



Part C

1. Generally, in bedded deposits in which grade and ore thickness are relatively uniform, regular pillar systems are used. This is generally called Room-and-Pillar Mining method.
 - a. Draw a neat sketch diagram and use it to describe the development and production of the cycle operations of "conventional" room-and-pillar mining in hard rock.

[10 Marks]
 - b. Where the "ore" is soft, continuous mining machinery can be applied. Compare and contrast "cyclic" hard rock and "continuous" soft ore room-and-pillar operations.

[12 Marks]

2. With the development of drills capable of drilling large diameter holes up to 60 m in length, conventional blast hole stoping has been replaced with vertical crater retreat (VCR) in most of the underground mining operations.
 - a. Draw a neat sketch diagram and use it to describe the development and production cycle of operations utilizing the vertical crater retreat (VCR) method of mining.

[10 Marks]
 - b. Describe three ore loading machines used in VCR and discuss advantages and disadvantages of selecting such machines.

[12 Marks]