B.E. Mining Engineering Third Semester (Old Pattern)

MN301 – Mining Geology – I

P. Pages : 1 **GUG/W/18/1518**

Time : Three Hours * 1 1 9 7 * Max. Marks : 80

Notes : 1. All questions carry equal marks.
2. Assume suitable data wherever necessary.
3. Diagrams and Chemical equation should be given wherever necessary.
4. Illustrate your answers wherever necessary with the help of neat sketches.

1. What is an earthquake? Discuss the origin of earthquake and characteristics of Seismic Waves. **16**

OR

2. What are the natural agencies of geological works? Describe the geological work of wind with respect to erosion, transportation and deposition along with their features. **16**

3. What are folds? Describe various types of folds. Add a note on their importance in mining operation. **16**

OR

4. a) A limestone bed in a mine site is found to be dipping at 1 in 6 along S 65º W and 1 in 8 along S 15º E. Find the amount and direction of its true dip. Give procedure scale 1 unit : 1 cm. **8**

b) A limestone bed is dipping at 25º east in to a hill slope 20º west. Its outcrop is 300 m. wide. Determine the true and vertical thickness. Write procedure scale 1 cm : 40 m. **8**

5. What is mineral? Describe various physical properties that help in their megascopic identification. **16**

OR

6. Write short notes on :

a) Physical Properties of foldspar group. **8**

b) Physical properties mica group. **8**

7. What are igneous rocks? Discuss the formation of igneous rocks. Give the Tabular classification of igneous rocks. **16**

OR

8. Define term texture and structure of igneous rocks. Explain various structures of igneous rocks with neat diagrams. **16**

9. How sedimentary rocks are formed? Describe the classification of sedimentary rocks. **16**

OR

10. What is metamorphism? Describe various kinds of metamorphism, giving examples of rocks in each category. **16**

****