 **D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY**

**Set-: II**

**Q. Paper Code:**

**22CE305505**

**KASABA BAWADA KOLHAPUR-416006**

**(An Autonomous Institute)**

T. Y. B. Tech (Civil), Sem-V

**END SEMESTER EXAMINATION(ESE), DEC. – 2022**

Course Name: **Advanced Surveying** Course Code: **201CEL305**

Seat No:

**Day and Date: 15.12.2022**

**Time: 2.00 pm to 4.00pm Max. Marks- 50**

***Instructions:***

1. *All Questions are compulsory.*
2. *Figure to the right indicate full marks.*

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| **BT** | **CO’s** | **Q.No.** |  | **Marks** |
|  |  | **Q.1** | **All Questions are compulsory** | **20** |
| **3** | **CO1** | **a** | Find the RL of station B from two observations taken by a theodolite from station A one to BM and other to station B.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Instrument station | Staff station | Target | Vertical angle | Staff readings | Remarks | | A | BM | Lower | -12⁰30ꞌ | 0.565 | RL of instrument axis = 655.5m | | Upper | -8⁰20ꞌ | 2.565 | | A | C | Lower | -7⁰30ꞌ | 1.25 | | Upper | +3⁰12ꞌ | 3.20 |   Find RL of staff station C and calculate the horizontal distance between the BM and staff station C. | **7 M** | |
| **3** | **CO2** | **b** | What is meant by satellite station and reduction to the centre | **5M** | |
| **3** | **CO3** | **c** | What is the necessity of providing overlaps in Aerial Photogrammetry? The scale of an aerial photograph is 1:10000 size of photograph is 200 mm x 200 mm. Determine the number of photographs required to cover an area of 8 Km x 12.5 Km. Take longitudinal overlap 60% and side lap as 30% | **8 M** | |
|  | | | | | |
|  |  | **Q.2** | **All Questions are compulsory.** | **10** |
| **2** | **CO4** | **a** | Explain in brief applications of GIS. | **4** | |
| **2** | **CO4** | **b** | Write a note on advantages of GIS mapping.  **Or**  Explain in brief various components of GIS. | **6** | |
|  | | | | | |
|  |  | **Q.3** | **All Questions are compulsory.** | **10** |
| **2** | **CO4** | **a** | What is an idealized Remote Sensing system? | **4** | |
| **2** | **CO4** | **b** | Write in detail applications of Remote Sensing in Civil Engineering  **Or**  What is the effect of atmosphere on electromagnetic radiation? | **6** | |
|  | | | | | |
|  |  | **Q.4** | **Attempt any two out of three questions** | **10** |
| **2** | **CO4** | **a** | Explain Waypoints, Tracks and Routes in GNSS. | **5** | |
| **2** | **CO4** | **b** | Describe the components of GNSS with neat sketch. | **5** | |
| **2** | **CO4** | **c** | Write a short note on applications of GNSS in Civil Engineering field. | **5** | |

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