Code No.: **50H09**

MR15-2015-16 Batch

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 I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2018

Subject: **Business Communication**

Branch: **Common to ME & Mining**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. What is an effective Business Communication?
2. Discuss the Semantic barriers.
3. Differentiate "Inferring meaning" and "critical reading".
4. What are the strategies for writing the Body of a Letter?
5. Write a few good mannerisms of " E- mail etiquette"?

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. How does communication play a crucial role in the progress of an organization? Explain.
2. a). Gestures are observed actions. Elucidate.

   b). How postures help you asses a person's confidence or diffidence?
3. Write a short note on Skimming, Scanning, Intensive and extensive reading skills.
4. a). Format of a formal letter.

   b). Prepare a letter to the editor of a news paper on "spreading garbage in and around your locality" with some solutions
5. List out the advantages & disadvantages of e-correspondence.
6. a) Explain with examples the weak and strong forms of English speech.

   b) Briefly explain the essential ingredients of good oral communication
7. Write an essay on positive and negative non-verbal clues.
8. Explain the different types of Reading Techniques.

Code No.: **50150**

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2018

Subject: **GREEN BUILDINGS**

Branch: **Common to ME & Mining**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Write in briefly the various methods and tools for building assessments.
2. What is project management in green building process
3. How we can do water conservation in green buildings
4. What are the economic benefits of green or sustainable building and development?
5. Categorize the carbon accounting green building specifications

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. (a) Explain the importance of high performance green buildings.
   (b) What are the sources of Green building materials?
2. a) Explain about Design and construction relationships in green building process?
   b) Write about BREEAM and CASBEE?
3. a) Best Practices for indoor environmental quality
   b) What are the parameters involved in constructing a green building?
4. a) compare between green building and high performance building technologies?
   b) write about economic issues of green buildings?
5. a) Why do green buildings cost more than traditional buildings?
   b) Write a case study on green building located in Hyderabad, CII, IGBC.
6. a) Explain briefly about eight green building principles?
   b) Write about impacts of building construction, operation and disposal?
7. a) Write down the advantages and disadvantages of green building construction
   b) Write about the importance of landscaping in green building?
8. a) explain in detail about Building hydrologic cycle strategies?
   b) what is the strategy behind selecting green building materials?

Code No.: **52532** | **MR15-2015-16 Batch**

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

IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, DECEMBER-2018

Subject: **Mine Ground Control**

Branch: **MINING**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Define the concept of ground control.
2. Differentiate between creep and heave with neat diagram.
3. Define the terms Sub-critical, Critical and Super Critical widths with reference to subsidence.
4. A square pillar in bord and pillar panel are 30 m center to center and the galleries are of width 4.6 m. Calculate the tributary area for each pillar.
5. Compare between roof truss and roof bolts.

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. a) Write about the significance of faults and joints in ground control in mines. Explain them briefly with neat sketches
   b) Write about ground control in relation to the sub systems of roof support, coal haulage and ventilation in a mechanized pillar extraction panel.

2. a) Discuss about hydraulic fracturing method of in-situ stress measurement.
   b) Describe pressure arch concept of stress distribution.

3. Discuss in detail a method of carrying out subsidence survey (as per DGMS Guidelines) to calculate the maximum subsidence, strain, subsidence trough, etc. for a longwall panel being extracted in a 4.0 thick coal seam having 1 in 6 gradient, existing at a minimum depth of 350 m and a maximum of 390 m.
4. a) What are the factors to be considered for designing an open pit slope.
   b) A 2.5 m thick coal seam lying at an average depth of 100 m has been developed by bord and pillar method. The width of the square pillars is 30 m center to center and gallery width is 4 m. The average density of the overlying strata is 26 kN/m^3 and the pillar strength is 4500 kN/m^2. Calculate factor of safety of pillar.
5. a) Write down the comparison between operational characteristics of 2- leg and 4- leg powered supports. (6)
   b) Discuss about rock reinforcement for supporting of roof. (4)
6. a) Explain the ground control practices used in mechanized longwall mines.
   b) Write about the importance of ground control in mines for improving safety and production.

7. a) Write about the modern concept of strata pressure redistribution.
   b) Explain briefly the factors affecting the convergence in longwall face.

8. Write short notes on any two of the following
   a) Trough subsidence b) Release of strain energy in relation to Richter scale
   c) Drill yield testing

Code No.: 52535

MR15-2015-16 Batch

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

IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, DECEMBER-2018

Subject: **Advanced Mining Machinery**

Branch: **MINING**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Describe the recapping of wire ropes.
2. What is the purpose of bell plate used in drum winding?
3. What is shearer? In which method of mining, it is used?
4. What is shuttle car?
5. What are the different types of continuous miners used in opencast mines?

