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Seat No.	
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[4957]-104

S.E. (Civil) (I Sem.) EXAMINATION, 2016

ENGINEERING GEOLOGY

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 100

- N.B. :—**
- (i) Answer *three* questions from Section I and *three* questions from Section II.
 - (ii) Answers to the two Sections should be written in separate answer-books.
 - (iii) Neat diagrams must be drawn wherever necessary.
 - (iv) Figures to the right indicate full marks.
 - (v) Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.
 - (vi) Assume suitable data, if necessary.

SECTION I

1. (a) Enlist different branches of Geology. Explain how engineering geology helps an engineer to solve the problems in the field. [8]
- (b) Describe parallel textures formed by metamorphism. Give suitable examples. [8]

P.T.O.

Or

2. (a) State and explain Grain size classification of sedimentary rocks with suitable examples. [8]
- (b) Describe various textures shown by Igneous rocks. [8]
3. (a) What is stratigraphy ? Write in detail importance of Gundwana formation. [8]
- (b) Describe stages of river. Explain any *two* landforms resulted by the process of deposition. [8]

Or

4. (a) Explain in detail Physiographic Divisions of India. Describe various types of rocks alongwith structural features occurring in Maharashtra state. [10]
- (b) What is Rejuvenation ? Describe any *two* landforms resulted by Rejuvenation. [6]
5. (a) Describe how an Unconformity is formed. Describe any *two* types with neat diagrams. [10]
- (b) Describe 'Gravity Fault' and 'Reverse Fault'. Draw neat sketches. [8]

Or

6. (a) What is folding ? Give nomenclature of the fold. Describe any *two* types of folds. [10]
(b) Write note on Concordent Igneous Intrusions. [8]

SECTION II

7. (a) What observations and precautions are necessary during drilling ? [8]
(b) Write notes on :
(i) Angle Drill holes [4]
(ii) GIS. [4]

Or

8. (a) Describe importance of preliminary Geological Exploration for civil engineering project. Give examples. [10]
(b) Define Remote Sensing. Explain stages of Remote Sensing. [6]
9. (a) What is Artesian condition ? Describe any *three* geological conditions leading to artesian condition. Draw neat diagrams. [10]
(b) Write note on cone of Depression and circle of influence. [6]

Or

10. (a) Describe various requirements of Good Building Stones. [8]
(b) Describe causes and preventive measures of land slides. [8]

11. (a) Explain feasibility of tunnel passing through different basaltic rocks. Draw diagrams. [6]
- (b) Describe geological conditions unfavourable for DAM foundation. [6]
- (c) Write a note on the study necessary for Reservoir sites. [6]

Or

12. (a) What problems may have to be faced while tunnel passes through folded region. Give suitable examples. [9]
- (b) Describe the feasibility of dam construction in tectonically disturbed area. Explain suitable treatment to be given to such structures. Give example. [9]