

G. S. Mandal's

Maharashtra Institute of Technology, Aurangabad

(An Autonomous Institute)

END SEMESTER EXAMINATION

Second Year B.Tech (Agri) – Feb/Mar-2023

Marking Scheme

Course Code: AED 204

Course Name: Surveying and Levelling

Duration: 2 Hrs

Max. Marks: 50

Date:

Instructions:

- All questions are compulsory
- Assume suitable data wherever necessary and clearly state it
- Figures to right indicate full marks

Q.	Answer any five(Marks:10)	M	C	B	PI
i		ar	O	L	
		ks			
a)	Definition centering- 1 mark And Definition of Transiting- 1 mark	2	1	1	3.1.1
b)	1. Define Check lines- 1 mark 2. Define Tie Lines- 1 mark	2	1	1	3.1.1
c)	Define Arbitrary Bearing- 2 mark	2	1	1	3.1.1
d)	Explain Whole Circle Bearing System- 2 mark	2	2	2	3.1.1
e)	Explain Quadrantal Bearing System.- 2 mark	2	2	2	3.1.1
f)	Correct True bearing carry 2 marks	2	3	3	3.1.1
g)	Correct four conditions carry 2 marks	2	2	2	3.1.1
h)	Explanation of Correction for pull or Tension - 2 mark	2	2	2	3.1.1
Q.	Average length of chain- 2 marks	8	3	3	1.3.1
2	Area of ground – 2 marks True area of ground-2 marks Alternative area of ground calculate with respect to error- 2 marks				
Q.	Fixed Hair method explanation-4 marks	8	3	3	2.1.2
3	Derivation of Distance-4 marks				
Q.	Conversion of all whole circle bearing to Quadrantal	8	4	4	1.3.1
4	Bearing (R.B)- 4 marks(1 mark for each) Conversion of all Quadrantal Bearing(R.B) to whole circle bearing)- 4 marks(1 mark for each)				
Q.	Correct Area of all figures carry -7 marks(1 mark for each figure)	8	5	5	1.3.1
5	Total area carry -1 mark				
	OR				

Each station with correct RL carry 1 mark and other details carry 2 marks Answer:								8	5	5	1.3.1
St at io n	B.S	I.S	F.S	Rise	Fall	R.L	Rem ark				
A	0.86 5					560.500	BM				
B	1.02 5		2.105		1.240	559.260	CP1				
C		1.58 0			0.555	558.705					
D	2.23 0		1.865		0.285	558.420	CP2				
E	2.35 5		2.835		0.605	557.815	CP3				
F			1.760	0.595		558.410					
Q. 6	Explanation of the instruments required for chaining with proper diagram(any four)- 4marks Explanation for Plane table Surveying-2 marks Explanation for Contouring- 2 marks							8	6	2	3.1.1
OR											
Each station point(7 station) with correct RL carry 1mark and other details carry 1 mark Answer								8	5	5	1.3.1
Sta tio n	B.S	I.S	F.S	H.I	R.L	Rem ark					
1	1.622			84.820	83.198	BM					
2	1.874		0.354	86.340	84.466	CP1					
3	2.032		1.780	86.592	84.560	CP2					
4		2.362			84.230						
5	0.984		1.122	86.454	85.470	CP3					
6	1.906		2.824	85.539	83.630	CP4					
7			2.036		83.500						

Note:- All course outcomes shall be addressed.