**20CE505**

**Hall Ticket Number:**

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| **III/IV B.Tech (Regular) DEGREE EXAMINATION** | | | |
| **February,2023** | **Civil Engineering** | | |
| **Fifth Semester** | **Remote Sensing & Drone Technology** | | |
| **Time:** Three Hours | | **Maximum: 7**0 Marks | |
| *Answer Question No. 1 Compulsorily.* | | | (14X1 = 14 Marks) |
| *Answer* ***ANY ONE*** *question from each Unit.* | | | (4X14=56 Marks) |

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| 1. | a) | What is photogrammetry? | CO1 | L1 | 1M |
|  | b) | Define Electromagnetic spectrum | CO1 | L1 | 1M |
|  | c) | What is absorption | CO1 | L1 | 1M |
|  | d) | What are the salient features of IRS satellite | CO2 | L1 | 1M |
|  | e) | Define a sensor | CO2 | L1 | 1M |
|  | f) | What do you mean by sun synchronous satellite | CO2 | L1 | 1M |
|  | g) | Define a drone | CO3 | L1 | 1M |
|  | h) | What is Flight planning? | CO3 | L1 | 1M |
|  | i) | What is Quadcopter | CO3 | L1 | 1M |
|  | j) | What is the working principle behind the Electronic Speed Controller of drone | CO3 | L1 | 1M |
|  | k) | What is digitization? | CO4 | L1 | 1M |
|  | l) | Define GIS | CO4 | L1 | 1M |
|  | m) | What are the basic overlay operations used in GIS | CO4 | L1 | 1M |
|  | n) | Mention two supporting software in GIS | CO4 | L1 | 1M |
| **Unit -I** | | | | | |
| 2. | a) | Discuss briefly on vertical photographs | CO1 | L2 | 7M |
|  | b) | Explain EMR interaction with atmosphere. | CO1 | L3 | 7M |
|  |  | **(OR)** |  |  |  |
| 3. | a) | Describe the principle behind stereoscopy. | CO1 | L2 | 7M |
|  | b) | Explain the EMR interaction with earth surface features. | CO1 | L2 | 7M |
|  |  | **Unit -II** |  |  |  |
| 4. | a) | Outline in detail on different types of sensors. | CO2 | L3 | 7M |
|  | b) | Explain the characteristics features of IRS Series | CO2 | L4 | 7M |
|  |  | **(OR)** |  |  |  |
| 5. | a) | Discuss briefly on air borne remote sensing. | CO2 | L2 | 7M |
|  | b) | Illustrate the applications of INSAT series satellites. | CO2 | L3 | 7M |
|  |  | **Unit -III** | |  |  |
| 6. | a) | Explain in detail about different types of drones. | CO3 | L2 | 7M |
|  | b) | Illustrate the working principle behind different electronic components of a drone. | CO3 | L2 | 7M |
|  |  | **(OR)** |  |  |  |
| 7. | a) | Discuss on the dynamics related to Quadcopter. | CO3 | L2 | 7M |
|  | b) | Outline in detail the structure of drone frames | CO3 | L2 | 7M |
|  |  | **Unit -IV** |  |  |  |
| 8. | a) | Differentiate between raster and vector data models | CO4 | L2 | 7M |
|  | b) | Discuss on the applications of GIS in watershed management | CO4 | L3 | 7M |
|  |  | **(OR)** |  |  |  |
| 9. | a) | Outline the components of GIS | CO4 | L2 | 7M |
|  | b) | Explain various data input and output methods used in GIS. | CO4 | L3 | 7M |

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