| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER - III • EXAMINATION - WINTER 2012

| | - | code: 130601 Date: 07-01-2013 | |
|------|------------|---|----------|
| Tim | e: 10 | Name: Surveying 0.30 am – 01.00 pm Total Marks: 70 | |
| Inst | 1. | tions: Attempt all questions. Make suitable assumptions wherever necessary. | |
| | | Figures to the right indicate full marks. | |
| Q.1 | (a) | What is sounding? Write purposes of sounding and explain different equipments used for locating sounding. | 07 |
| | (b) | Explain horizontal control and vertical control for setting out works. | 07 |
| Q.2 | (a) (b) | Derive an expression for prismoidal formula for volume. Compare it with the trapezoidal formula. | 07 07 |
| | (b) | OR Enumerate different types of methods for measuring the volume and explain | 07 |
| | (b) | any one method in brief. | 07 |
| Q.3 | (a) | What are the general methods of calculating area? Explain double meridian distance (DMD) method in detail. | 07 |
| | (b) | for a first class rail track. | 07 |
| 0.3 | () | OR | 0.5 |
| Q.3 | (a) | method employed in overcoming them. | 07 07 |
| | (b) | Enumerate the parts of a compound curve and describe the relationship between them. | U/ |
| Q.4 | (a) (b) | What is vertical curve? Explain different types of vertical curves. Derive an expression for the distance and height for the trigonometric levelling case of 'object inaccessible and instruments axes at different levels'. | 07 07 |
| | | OR | |
| Q.4 | (a) (b) | Explain trigonometric leveling on the steep ground. Differentiate between temporary and permanent adjustment of a theodolite. | 07 07 |
| Q.5 | (a) | Discuss various methods of the theodolite traversing. | 07 |
| | (b) | Write short notes on omitted measurements. OR | 07 |
| Q.5 | (a) | eliminated? | 07 |
| | (b) | Distinguish between resection method and intersection method of plane table survey. | 07 |

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