

OLD COURSE

QP Code : 28772

(3) Hours

Total Marks: 100

N.B. 1. Question No. 1 is compulsory

2. Attempt any 4 questions out of remaining 6 questions.

3. Draw neat labelled diagrams wherever necessary.

4. All the parts of a question should be grouped together.

5. Figures to the right indicate marks

1. (i) Write the identifying properties and economic use of the following minerals. 5
- |                         |                  |
|-------------------------|------------------|
| (a) Fluorite            | (b) Corundum     |
| (c) Hematite            | (d) Biotite Mica |
| (e) Orthoclase Feldspar |                  |
- (ii) Define the following terms. 5
- |                       |                |
|-----------------------|----------------|
| (a) Stratigraphy      | (b) Dip        |
| (c) Streak of mineral | (d) Weathering |
| (e) Water Table       |                |
- (iii) Answer the following- 5
- What is Petrology?
  - Name the mineral whose composition is  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
  - What is Perched Water Table?
  - What is a strike-slip fault?
  - What is a confined aquifer?
- (iv) Which geological agent is responsible for the formation of the following landforms- 5
- |                  |                   |
|------------------|-------------------|
| (a) Moraines     | (b) Pedestal rock |
| (c) Alluvial fan | (d) Ox-bow lake   |
| (e) Cirque       |                   |

2. (i) What is texture? Write various textures of igneous rocks. 10  
 (ii) What are agents of metamorphism? Describe various types of metamorphism. 10
3. (i) Write a note on mechanical weathering of rocks 5  
 (ii) What is unconformity? Describe Nonconformity. 5  
 (iii) What is a tunnel? Discuss the favourable and unfavourable geological structures for Tunnel construction. 10
4. (i) Describe various types of folds in the rocks. 10  
 (ii) Describe structures in sedimentary rocks. 6  
 (iii) Give Causes of landslides and their preventive measures 4
5. (i) Describe the stratigraphy of Gondwana group and its economic importance. 10  
 (ii) Describe the seismic method of geophysical investigation? 5  
 (iii) What is RQD? Explain its significance. 5
6. (i) Differentiate between any 5 of the following- (4x5=20)  
 (a) Central eruption and fissure eruption  
 (b) Weathering and erosion  
 (c) Seismogram and seismograph  
 (d) Normal Fault and Reverse Fault  
 (e) Aquifer and aquiclude  
 (f) Sill and Dyke
7. Write short notes on any 5 - (4x5=20)  
 (a) Gravity dam (b) Internal structure of earth  
 (c) Hanging valley (d) Importance of geology in civil engineering  
 (e) Building stones (f) Zones of ground water

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