

2 0 1 7

(6th Semester)

GEOLOGY

ELEVENTH PAPER

(Applied and Engineering Geology)

Full Marks : 55

Time : 2½ hours

(PART : B—DESCRIPTIVE)

(Marks : 35)

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. Write a note on engineering properties of rocks. 7
2. Give geological consideration in the construction of—
 - (a) road;
 - (b) bridge. 3½×2=7

G7/444a

(Turn Over)

UNIT—II

3. What is topographic surveying? Write the equipments for plane-table survey and explain the procedure of plane table in the field. 1+2+4=7
4. Write notes on the following : 3½×2=7
 - (a) Advantages and disadvantages of chain and tape survey
 - (b) Characteristics of contours in topographic map

UNIT—III

5. Write in detail about the specification of building materials. 7
6. Write a note on the importance of building stones. 7

UNIT—IV

7. Define aerial photograph. Add notes on any two of the following : 1+(3×2)=7
 - (a) Relief displacement and parallax
 - (b) Types of aerial photographs according to orientation of camera axis
 - (c) Sensors and multispectral scanners

(Continued)

(3)

8. Write notes on any *two* of the following :

$3\frac{1}{2} \times 2 = 7$

- (a) Photogeologic characteristics of sandstone in humid and sub-humid area
- (b) Photogeologic characteristics of schist
- (c) Pocket stereoscope and mirror stereoscope

UNIT—V

9. Write notes on any *two* of the following :

$3\frac{1}{2} \times 2 = 7$

- (a) Points, lines and area
- (b) DEM
- (c) Hardware components of GIS

10. Define GIS. Add a note on the functions of GIS.

$2 + 5 = 7$

Subject Code : GEOL/VI/11

Booklet No. **A**

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Date Stamp

To be filled in by the Candidate

DEGREE 6th Semester
(Arts / Science / Commerce /
.....) Exam., **2017**
Subject
Paper

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To be filled in by the Candidate

DEGREE 6th Semester
(Arts / Science / Commerce /
.....) Exam., **2017**
Roll No.
Regn. No.
Subject
Paper
Descriptive Type
Booklet No. B

INSTRUCTIONS TO CANDIDATES

1. The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.
2. This paper should be ANSWERED FIRST and submitted within 45 minutes of the commencement of the Examination.
3. While answering the questions of this booklet, any cutting, erasing, overwriting or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.

Signature of
Scrutiniser(s)

Signature of
Examiner(s)

Signature of
Invigilator(s)

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(6th Semester)

GEOLOGY

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(PART : A—OBJECTIVE)

(Marks : 20)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 5)

- 1.** Put a Tick (✓) mark against the correct answer in the brackets provided : 1×5=5

(a) Tunneling is safest when the structure is

(i) parallel to the dip of the bed ()

(ii) parallel to the strike of the bed ()

(iii) drilled across the syncline ()

(iv) in contact with the groundwater ()

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(2)

(b) The length of engineer's chain link is

(i) 0.55 ft ()

(ii) 0.66 ft ()

(iii) 1.0 ft ()

(iv) 1.5 ft ()

(c) Permeability is highest in

(i) granite ()

(ii) sandstone ()

(iii) limestone ()

(iv) clays ()

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(3)

(d) The principal point of an aerial photo represented on an adjacent aerial photograph is called

(i) nadir point ()

(ii) isocenter ()

(iii) conjugate principal point ()

(iv) principal point ()

(e) GIS deals with which kind of data?

(i) Numeric data ()

(ii) Binary data ()

(iii) Spatial data ()

(iv) Complex data ()

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(4)

SECTION—B

(Marks : 15)

2. Write notes on the following :

3×5=15

(a) Site investigation

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(5)

(b) Difference between large-scale map and small-scale map

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(6)

(c) Density of rock

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(7)

(d) Difference between an aerial photograph and a map

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(8)

(e) TIN

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