MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent unit of MAHE, Manipal)

# MANIPAL INSTITUTE OF TECHNOLOGY THIRD SEMESTER B.TECH (CIVIL ENGINEERING) END SEMESTER EXAMINATION, DEC 2023

## SURVEYING (CIE 2122)

### ( -12 - 2023)

TIME: 3 HRS.

MAX. MARKS: 50

## Note: 1. Answer all questions.

#### 2. Any missing data may be suitably assumed.

Q. NO	QUESTION	MARKS	CO	BL
1A	The stadia intercept read by means of a fixed hair instrument			
	of a vertically field start is 1.05m, the angle of elevation being $6^{\circ}26^{\circ}$ . The instrument constants are 100 and 0.4.			
	What would be the total number of turns registered on a	5	2	3
	what would be the total humber of turns registered on a	5	4	5
	intercept on a staff held on the same point the vertical angle			
	in this case being 6858' and the constants 1000 and 0.5			
1D	In this case being 6.58 and the constants 1000 and 0.5.	2	2	2
1D 1C	With the next shotsh symbolic range finder.	3	2	2
	With next sketch explain range finder.	<u>_</u>	2	2
ZA	with near sketch explain the graphical method of solving three	5	2	2
20	What are the various grantians of acting out of turnel?		3	2
28	Explain the surface survey	3	3	2
20	With the next sketch evaluin Weisheeh Triangle method in		2	2
20	transforming alignment in underground survey	2	3	4
2 1	What is terrestrial photogrammetry? Explain the graphical		1	2
ЗА	what is terrestrial photogrammetry? Explain the graphical	4	4	4
	measurements from terrestrial photographs	4		
2P	An area 15 km x 20 km is to be photographed with 150 mm			
30	An area 15 km x 50 km is to be photographed with 150 mm			
	1:25000 affective at an elevation of 400 m. Take the and lan			
	as 65% and side lap as 35%. The size of the photograph is 200	1	1	3
	mm x 200 mm. An intervalometer will be used to control the	-	-	5
	interval between exposures with the least count of 0.5sec. The			
	speed of the aircraft will be maintained at 200 km/br			
30	write the classification of aerial photograph and explain any		4	2
	two of them.	2	-	

<b>4</b> A	Ground length of a line AB is 500m. The elevation of point A						4	3
	and B are found to be 600m and 380m respectively. The photo						•	C
	co-ordinat							
	Point	Point Photo Co-ordinate x Photo Co-ordinate y						
	1 onne	(mm)		(mm)	5			
	а	29.17		14.97		5		
	h	-21.14		40.18		C		
	0	0 21.11 10.10						
	If ab mea							
	calculate the flying height using method of successive							
	approximation. (Two iterations only)							
<b>4</b> B	Two poin		4	3				
	respectively above datum appear on the vertical photograph							
	having fo	having focal length of 20cm and flying altitude of 2400m						
	above datum. Their corrected photographic co-ordinates are as							
	follows:	llows:				2		
	Poi	ints	Photographic co-ordinates			3		
			x (cm)	y (cm)				
	А		+2.45	+1.36				
	В		-1.72	+2.65				
	Find the le	ength of th	_					
<b>4</b> C	With the neat sketch explain the method of finding elevation					n	4	3
	of a point using photo graphic measurements					4		
5A	What is Drone surveying? And what are the benefits of Drone					4	5	2
	Surveying?							
5B	What is Remote Sensing and what are the different types of					3	5	3
	Remote Sensing					5		
5C	What are the Challenges and Future Trends in Remote Sensing					3	5	3
	and GIS?					5		