** | **CO1** |
| **4** | Using a case study, explain how Pix4D Matic is applied in construction and engineering projects for progress monitoring and volume calculation. | **10 Marks** | **L2** | **CO2** |
| **5** | Detail the process of exporting data from Pix4D Matic. What are the advantages of different export formats | **10 Marks** | **L3** | **CO3** |
| **6** | Identify common issues encountered when using Pix4D Matic and discuss troubleshooting strategies | **10 Marks** | **L2** | **CO3** |

**Part B**

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| --- | --- | --- | --- | --- | --- |
| **Answer the Questions. Each question carries 20 marks 2Q x 20 = 40 Marks** | | | | | |
| **7.** | **a.**  **b.** | Explain the process of creating and texturing a 3D model in Pix4D Matic. How does this process differ from simpler photogrammetric techniques?  Discuss the importance of Ground Control Points (GCPs) in photogrammetry. How does Pix4D Matic facilitate the use of GCPs to improve accuracy? | **20 Marks** | **L3** | **CO2** |
|  | | | | | |
| **8.** | **a.** | Analyze the role of Pix4D Matic in environmental monitoring projects, using a case study to illustrate its impact on environmental conservation efforts | **20 Marks** | **L4** | **CO3** |

**\*\*\*\*\* BEST WISHES \*\*\*\*\***