DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL - 2023

SURVEYING FOR ATCHITECTURE

[Maximum marks: 75]   (Time: 3 Hours)

PART A

I. Answer all the following questions in one word or one sentence. Each question carries 1 mark

(9 x 1 = 9 Marks)

		Module outcome	Cognitive level
1	Name the survey in which curvature of earth is not considered.	M1.01	R
2	An engineer's chain have…….number of links.	M1.01	R
3	Define parallax.	M2.01	R
4	Name the station point where both back sight and fore sight are taken.	M2.02	R
5	Define the term transiting the telescope.	M3.01	R
6	Define the term swinging of theodolite.	M3.01	R
7	Define slope distance.	M4.03	R
8	Full form of GPS is……..	M4.01	R
9	The instrument which is a combination of electronic theodolite and EDM is ……..	M4.03	U

PART B

II. Answer any eight questions from the following. Each question carries 3 marks.

(8 x 3 = 24 Marks)

		Module outcome	Cognitive level
1	Explain the temporary adjustments made on a compass.	M1.03	U
2	Fore bearing of 3 traverse lines are given below:- (a) AB: Fore bearing = N 40^0 30' E (b) BC: Fore bearing = S $60^0$30'W (c) CD: Fore bearing = 290^0 What will be the back bearing of the lines?	M1.03	U
3	List the disadvantages of Plane table surveying over other techniques of surveying.	M1.01	R
4	List the characteristics of contour lines.	M2.02	R
5	Explain the steps in elimination of parallax in levelling.	M2.01	U
6	List the fundamental lines of a transit theodolite.	M3.01	R

7	Discuss the uses of electronic theodolite.	M4.01	U
8	Describe the applications of GIS.	M4.02	U
9	State the parameters of total station.	M4.03	R
10	Explain about distomat.	M4.01	U

PART C
Answer all questions. Each question carries seven marks

(6 x 7 = 42 Marks)

		Module outcome	Cognitive level
III	The following offsets were taken from a chain line.	M1.02	A

Chainage(m)	0	30	60	90	120
Offset(m)	10(Right)	20(Left)	15(Right)	25(Left)	0

Plot the data and calculate the area.

OR

		Module outcome	Cognitive level
IV	Explain any 4 instruments used in chain survey.	M1.02	U
V	Draw the figure of dumpy level, mark its parts and explain its functions.	M2.01	R

OR

		Module outcome	Cognitive level
VI	List the uses of contour map.	M2.02	R

The observations of a levelling experiment are given in the Table below:-

Instrument station	Station	Readings(m)		
		BS	IS	FS
O$_1$	BM	0.235		
	A		0.195	
	B		0.645	
O$_2$	C	0.295		0.125
	D		0.185	
O$_3$	E	0.555		0.635
	F		0.375	
	G			0.255

RL of BM = +100.00m

		Module outcome	Cognitive level
VII	Determine the reduced level of all the stations by Height of Instrument method and apply the checks. (observations in previous Table)	M2.02	A

OR

		Module outcome	Cognitive level
VIII	Determine the reduced level of all the stations by Rise and Fall method and apply the checks.(observations in previous Table)	M2.02	A

IX	Explain the procedure of measurement of horizontal angle by reiteration method.	M3.02	U
	OR		
X	Explain temporary adjustments of a theodolite.	M3.01	U
XI	The length and bearing of the traverse lines of a traverse survey are given in the Table below.	M3.03	A

Line	Length(m)	Bearing (^{0})
AB	14	25
BC	20	120
CD	16	60
DE	30	220

	Determine the latitude and departure of the traverse lines		
	OR		
XII	Explain the methods of conducting traverse survey in the field using theodolite.	M3.02	U
XIII	Discuss about remote sensing and explain its applications.	M4.01	U
	OR		
XIV	Discuss about applications of GPS	M4.01	U

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