

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)
Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad**III B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS, DECEMBER-2018**Subject: **MINE SURVEYING-II**Branch: **MINING**Time: **3 hours**Max. Marks: **75****PART – A****I. Answer ALL questions of the following****5x1Mark=5 Marks**

1. Define point of curve (P.C).
2. Define Photogrammetry.
3. What are the components of GIS?
4. Write down the uses of Total Station.
5. Distinguish the types of EDM instruments.

II. Answer ALL questions of the following**10x2Mark=20 Marks**

1. What are the various systems of tachometric survey?
2. Define point of tangency.
3. Briefly explain satellite and polar orbiting satellite.
4. Differentiate between true error and most probable error.
5. Distinguish the different types of RS system.
6. What is the importance of national grid?
7. How mapping of a site is done by total station?
8. What is the use of eye piece screw and focusing screw in total station?
9. List out different GIS softwares.
10. Write any two applications of GIS softwares in mining.

PART-B**Answer ALL questions of the following****5x10 Marks= 50Marks**

1. A Tacheometer was setup at station A and the following readings were obtained on a vertically held staff:

Instrument Station	Staff Station	Vertical Angle	Hair Readings	Remarks
A	B.M	-2°18'	3.225, 3.550, 3.875	R.L of B.M=437.655m
A	B	+8°36'	1.650, 2.515, 3.380	

Calculate the horizontal distance from A to B and the R.L of B if the multiplying constant and additive constant of the instrument were 100 and 0.4 respectively.

(OR)

2. a) Derive an expression for horizontal distance and elevation in the fixed hair method when the staff is held vertical and line of sight is inclined?
b) What is anallactic lens? It is used in which type of telescope? Explain the reason behind it.
3. What are the reasons for keeping overlap in the photographs? The scale of an aerial photograph is $1\text{ cm}=100\text{ m}$. The photograph size is $20\text{ cm} \times 20\text{ cm}$. Determine the no of photographs required to cover an area of 100 sq. Km if the longitudinal lap is 60% and the side lap is 30% .

(OR)

4. What is datum scale (S_d) & Average scale (S_{av})? A vertical photograph was taken at an altitude of 1200 m above mean sea level. Determine the scale of the photograph for terrain lying at elevations of 80 m and 300 m if the focal of the camera is 15 cm .
5. a) Explain the method for transferring surface line down shafts and setting out underground line.
b) Explain weisbach triangle method for setting out underground correlation survey?

(OR)

6. a) Define the term RS? State the idealized components of RS system with sketch?

b) Define the term GIS? Write the working principle of GIS?

7. Explain the procedure of mapping of sites by total station.

(OR)

8. What are the various applications of total station in mine surveying? Explain them.
9. Write down the statutory requirements for mine plans and sections as per DGMS?

(OR)

10. With the help of a neat diagram, explain Geodimeter.