

|             |               |                                       |   |               |
|-------------|---------------|---------------------------------------|---|---------------|
| Discipline: | MINING        | Semester: 3 <sup>rd</sup>             | Name of the Teaching Faculty:           |               |
| Subject:    | MINE SURVEY-I | No of Days/Week Class Allotted: _____ | Semester From date: _____ To date _____ | No. of Weeks: |

| WEEK                      | Class Day | Theory Topics  |
|---------------------------|-----------|--|
| From 15/09/22 to 16/09/22 | 1st       | Chain survey, conventional signs, abbreviation standards of lining, inking & coloring. |
|                           | 2nd       | Selection of scale to be used in surveying.  |
|                           | 3rd       | Various principle of chain surveying   |
|                           | 4th       | Instruments used in surveying & checking their accuracy.                               |
|                           | 5th       |  |
| From 19/09/22 to 24/09/22 | 1st       | Ranging and chaining of a line & errors in chaining.                                   |
|                           | 2nd       | Study the obstruction while chaining & chaining along a sloping ground.                |
|                           | 3rd       | Use of optical square and line range and checking the accuracy of optical.             |
|                           | 4th       | Description of offsets and their measurements.   |
|                           | 5th       |  |
| From 26/09/22 to 01/10/22 | 1st       | Reference sketches of stations.  |
|                           | 2nd       | Procedure of chain surveying.  |
|                           | 3rd       | Field booking and plotting of chain survey.  |
|                           | 4th       | Compass survey, prismatic compass, its adjustments and use.                            |
|                           | 5th       |  |

| WEEK                      | Class Day | Theory Topics   |
|---------------------------|-----------|---|
| From 10/10/22 to 15/10/22 | 1st       | True meridian, magnetic meridian, grid line meridian and arbitrary meridian.        |
|                           | 2nd       | W.C.B and Q.B and Conversion from one to other.                                     |
|                           | 3rd       | Fore and back bearing and their conversion, angles from bearing and bearing angles. |
|                           | 4th       | Local alteration and necessary correction to the bearing.                           |
|                           | 5th       |   |
| From 17/10/22 to 22/10/22 | 1st       | closed and open compass surveying and its plotting.                                 |
|                           | 2nd       | procedure of field booking in compass and chain traverses.                          |
|                           | 3rd       | Adjustment of closing error in compass traversing.                                  |
|                           | 4th       | Surveyor compass (Miner's dial), its adjustment and use.                            |
|                           | 5th       |   |
| From 24/10/22 to 29/10/22 | 1st       | Comparison of prismatic compass with theodolite surveyor compass.                   |
|                           | 2nd       | Introduction to plane table survey & its application.                               |
|                           | 3rd       | Explanation of two point problems.  |
|                           | 4th       | Procedure of plane table surveying.   |
|                           | 5th       |   |

|             |                                       |   |                     |
|-------------|---------------------------------------|---|---------------------|
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| WEEK                      | Class Day | Theory Topics                                    |
|---------------------------|-----------|--|
| From 01/11/22 to 05/11/22 | 1st       | Explanation of Three point problems              |
|                           | 2nd       | Its solution by tracing paper method.            |
|                           | 3rd       | Advantages of plane table                        |
|                           | 4th       | Disadvantages of plane table                     |
|                           | 5th       |  |
| 07/11/22 to 12/11/22      | 1st       | Computation of Areas (Introduction)              |
|                           | 2nd       | Methods of determining areas.                    |
|                           | 3rd       | Find out areas from offset to a base line using. |
|                           | 4th       |  |
|                           | 5th       |  |
| From 14/11/22 to 19/11/22 | 1st       | Mid ordinate rule                                |
|                           | 2nd       | Average ordinate rule                            |
|                           | 3rd       | Trapezoidal rule                                 |
|                           | 4th       | Simpson's rule                                   |
|                           | 5th       |  |

| WEEK                      | Class Day | Theory Topics                                    |
|---------------------------|-----------|--|
| From 21/11/22 to 26/11/22 | 1st       | compute area by planimeter and from graph paper. |
|                           | 2nd       | Leveling (Introduction)                          |
|                           | 3rd       | Benchmark M.S.L dumpy level.                     |
|                           | 4th       | Adjust dumpy level                               |
|                           | 5th       |  |
| 28/11/22 to 03/12/22      | 1st       | Modern levels (Auto level)                       |
|                           | 2nd       | precise staff                                    |
|                           | 3rd       | Methods of leveling                              |
|                           | 4th       | Rise & fall method                               |
|                           | 5th       |  |
| 05/12/22 to 01/12/22      | 1st       | Height of instrument.                            |
|                           | 2nd       | Errors in ordinary leveling.                     |
|                           | 3rd       | Reciprocal leveling, subsidence leveling         |
|                           | 4th       | setting out gradient, trigonometric leveling.    |
|                           | 5th       |  |

# ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

|             |  |                                       |   |               |
|-------------|--|---------------------------------------|---|---------------|
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| Subject:    |  | No of Days/Week Class Allotted: _____ | Semester From date: _____ To date _____ | No. of Weeks: |

| WEEK                 | Class Day | Theory Topics                                       |
|----------------------|-----------|---|
| 12/12/22 to 17/12/22 | 1st       | Geometrical leveling & Physical leveling.           |
|                      | 2nd       | One reserves, classification of reserves.           |
|                      | 3rd       | Evaluate reserves by exploratory                    |
|                      | 4th       | Primary one reserve by material balance method.     |
|                      | 5th       |   |
| 19/12/22 to 22/12/22 | 1st       | Decline curve method                                |
|                      | 2nd       | Temporary & permanent adjustment of theodolite.     |
|                      | 3rd       | Principles of operation & describe different parts. |
|                      | 4th       | Horizontal & vertical angles                        |
|                      | 5th       |   |
|                      | 1st       | Setting of the instrument                           |
|                      | 2nd       | Traversing with theodolite.                         |
|                      | 3rd       |   |
|                      | 4th       |   |
|                      | 5th       |   |