## C14-MNG-405

## 4469

# BOARD DIPLOMA EXAMINATION, (C-14) <br> OCTOBER/NOVEMBER-2018 <br> DMNG-FOURTH SEMESTER EXAMINATION 

## MINE SURVEYING-II

## PART-A

$3 \mathrm{X} 10=30$
Instructions : 1. Answer All questions.
2. Each question carries THREE marks
3. Answer should be brief and straight to the point

1. List the fundamental lines of a transit theodolite
2. Define the terms (a) Transiting (b) Face Left
3. List the methods of Balancing the traverse.
4. Define (a) Simple curve, (b) Reverse curve.
5. State the purpose of correlation.
6. Define the term Weisbach triangle
7. State the principle of tacheometric Surveying
8. List the methods of tacheometric survey.
9. Define the terms (a) Dip $\quad$ (b) Strike.
10. The amount and direction of full dip is 1 in 2 due South. What is the gradient of a road driven on a bearing $\mathrm{S} 40^{\circ} \mathrm{W}$ ?

## PART-B

Instructions : 1. Answer any five questions. Each question carries ten marks.
2. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer
11. Describe the repetition method of measurement of horizontal angle.
12. Describe the continuous Azimuth, method of traverse.
13. Under noted are the details of a closed traverse:

| Line | Bearing | Distance |
| :--- | :--- | :--- |
| AB | $\mathrm{N} 85^{\circ} \mathrm{E}$ | 439 m |
| BC | Due south | 488 m |
| CD | $\mathrm{S} 60^{\circ} \mathrm{W}$ | 377 m |
| DA | $\mathrm{N} 10^{\circ} \mathrm{W}$ | 609.5 m |

Calculate the area of traverse ABCD by co-ordinate. Tabulate your calculation in proper form.
14. List the methods of setting out curve by chord and angle method in underground.
15. Describe the method of correlation by Co-Planing or Exact alignment method.
16. A Tacheometer is set up at an intermediate points on a traverse course $A B$, and the following observations are made on a vertically held staff:

| Staff Stn. | Intercept | Mid-wire reading | Bearing | V. angle |
| :---: | :---: | :---: | :---: | :---: |
| A | 7.42 | 6.71 | $218^{\circ} 38^{\prime}$ | $-5^{\circ} 30^{\prime}$ |
| B | 6.80 | 6.40 | $38^{\circ} 37^{\prime}$ | $-6^{\circ} 30^{\prime}$ |

The instrument is fitted with an anyllactic lens, and the constant is 100 . Compute the length AB and the R.L. of B given that A being 226.8 units above M.S.L.
17. Derives a formula relating between true dip, apparent dip and strike of a mineral bed.

Three boreholes A, B and C supplied the following information of a the coal seam:

| Line | Bearing | Gradient |
| :--- | :--- | :--- |
| AB | $\mathrm{S} 40^{\circ} \mathrm{W}$ | 1 in 5 |
| AC | $\mathrm{S} 35^{\circ} \mathrm{E}$ | 1 in 3 |

18. Calculate the direction and gradient of the true dip of the coal seam.
