



VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE

[Central Technological Institute, Maharashtra State]

Matunga, Mumbai-400 019

END SEMESTER EXAMINATION	MAY 2012	DATE OF EXAM	11.05.2012
SEMESTER & PROGRAM	S.Y.B.Tech, SEM IV	TIME	3 Hours
TIME ALLOWED	3 HRS.	MARKS	100
COURSE (Course Code) :	ENGINEERING GEOLOGY (CE0004)		
BRANCH:	Civil Engineering		

- Instructions
1. Que. 1 is compulsory with no internal choice.
 2. Figures to the right indicate full marks.

- Q.1
- a. Explain the following terms
1. Economic Geology 2. Primary Minerals 3. Outcrop 03
 - b. Briefly explain various metamorphic agents 03
 - c. Explain true dip and apparent dip 02
 - d. Briefly explain mineral identification by x – ray analysis. What are the constraints associated with this method? 02
 - e. Define erosion and denudation of rocks. 02
 - f. List the functions (four functions) of Geological Survey of India? 02
 - g. Differentiate between cleavage and fracture of a mineral with suitable example. 02
 - h. Write the average chemical composition of Igneous rocks. 02
 - i. Define Anticline and Syncline folds with labeled sketch. 02
- Q.2
- a. Explain in detail about the development of river with a neat sketch. 06
OR
Explain mineralogical composition, structure, and physical properties of Pegmatite.
 - b. Discuss the common structures and textures of Metamorphic rocks. 06
OR
Give the detailed classification of Sedimentary rocks with suitable example
 - c. Explain the civil engineering uses of following rocks; 08
1. Limestone 2. Gypsum 3. Basalt 4. Granite
OR
Explain in detail, chemical composition and physical properties of Quartz.
- Q.3
- a. Explain with neat sketch various parts of fold. 07
 - b. Differentiate between 08
1. Felsic and Mafic minerals
2. Concordant igneous intrusion and discordant igneous intrusion
- Q.4
- a. Explain the significance of Stratigraphy in tunneling. 07
 - b. Enlist the different structures of Igneous rocks, Sedimentary rocks and metamorphic rocks. Explain briefly the structures of any one type of rock. 08
- Q.5
- a. What is the significance of precise geological investigations before the construction of reservoirs? 07
 - b. Write a short note on following: 08
i. Internal constitution of Earth
ii. Comparison of Joints and Faults
iii. Textures of sedimentary rocks
- Q.6
- a. Define crystal. Classify crystal into systems. Enumerate the characteristic elements of the different crystal systems. 08
 - b. Explain how the fault lines affect the construction of dams with a neat sketch. 07