D 48858 (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION JUNE 2008

CE 04 406—ENGINEERING GEOLOGY

(2004 admissions)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Draw neat sketches wherever necessary.

1. (a) How are volcanoes divided ? Explain.
   (b) Explain with figure the subsidence.
   (c) Define Rock cycle and explain briefly.
   (d) Write any *two* uses of the minerals Quartz, Felspares and Micas.
   (e) How are unconformities recognised in the field ?
   (f) What is a gravimetric survey and what are its uses ?
   (g) Write any *five* causes for dam failure.
   (h) What are the important components of a GIS ? Explain them.

(8 × 5 = 40 marks)

Part B

2. (a) What is weathering ? Enumerate the various mechanisms of rock weathering. Describe in detail the chemical weathering. What are the products of weathering ?

(1 + 4 + 7 + 3 = 15 marks)

Or

(b) What is an earthquake ? Discuss causes of earthquakes. Describe in brief the nature of various earthquake waves.

(15 marks)

3. (a) Describe the physical properties, chemical composition, occurrence and uses of pyroxene group of minerals.

(15 marks)

Or

(b) Describe briefly the important qualities of a good building stone. (15 marks)

4. (a) What is a fault ? Describe with neat sketches the parts and types of faults. Add a note on Engineering considerations in Civil Engineering Projects.

(1 + 4 + 8 + 2 = 15 marks)

Or

(b) How are the Electrical survey methods classified ? Describe all the methods in detail.

(1 + 3 + 3 + 3 + 5 = 15 marks)

Turn over

5. (a) What is a tunnel ? Describe the various geological problems met during the construction of tunnel both in the hard rocks and in the soft ground. Add a note on overbreak in Tunnels.

(1 + 9 + 3 + 2 = 15 marks)

Or

(b) Give an account on Graphic representation of Spatial data. (15 marks)

[4 × 15 = 60 marks]