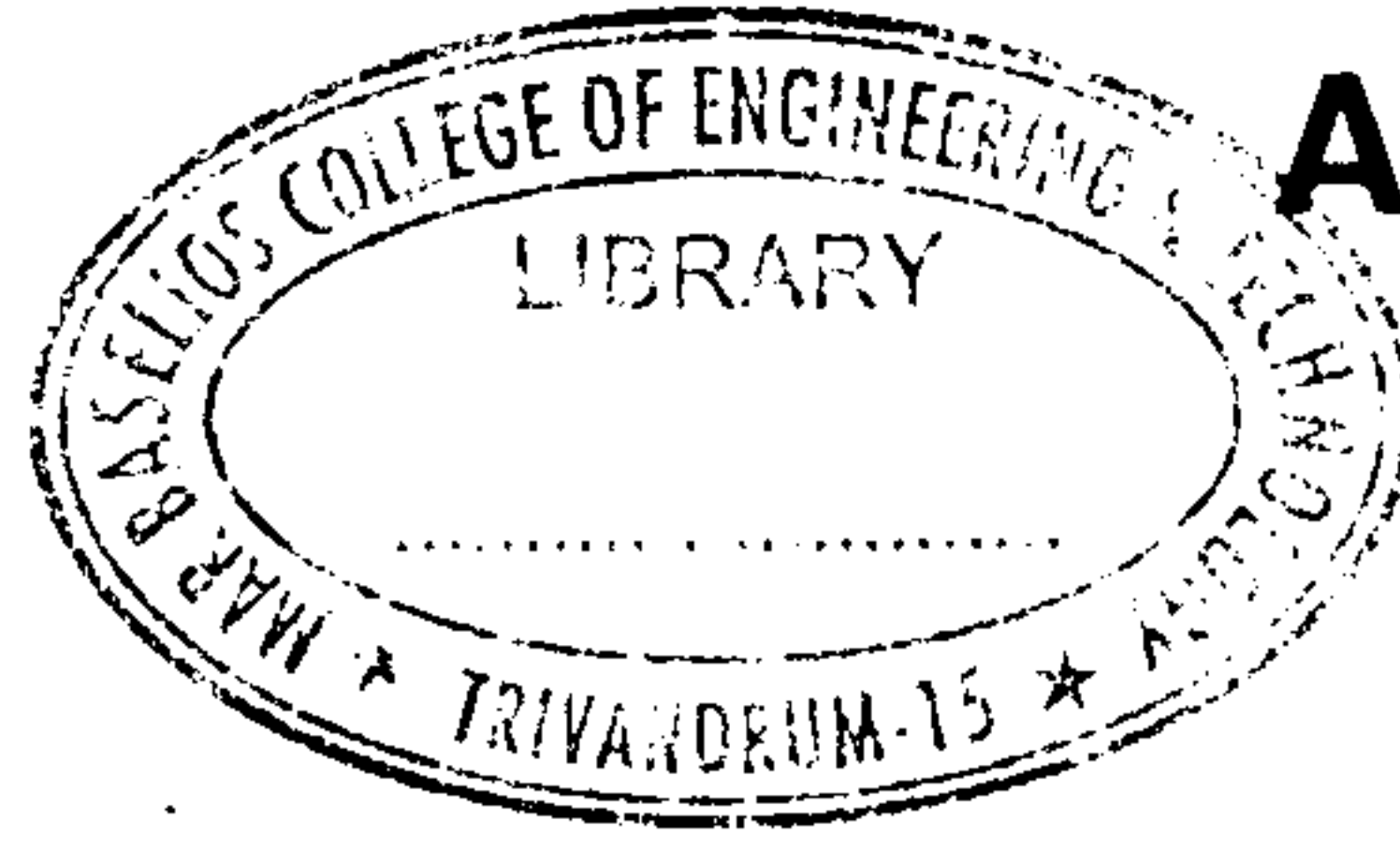




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A – 6615

Reg. No. :

Name :

**Combined First and Second Semester B.Tech. Degree
Examination, December 2016
(2013 Scheme)**

13.106 : BASIC CIVIL ENGINEERING (ABEFHNMNPRSTU)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions, **each** question carries **4** marks.

1. How are measurements recorded in a field book ? Illustrate with an example.
2. What are the desirable properties of coarse aggregates used in making concrete ?
3. What are the quality standards prescribed for drinking water in India ?
4. What are the common types of steel used in construction ? Explain their properties.
5. When is a mat foundation recommended ? What are its features ? **(5×4=20 Marks)**

PART – B

Answer **one full** question from **each** Module.

Module – I

6. a) What are the precautions to be taken during levelling ? **5**
- b) The following consecutive readings were taken with a level and a 4 m staff on a continuously sloping ground at a common interval of 30 m. 0.780, 1.535, 1.955, 2.430, 2.985, 3.480, 1.155, 1.960, 2.365, 3.640, 0.935, 1.045, 1.630 and 2.545 m. The reduced level of the first point was 180.750. Enter the values as seen in a field book and find out the reduced level of the points by height of collimation method. **15**

OR

P.T.O.



7. a) How can area of a plot be completed from field notes ? 5
- b) The following perpendicular offsets were taken from a survey line at 10 m intervals to an irregular boundary line 3.82, 4.37, 6.82, 5.26, 7.59, 8.90, 9.52, 8.42 and 6.43 m. Calculate the area in sq. m. enclosed between the survey line and the first and last offsets by the application of Simpson's rule. 15

Module – II

8. a) Explain the process of plastering a wall surface using cement mortar. 10
- b) What are the points to be kept in mind when painting a plastered surface ? 10
- OR
9. With a neat sketch, label and explain the main components of a building. 20

Module – III

10. Explain the different stages in the preparation of concrete. 20
- OR
11. Explain workability of concrete. Explain in detail any one test to measure the workability of concrete. 20

Module – IV

12. How can recycled materials be used in civil engineering construction ? Illustrate with a few examples. 20
- OR
13. How can sustainability be ensured in buildings through the concept of green technology ? 20
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