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T.E. (Civil Engineering) (Part -III) (Semester - VI) (New)

Examination, April - 2016

ENGINEERING GEOLOGY

Sub. Code : 66876

Day and Date : Saturday, 23 - 04 - 2016

Total Marks : 100

Time : 03.00 p.m. to 06.00 p.m.

- Instructions :**
- 1) All questions are compulsory.
 - 2) Use of non-programmable calculator is allowed.
 - 3) Figures to the right indicate full marks.

SECTION - I

- Q1) a)** Explain erosional features produced by River with their civil engineering significance. **[8]**
- b) Discuss the cooling of magma under Plutonic, Hypabyssal & Volcanic conditions. **[7]**
- Q2) Write short notes on any four of the following : **[20]****
- a) Internal structure of the earth.
 - b) Dyke & Sill
 - c) Scope of Engineering Geology
 - d) Agents of Metamorphism
 - e) Pyroclasts

P.T.O.

Q3) a) What is meant by Unconformity? Explain types of Unconformity. [8]

OR

a) What is meant by fault? Explain classification of faults. [8]

b) What is meant by sedimentary rock? Explain grain size classification of sedimentary rocks. [7]

SECTION - II

Q4) Write short notes on any four of the following : [20]

- a) RIS
- b) Sources of Groundwater
- c) Engineering properties of rocks
- d) Porosity & Permeability
- e) Core logging

Q5) a) Describe in detail the suitable and unsuitable geological conditions for locating a tunnel site. [8]

OR

a) Describe in detail the suitable and unsuitable geological conditions for locating a dam site. [8]

b) Write brief account on observations during drilling. [7]

Q6) a) Explain the following : [7]

- i) R. Q. D.,
- ii) Preservation of cores,
- iii) Core recovery,
- iv) Turbid drill water

b) Following is the data obtained during drilling a borehole along a dam alignment : [8]

- i) Top R.L. of bore : 580 m
- ii) Bore hole ends at R.L. 530 m
- iii) Length of each piece of core recovered between R.L. 543 m to R.L. 540 m. is as follows :

14, 13, 09, 02, 07, 12, 11, 07, 10, 11, 13, 12, 10, 14, 12, 05, 4, 15, 12, 15, 14, 15, 17, 12, 14, 15. All piece lengths are in cm.

Find out :

- i) Total depth of bore
- ii) Total length of core recovered
- iii) Core recovery %
- iv) RQD
- v) Core loss
- vi) Machine Run

As per conclusion comment on suitability or non-suitability of sites with justification.