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. Explain the cage and suspension gear in detail with neat sketches.
2. a) Describe various types of rope guides used in shaft with their applicability.
   b) Describe capping procedure with split capel and rivets.
3. Explain electrical and mechanical braking systems used in winding engines with labelled diagrams
4. a) Explain the haulage system in underground mines.
   b) Explain Whitmore overwind controller.
5. Describe various types of continuous miners with their constructional features and applications.
6. a) Explain about strata control methods in underground mines.
   b) A centrifugal pump running at 1200 rpm is delivering a head of 180 meters and a quantity of 4800 liters per minute. What would be the head and quantity if the speed of the pump is increased to 1600 rpm.
7. What is a blast hole drill? Explain in detail, with a line diagram, the constructional features and operation of a blast hole drill used in large open cast mines.
8. Explain briefly any two of the following:
   a) Difference between AC and DC type machinery in underground mines
   b) Explain how benches are constructed in open cast mines
   c) Explain why JCB are used in open cast mines

Code No.: **52528**

MR15-2015-16 Batch

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2018

Subject: **Introduction to Mineral Processing**

Branch: **MINING**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. What are the limitations of the mineral processing?
2. Define the term Sample. Enumerate the objectives of sampling in mineral processing.
3. Why flotation is used for fine particles only?
4. Give list of four minerals and gangue that can be separated using electrical properties.
5. Define para-magnetic materials with suitable example.

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. A material is crushed in a blake jaw crusher such that the average size of particle is reduced from 50 mm to 10 mm with the consumption of energy of 13 kWs/kg. what would be the consumption of energy needed to crush the same material of average size 70 mm to an average size of 20 mm:
   a) Assuming Rittinger's law applies?
   b) Assuming Kick's law applies?

2.a) Compare row and row-tap sieve shakers. Name the different series if laboratory sieves known to you. What do you understand by mesh number in BSS series? (4M)

b) Explain the Stokes' law and Newton's law related to movement of solids in fluids. Give the equations to compute terminal velocity of particles and mention the fields of application of these laws. (6M)

3. What do you understand by 'flotation processes'? Explain the different steps involved in froth flotation process with neat sketches.
4. a) What is pining effect in electrostatic separation?
   b) Explain the operation of dielectric separation.
5. Give a flow chart of a coal washery established to concentrate one lakh tonnes of low-grade ROM coal? The answer should include all the equipment to be used with their capacities, handling of concentrate & middling's, disposal of rejects in an environmental friendly manner.

6.a) Describe the constructional features of jaw crusher with neat sketches. State and its merits, demerits,
fields of applications and limitations.

b) How do you assess the power consumption in comminution.

7. a) What are the types of jaw crushers? Explain Blake jaw crusher.
   b) Explain the work principal and operation of shaking table.
8. Write short notes on any two of the following
   (a) Screening and factors affect the screening efficiency.
   (b) Sample and sampling
   (c) Flow film principle.

Code No.: **52529**

MR15-2015-16 Batch

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2018

Subject: **Under Ground Metal Mining Technology**

Branch: **MINING**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Define Raise and Winze.
2. What are the types of raising methods?
3. Define overhand and underhand stopping
4. Explain briefly the machineries/equipment's required for ground breaking.
5. State the principle of insitu leaching method.

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. What do you mean by unit operations? Briefly explain various unit operations associated with development of a drift. Give the name of the resources required for the drift development.
2. a) What are the applications of the raises in UG mines? [3M]
   b) Explain the two-compartment method of raising with neat sketch [7M]
3. a) Explain with sketches unit operations and points of concern involved in block caving stoping.
   b) Explain the preparatory works done in sublevel stoping.
4. Write any five supporting system used in underground metal mining. Explain briefly any one of them.
5. Why insitu leaching is required? Explain associated problems during insitu leaching.
6. a) Give the drilling and charging pattern in long hole raising
   b) Give drilling and charging pattern adopted in vertical crater retreat method.
7. Briefly explain complete cycle of raise driving by Jora lift with neat sketches.
8. Write short notes on any two of the following
   (a) Room and pillar method of working
   (b) Open raising method
   (c) Underhand stoping

Code No.: **50124** | **MR15-2015-16 Batch**

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IV B.TECH I SEMESTER REGULAR END EXAMINATIONS, NOVEMBER-2018

Subject: **Disaster Management**

Branch: **Mining**

Time: 3 hours **Max. Marks: 60**

PART – A

Answer ALL questions of the following **5x2Mark=10 Marks**

1. Define rapid onset and slow onset disaster.
2. Define landslides
3. Enlist the immediate relief measures in Disaster management
4. Write a note on seismology observatory.
5. Define Sustainable development

PART-B

Answer any FIVE Questions of the following **5x10 Marks= 50Marks**

1. Elucidate the various types of hazards and disasters
2. Describe in detail about Cyclones-its formation, Structure, impacts and mitigation measures.
3. a) Explain in brief Post disaster stage rehabilitation
   b) Explain in brief about Pre disaster stage
4. Discuss the Integrated planning methods. (3+3+4M)
   a) Education & awareness b) Community Involvement
   c) National Standards Committee.
5. a) Write short notes on Ecological planning for sustainability
   b) Write short notes on Role of Zillaparishad in Disaster Management.
6. Explain the relation of landscape approach with human ecology.
7. a) Write about Bhopal gas tragedy.
   b) Explain briefly about Biological hazards / disasters in view of population explosion
8. a) When will we called a situation as Disaster emergency. What measures you are going to be suggested for mitigating the emergency conditions. Explain with example.
   b) Discuss the role of technology in disaster management.