

B.E(C.E)4thSem FinalExamination,2013
Engineering Geology
(GEO—401)

Full Marks—70

Time-3 hrs.

Group-A

Answer question 1 and 2 and any one from the rest

1. 1x10=10
- I. What is the most abundant element of planet Earth ?
 - II. What are the two most abundant elements of the crust ?
 - III. Which portion of the planet Earth contain most of its mass ?
 - IV. What are the principal mineral content of granite ?
 - V. What is Raynolds number ?
 - VI. Name any rock that contain olivine as a mineral constituent ?
 - VII. Name a coarse grained sedimentary rock .
 - VIII. What are primary minerals and secondary minerals ?
 - IX. Which is the most stable mineral under the action of weathering ?
 - X. What is the difference between a mineral and a rock ?
2. State what type of silicate are the minerals mentioned below? Also state whether they are primary mineral or secondary mineral. 10
Epidote, Chlorite, Feldspar, Quartz, Mica, Pyroxene and Zeolite
3. Discuss ,In brief, the principal agents of Metamorphism? 9

Or,

Write briefly about i)Laccolith ,ii)Lopolith, iii)Dyke and iv)Sill
With neat sketches

4. What do you understand by the word " rock texture"? How do you differentiate sedimentary, igneous and metamorphic rocks on the basis of texture? 6
Define hypidiomorphic granular texture
- Or,
- Volcanic eruption can be explosive or effusive in nature ---illustrate

Group—B

Answer all the questions

5. Plot the following dip data i)30°→30° ii)50°→90°iii)10°→40° iv)70°→30° 8
6. Define Dam.State the geological investigations necessary prior to dam erection 8

7. Define Tunnel. Name different types of tunnels. State with neat sketches how attitude of beds controls the design and longevity of tunnel 8
8. Draw diagrams to illustrate i) Repetition and ii) Omission of strata due to faulting 8
9. Write short notes on (any one) 3
 - i) Frost action
 - ii) Thermal effect