

Code No: 157EV**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, February/March - 2022****MATERIAL HANDLING IN MINES****(Mechanical Engineering)****Time: 3 Hours****Max. Marks: 75****Answer any five questions****All questions carry equal marks**

1. Explain how do you classify material handling equipment. Explain the importance and advantages of each type of equipment. [15]
2. Explain the current state of art of bulk handling materials in mining in Indian scenario. [15]
3. Explain about screw conveyor and auger conveyor. [15]
4. Explain in detail the in-pit crushers and modular conveyors. [15]
5. Explain how do you calculate the tension requirement and factor of safety for a Belt Conveyor System. [15]
6. Explain the design aspects of the following components of belt conveyor systems.
a) Structures b) Rollers c) Gear boxes d) Motors [15]
7. Explain construction of High Angle Conveyors (HAC) and new inventions in High Angle Conveyors. [15]
8. Explain the construction and functions of Mobile cranes and derrick cranes. [15]

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