Roll No.

24383

B. Tech. (Civil) 6th Semester Examination – May, 2015

ENGINEERING GEOLOGY

Paper: CE-312-F



Time: Three Hours]

[Maximum Marks: 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

- Note: (i) Question No. 1 is compulsory. Attempt one question from each section.
 - (ii) All questions carry equal marks.
 - (iii) Assume missing data, if any, suitably.
 - 1. Explain the following:

 $10 \times 2 = 20$

- (a) Artesian wells and springs
- (b) Erosion of the surface of the earth
- (c) Rock forming minerals
- (d) Magma and its constituents
- (e) Retaining walls

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- (f) Mohr's scale of hardness
- (g) Importance of soil profile
- (h) Petrology and structural geology
- (i) Cone of depression
- (j) Influence of geological conditions on the location of bridges

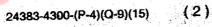
SECTION - A

- (a) Describe importance of engineering geology in the planning and execution of civil engineering projects.
 - (b) Briefly describe with the help of a neat sketch internal structure of earth.
- 3. (a) Explain the geological work of ice and water.

 Explain in detail.
 - (b) Explain the external and internal geological forces causing changes of the surface of the earth.10

SECTION - B

- 4. (a) Define mineral and rocks. Explain the physical properties of important minerals.
 - (b) What are the objectives and principles of stratigraphy? Explain stratigraphical time scale with its sub division.



	5. (a) Describe in detail the different types of folds and faults in detail.
	(b) Describe the following terms in brief: 10
* = = = = = = = = = = = = = = = = = = =	(i) Bedding plane and outcrops
	(ii) Dip and strike
1	SECTION - C
	6. (a) What do you mean by geological investigations? Explain the remote sensing techniques for
	geological and hydrological survey and
	investigation.
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6 E .	7. (a) What is aquifer? Describe in detail different type
	of aquifers.
, 1	(b) Describe the following:
	(i) Difference between perched water table and
	ground water table .
	(ii) Geological maps and interpretation of data.
9. ⁹⁷ 9. 9	SECTION - D
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	sites and abutments.
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- (b) Briefly explain the essential qualities for location of dams to ensure stability. Also describe the geological conditions and their influence on the selection and location of dams.
- **9.** (a) Write down the internal and external causes of landslides. State the measures to control slides. 10
 - (b) Write a short note on "Geology and environment of earth".



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