ORISSA SCHOOL OF MINING ENGINEERING
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DEPARTMENT OF MINING ENGINEERING

LESSION PLAN

| Discipline: MINING | SEMESTER: 4TH | Name of the Teaching Faculty: Partha Sarathy Dash |
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| Subject: MINE SURVEY- II | No. of Days/ week class allotted: 4 | Semester start from date: 13.02.23 to 23.05.23<br>No of weeks- 16 |
| **Week** | **Class Day** | **Topics** |
| 1st | 1st | Define Stadia & its Principle. |
| | 2nd | Explain Diaphragm. |
| | 3rd | Explain Reticules. |
| | 4th | Explain Tacheometer. |
| 2nd | 1st | Explain Instruments constants. |
| | 2nd | Find out height & distance from Stadia intercepts method. |
| | 3rd | Find out height & distance from Tangential system. |
| | 4th | State purpose & principle involved in Triangulation method. |
| 3rd | 1st | State purpose & principle involved in Trilateration method. |
| | 2nd | Classify various methods of Triangulation method. |
| | 3rd | Explain Primary Triangulation. |
| | 4th | Explain Triangulation. |
| 4th | 1st | Explain tertiary colliery Triangulation. |
| | 2nd | Develop concept about reconnaissance survey. |
| | 3rd | Describe methods of measuring angle. |
| | 4th | Types of theodolite used in triangulation survey. |
| 5th | 1st | Describe the methods of base line measurement using E.D.M. |
| | 2nd | Define Tape correction. |
| | 3rd | State construction of Triangulation station of permanent nature. |
| | 4th | Doubt Clearing, CLASS TEST etc. |
| 6th | 1st | State CO relation. State co relation by Traversing method. |
| | 2nd | State co relation by Optical method. |
| | 3rd | Describe Orientation by wires in two shafts. |
| | 4th | Explain correlation by mines in vertical shafts. |
| 7th | 1st | State CO Planning / Alignmention. |
| | 2nd | Describe Weissbach triangle method. |
| | 3rd | Describe Weis quadrilateral triangle method. |
| | 4th | Explain Precise magnetic correlation. |
| 8th | 1st | State Curves. Its Elements. |
| | 2nd | Define designation of curves. |
| | 3rd | State simple, compound & reverse curves |
| | 4th | Doubt clearing, Surprise viva test. |
| 9th | 1st | Explain setting out of surface & underground curves by chords & offsets. |
| | 2nd | Explain setting out of surface & underground curves by chords & angle. |
| | 3rd | Explain setting out of surface & underground curves by tangent & offset. |
| | 4th | Explain setting out of surface & underground curves by Plate layer method. |
| 10th | 1st | Describe various setting out by chain & one theodolite. |
| | 2nd | Describe various setting out by chain & two theodolite. |
| | 3rd | Describe various setting by chain. |
| | 4th | Describe various setting out by one theodolite. |
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| 11th | 1st | Describe super elevation. |
| | 2nd | Describe Transition & Vertical curves. |
| | 3rd | CLASS TEST & Previous year question discussion. |
| | 4th | Explain Tape triangulation. |
| 12th | 1st | Explain Instrumental survey. |
| | 2nd | Determination of Stope face. |
| | 3rd | State preparation of Stope planes. |
| | 4th | State Plotting of Stope face to mine plan. |
| 13th | 1st | Describe plotting the stope station. |
| | 2nd | Describe Planimeter. |
| | 3rd | Find out extraction of area by Planimeter. |
| | 4th | Find out extraction of area by Planimeter & calculation of triangle thereof. |
| 14th | 1st | Describe GPS (Global Positioning system) |
| | 2nd | Explain the basic principles of GPS. |
| | 3rd | Explain the basic principles of GPS |
| | 4th | Explain the basic principles of GPS. |
| 15th | 1st | Describe TOTAL STATION. |
| | 2nd | Explain the basic principles of Total station. |
| | 3rd | Explain the basic principles of Total station. |
| | 4th | Introduction to DGPS. |
| 16th | 1st | Explain the basic principles of DGPS. |
| | 2nd | Doubt clearing. |
| | 3rd | Doubt clearing. |
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Signature of Faculty 13/2/23

Signature of HOD 13/02/23