**Code No: 138AM** **R16**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**B. Tech IV Year II Semester Examinations, September - 2020**
**ADVANCED UNDERGROUND COAL MINING TECHNOLOGY**
**(Mining Engineering)**

**Time: 2 Hours** **Max. Marks: 75**

**Answer any Five Questions**
**All Questions Carry Equal Marks**
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1. What are the problems associated with development of coal deposit having a gradient of 1 in 6 and seam thickness of 6 m at a depth of 300 m. Explain how can you resolve the problems? [15]

2. What is a shaft pillar? Explain the factors to be considered in leaving shaft pillar? Discuss the size of shaft pillar to be left? [15]

3. Explain what are the preparatory arrangements for Depillaring operations in an underground coal mine? [15]

4. Explain the conditions under which Blasting gallery method is method? Is this method is applicable now? Explain the method with a neat sketch? [15]

5. What are the factors affecting pillar extraction? Under which conditions Bord and Pillar extraction is adapted in general? [15]

6. A mining company has decided to get a production of 2 million tons of coal from a underground mine? Explain the layout for required output, type of machines, personnel required to get that output? Assume your own conditions. [15]

7. What are different long wall methods are there? Explain about Long wall Retreating method of mining? Assume your conditions. [15]

8. Explain how can you produce the highest coal from a Longwall panel with shearer? Discuss the factors? [15]

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