



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code:2P3AB

B.Tech III Semester Supplementary Examinations, March/April 2023

SURVEYING & GEOMATICS

(Civil Engineering)

Maximum Marks: 70

Date:29.03.2023 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Define principle of surveying.
- 2 How would measure vertical angle with a theodolite?
- 3 What are the working principles of EDM instrument?
- 4 Write about the characteristics of contours?
- 5 What are the different methods of setting of a curve?
- 6 Mention the methods of Leveling and explain any two in detail?
- 7 What are the three segments of GPS?
- 8 Define the following terms i) Bench mark (ii) Reduced Level
- 9 Define principle of GPS.
- 10 List out the tape corrections?

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 A) Explain about classification of surveying? (5m)
B) A 20 m chain used for a survey was found to be 20.10 m at the beginning and 20.30 m at the end of the work. The area of the plan drawn to a scale of 1cm = 8 m was measured with the help of a planimeter and was found to be 32.56 sq.cm . Find the true area of the field? (5m)
- OR
- 12 A) Define surveying? What are the principles of surveying? Explain them briefly? (5m)
B) Write briefly about comparison of chain and compass surveying? (5m)
- 13 A) List out the methods of contouring and explain any one method in detail? (5m)
B) What are the relative merits of plane of collimation method and Rise and Fall method of booking? (5m)
- OR
- 14 A) Describe the temporary adjustment of levelling with neat sketch. (5m)
B) How do you determine area from coordinates? (5m)
- 15 A) Distinguish between closed traverse and open traverse. write a note on the checks in closed traverse? (5m)
B) Explain how you would measure with a theodolite? (5m)

OR

- 16 A) What are the different errors in theodolite work? (5m)
B) What are the limits of precision in theodolite traversing? (5m)
- 17 A) Draw a neat sketch of a circular curve and show its various elements theorem? (5m)
B) What are the different methods of designation of a curve? (5m)
- OR
- 18 A) What is tachometer? What are different systems of tachometric measurements? (5m)
B) What are advantages of a tachometric surveying over other methods? (5m)
- 19 A) What are the applications of GPS? (5m)
B) Explain about the electromagnetic wave theory? (5m)
- OR
- 20 A) What are the advantages and applications of total station surveying? (5m)
B) Compare the surveying by using GPS with the conventional surveying? (5m)