**20CE505**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular/Supplementary) DEGREE EXAMINATION** | | | |
| **January, 2024** | **Civil Engineering** | | |
| **Fifth Semester** | **Remote Sensing & Drone Technology** | | |
| **Time:** Three Hours | | **Maximum:** 70 Marks | |
| ***Answer question 1 compulsory.*** | | | **(14X1 = 14Marks)** |
| ***Answer one question from each unit.*** | | | **(4X14=56 Marks)** |
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|  |  |  | CO | BL | M |
| 1 | a) | Define Remote Sensing | CO1 | L1 | 1M |
|  | b) | Define Focal Point. | CO1 | L1 | 1M |
|  | c) | Differentiate between vertical and oblique photograph | CO1 | L1 | 1M |
|  | d) | How does Geo-Synchronous Satellite functions | CO2 | L1 | 1M |
|  | e) | List any two geostationary stationary satellite applications | CO2 | L1 | 1M |
|  | f) | Abbreviate LISS, MSS. | CO2 | L1 | 1M |
|  | g) | What is spatial resolution? | CO2 | L2 | 1M |
|  | h) | What is a payload In an UAV? | CO3 | L3 | 1M |
|  | i) | What are the steps involved in flying a drone. | CO3 | L2 | 1M |
|  | j) | What is the role of ESC in an UAV | CO3 | L3 | 1M |
|  | k) | Define GIS. | CO4 | L2 | 1M |
|  | l) | What is non-spatial data? | CO4 | L2 | 1M |
|  | m) | What is meant by "data manipulation" in GIS? | CO4 | L3 | 1M |
|  | n) | Write the components of GIS. | CO4 | L2 | 1M |
| **Unit-I** | | | | | |
| 2 |  | Explain the Fundamentals of Photogrammetry. With a neat sketch discuss stereoscopy | CO1 | L2 | 14M |
| **(OR)** | | | | | |
| 3 | a) | With a Neat Sketch what is Electromagnetic Spectrum | CO1 | L3 | 7M |
|  | b) | Explain about photo interpretation techniques. | CO1 | L2 | 7M |
| **Unit-II** | | | | | |
| 4 | a) | Explain the Energy Interaction with atmosphere | CO2 | L2 | 7M |
|  | b) | Explain the Energy Interaction with Target | CO2 | L2 | 7M |
| **(OR)** | | | | | |
| 5 |  | Explain briefly about IRS & CARTOSAT Satellite Series | CO2 | L2 | 14M |
| **Unit-III** | | | | | |
| 6 | a) | Explain quadcopter dynamics in a drone | CO3 | L3 | 7M |
|  | b) | Explain briefly about drone components. | CO3 | L2 | 7M |
| **(OR)** | | | | | |
| 7 |  | Briefly describe about various applications of drones. | CO3 | L2 | 14M |
| **Unit-IV** | | | | | |
| 8 | a) | Explain vector and raster data models with neat sketches. | CO4 | L2 | 7M |
|  | b) | Explain about network analysis | CO4 | L2 | 7M |
| **(OR)** | | | | | |
| 9 |  | Explain urban planning applications in GIS? | CO4 | L3 | 14M |

