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KAMALA INSTITUTE OF TECHNOLOGY & SCIENCE, SINGAPUR
23CE28PC205

I B. Tech. II Semester Regular/Supplementary Examinations, JULY-2025

SURVEYING

(CE)

Time: 3 Hours

Max.Marks:60

Note: Question paper consists of Part-A & Part-B.

i) **Part-A** for 10M, ii) **Part-B** for 50marks

- **Part A** is compulsory, consists of 10 sub questions from all units carrying equal marks.
- **Part-B** consists of **10 questions** (numbered from 2 to 11) carrying **10marks** each. From each unit there are 2 questions and the students should answer one of them. Hence the student should answer **5 questions** from **Part-B**.

PART-A		(10Marks)	
Q.No	Questions	Marks	BTL
1.a)	What do you mean by plane surveying?	1	2
1.b)	What are the types of Chain?	1	1
1.c)	Define cut and fill in leveling.	1	1
1.d)	Mention and brief about temporary adjustment.	1	2
1.e)	What are the methods of traversing?	1	1
1.f)	List out the major parts of Theodolite?	1	1
1.g)	Differentiate between simple and compound curve.	1	3
1.h)	List out the types of curves.	1	1
1.i)	List the advantages of total station.	1	2
1.j)	What are the objectives of GIS?	1	2
PART-B		(50Marks)	
Q.No	Questions	Marks	BTL
2. a)	Explain the methods of direct and Indirect ranging.	5M	2
b)	Discuss in detail about Prismatic compass.	5M	3
OR			
3. a)	Convert the whole circle bearing into reduced bearing: 50° , 176° , 210° , 232° , 150° , 76° , 310° , 242° ?	6M	3
b)	Discuss about the classification of surveying based on the function?	4M	2
4.	List out the methods of contouring and explain about any one method in detail with a neat sketch.	10M	2
OR			
5.	Following consecutive staff readings were taken with a level along a sloping ground line AB at a regular distance of 20m by using 4m leveling staff 0.352, 0.787, 1.832, 2.956, 3.758, 0.953, 1.766, 2.738, 3.872, 0.812, 2.325 and 3.137. Rule out a page of level field book, enter the above readings. RL of points A is 320.288m. Calculate RL of all the points by rise and fall method and work out the gradient of line AB.	10M	3

6.	Explain how you would measure with a theodolite: a) Horizontal angle by repetition b) vertical angle.	10M	2
OR			
7. a)	What are various checks to be performed on closed and open traverse?	5M	4
b)	What are the limits of precision in theodolite traversing?	5M	2
8. a)	What is meant by tachometry? List the instruments needed for tachometry.	5M	2
b)	Draw a neat sketch of a circular curve and show its various elements there.	5M	3
OR			
9.	Two straights AC and BC meet at an inaccessible point C. They are to be connected by a simple curve of radius 12 chains. Two points P and Q are selected on AC and BC respectively and the following measurements are made, Angle APQ=1600; Angle BQP=1640 ; PQ=86m. Chainage of P=71.546 chains. Determine: a) The deflection angle of the curve b) Tangent length c) Length of the curve d) Chainage of the end points of the curve Take 1 chain=20m	10M	3
10.a)	Explain various segments of GPS.	5M	2
b)	Write a short note on the errors in EDM.	5M	2
OR			
11.	Explain the basic principles of GPS and its application in surveying.	10M	2

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