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Name.....

Reg. No.....

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
DECEMBER 2009**

CE 04 406—ENGINEERING GEOLOGY

(2004 admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Draw neat sketches wherever necessary.

1. (a) Write a brief note on Sand dunes.
(b) How are earthquakes classified ?
(c) Describe all the properties and uses of orthoclase feldspars.
(d) Distinguish the concordant and discordant intrusive forms of igneous rocks.
(e) Explain the occurrence and sources of ground water.
(f) Write a note on Geiger Muller counter and scintillation counter.
(g) What are the complicated regions for road ? Explain them.
(h) Explain Electromagnetic spectrum and atmospheric windows.

(8 × 5 = 40 marks)
2. (a) What is plate tectonics ? Describe the various types of plate boundaries.

Or

(b) What are landslides ? How are they caused ? Describe the various types of landslides and various methods of prevention of landslides.

(1 + 3 + 8 + 3 = 15 marks)
3. (a) Give an account on distinctive among three types of rocks on its structure texture, mineral composition and uses.

Or

(b) Describe the structures texture, mineral composition, engineering properties occurrences and uses of the following rock types :—
(i) Basalt ; (ii) Limestone ; (iii) Gneiss ; (iv) Dolerite ; and (v) Slate.

(5 × 3 = 15 marks)
4. (a) Describe briefly with neat sketches :
(i) Joints ; and (ii) Unconformities.

(7½ + 7½ = 15 marks)

Or

(b) Describe the principle and applications of radiometric survey.

(15 marks)

Turn over

5. (a) Write notes on :

- (i) Factors affecting stability of bridges.
- (ii) Geology reservoirs.

(7½ + 7½ = 15 marks)

Or

- (b) (i) Write the detailed comparisons between Raster model and Vector models. (7½ marks)
- (ii) Write a brief note on Electromagnetic spectral regions. (7½ marks)

[4 × 15 = 60 marks]