## Vivekananda College of Engineering & Technology, Puttur
### [A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]
### Affiliated to VTU, Belagavi & Approved by AICTE New Delhi

## CONTINUOUS INTERNAL EVALUATION- 1

| Dept: Civil Engg | Sem / Div: 3 | Sub: Basic Surveying | S Code: 18CV35 |
|---|---|---|---|
| Date: 04-12-21 | Time: 9:30-11:00 am Max Marks: 50 | | Elective: N |

Note: Answer any 2 full questions, choosing one full question from each part.

| QN | Questions | Marks | RBT | COs |
|---|---|---|---|---|
| | **PART A** | | | |
| 1 a | With neat sketch, Explain the basic principles of surveying? | 8 | L2 | CO1 |
| b | Explain with neat sketches the Numbering of Topo maps of India. | 7 | L2 | CO1 |
| c | A 20m steel tape standardized at 13.5°C under a pull of 100 N was used for measuring a base line. Find the correction per tape length if the field temperature is 20°C under an applied pull of 160N. Assume area of tape as 0.02cm², weight of tape 8N, E= 2.11 X 10⁷ N/cm², α = 6.2 X 10⁻⁶ / °C. | 10 | L3 | CO1 |
| | **OR** | | | |
| 2 a | What do you understand by ranging a line? Explain how you will range a line between two points which are not visible to each other due to small hillock in between? | 8 | L2 | CO1 |
| b | Define surveying. Explain the classification of surveying. | 7 | L2 | CO1 |
| c | A 30m chain was found to be 12cms too long after chaining a distance of 1750m. It was found to be 23cms too long at the end of day's work after chaining a total distance of 3600m. Find the true distance if the chain was correct, before the commencement of the work. | 10 | L3 | CO1 |
| | **PART B** | | | |
| 3 a | List the difference between prismatic and surveyors compass. | 8 | L2 | CO2 |
| b | What is meant by local attraction? How it is detected? | 7 | L2 | CO2 |
| c | The following bearings were observed with a compass. Calculate the interior angles. Apply check. | 10 | L3 | CO2 |

| Line | AB | BC | CD | DE | EA |
|---|---|---|---|---|---|
| F.B | 119°15' | 32°00' | 291°30' | 199°15' | 134°45' |

**OR**

| QN | Questions | Marks | RBT | COs |
|---|---|---|---|---|
| 4 a | Explain temporary adjustments for prismatic compass. | 7 | L2 | CO2 |
| b | Define. a) True meridian b) Magnetic meridian c) Fore bearing d) Back bearing | 8 | L2 | CO2 |
| c | The following FB and BB were observed in traversing with a compass in a place where local attraction was suspected. Compute the correct bearing of the lines. | 10 | L3 | CO2 |

| Line | FB | BB |
|---|---|---|
| AB | 38°30' | 219°15' |
| BC | 100°45' | 278°30' |

Prepared by: Sumanth A

HOD

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CONTINUOUS INTERNAL EVALUATION- 1

| | | | | | |
|---|---|---|---|---|---|
| CD | $25^0 45'$ | | $207^0 30'$ | | |
| DE | $325^0 15'$ | | $145^0 15'$ | | |
| EA | $190^0 30'$ | | $10^0 15'$ | | |