Code No.: **40725**

MR14

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)

Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

IV B.TECH II SEMESTER REGULAR END EXAMINATIONS, MARCH-2018

Branch: **Mining**

Subject: **Mine Ground Control**

Time: 3 hours **Max. Marks: 75**

PART – A

I. Answer All Questions **5x1Mark=5 Marks**

1. Why roof tend to fall in underground mines?
2. Mention the instruments used to measure vertical stress.
3. Define caving.
4. What do you mean by anisotropism?
5. Define super-critical subsidence.

II. Answer All Questions **10x2Mark=20 Marks**

1. What are the factors that influence the ground control design?
2. Why is it necessary to pay attention to ground control?
3. What is meant by convergence?
4. Write a short note on load cells.
5. What are the different types of goaf control?
6. Explain the principle of roof bolts.
7. What are the different embankments laid in mines?
8. Explain about design of pillars in underground mines.
9. What are the surface effects of underground subsidence?
10. What are the causes of rock bursts in underground mines?

PART-B

Answer All Questions **5x10 Marks= 50Marks**

1. What are the characteristics of coal measure strata? Explain.

OR

2. Explain the different types of ground control failures.
3. What are the different methods of determining insitu stress? Explain

OR

4. Explain the modern concept of pressure distribution.
5. Describe briefly how supports are provided in Longwall panel, assuming your own conditions.

OR

6. Explain about friction and hydraulic props.
7. Explain the factors to be considered during design of slopes in surface mines.

OR

8. Explain the design of dumps in open cast mines. Discuss the factors affecting dump stability.
9. What are the practices available to measure subsidence? Discuss the preventive measures to avoid damage due to subsidence.

OR

10. Explain methods of preventing subsidence

Code No.: **407C2**

MR14

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Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad

IV B.TECH II SEMESTER REGULAR END EXAMINATIONS, MARCH-2018

Branch: **Mining**

Subject: **Planning of Underground Coal Mining Project**

Time: 3 hours **Max. Marks: 75**

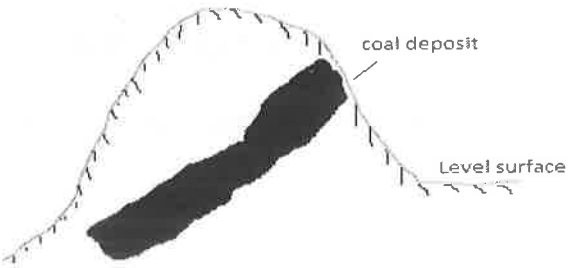
PART – A

I. Answer All Questions **5x1Mark=5 Marks**

1. What is a feasibility study?
2. Name any two objectives of Mine Planning.
3. Which explosive is used for Blasting Gallery Methods?
4. What is gate road way in Longwall mining?
5. Define angle of draw?

II. Answer All Questions **10x2Mark=20 Marks**

1. The following figure shows the position of the coal deposit, as a manager of mine planning department, which method do you prefer to access the coal deposit, give reason.



2. Write a comparison between mining company and other company
3. What is the objective of mine closure plan?
4. Differentiate between extraction and excavation.
5. What is "Blasting Gallery" Method? Mention the applicability conditions for the "Blasting Gallery" Method.
6. What is the importance of output per man shift in mining projects?
7. A double ended ranging drum shearer is employed in a longwall mine of face length 150 m. The mining height is 3.5 m and depth of the web cut is 0.76m. The cycle time for unidirectional cutting is 40 min. Considering bulk density of coal to be 1.4 t/m^3, determine hourly production from the face in ton.
8. What do you mean by continuous mining?
9. What is subsidence prediction?
10. What is subsidence control?

PART-B

Answer All Questions **5x10 Marks= 50Marks**

1. With examples, mention any five factors influencing mining activities.

OR

2. Explain briefly the stages involved in planning of new coal mines.

3. What are the parameters influencing the size of pillars in Bord and Pillar mining method? Briefly explain the determination of strength of pillar and extraction ratio.

OR

4. Discuss the different stages of development of pillar in Bord and Pillar mining with neat sketch.

5. Explain the operation of SDL in underground coal mining.

OR

6. How can you extract coal pillar BGM. Explain with neat sketch.

7. Briefly explain various face support systems used in Longwall system of mining. Draw neat sketches for each face support system.

OR

8. Explain the longwall advancing with neat diagram.

9. Briefly explain various subsidence measurement techniques.

OR

10. Explain the subsidence profile over B&P Panel working below 280m from surface. Assume data wherever necessary.

Code No.: **407D2** | **MR14**

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IV B.TECH II SEMESTER REGULAR END EXAMINATIONS, MARCH-2018

Branch: **Mining**

Subject: **Mine Health & Safety Engineering**

Time: 3 hours **Max. Marks: 75**

PART – A

I. Answer All Questions **5x1Mark=5 Marks**

1. Define Accident
2. Who is in charge for the enquiry of accidents in the mines?
3. What is a disaster?
4. What is the use of controlled blasting in opencast mines?
5. What is the cause for electrical accidents in the open cast?

II. Answer All Questions **10x2Mark=20 Marks**

1. Define the term serious bodily injury?
2. What is a fatal accident?
3. What is the safety Management in mines?
4. What are the duties of a safety officer?
5. What are the duties of a Manager in regard with safety?
6. Who consists of safety committee?
7. What are the causes of roof fall accident?
8. What is side fall?
9. How you will deal misfire in mine to avoid accident?
10. What is misfire? Write causes of misfire?

PART-B

Answer All Questions **5x10 Marks= 50Marks**

1. How the classification of accidents shall be done?

OR

2. Tabulate the statistical analysis of mine accidents worldwide
3. What are the uses of classification of accidents in mines?

OR

4. Describe risk identification and Risk Management?
5. Make a safety policy to avoid accidents due to heavy machinery in Open cast mines?

OR

6. Give detailed note about Emergency organization of Disaster Management
7. Write down the disaster management during the heavy roof fall in the mine?

OR

8. What are the common causes and preventive measures of accidents due to rope haulages?
9. What are the precautions to be taken to avoid the electrical accidents while using the heavy earth machinery?

OR

10. What are the common causes of explosive accidents in mines? Write the preventive measures for explosive accidents?