

BE-205

B. E. (First Semester) EXAMINATION, April, 2009 (Common to all Branches) BASIC

CIVIL ENGINEERING (BE-205)

Time : Three Hours Maximum Marks : 100 Minimum Pass Marks : 35

Note : Attempt all the *five* questions. There is internal choice within each question. Assume suitable data wherever necessary.

1. List out laboratory tests to find suitability of bricks and cement. Explain procedure for any *two* important tests for the stone, giving standard values. 20

Or

Write short notes on any *four* of the following : 5 each

- (a) Reinforced cement concrete
- (b) Ferrocemeht
- (c) Concrete blocks
- (d) Mud Plastering
- (e) Bitumen
- (f) Steel

(a) List out the elements of building. Explain orientation and utility of space in planning of building. 10

(b) Write short notes on any *two* of the following : 5 each

- (i) Spread footing
- (ii) Raft
- (iii) R. C. C footing
- (iv) Grillage foundation

Or

Explain within neat sketches any *four* of the following :

5 each

- (i) Coursed rubble masonry
- (ii) Flemish Bond
- (iii) Open newel stairs
- (iv) Jack arched floor
- (v) Collapsible steel doors
- (vi) Bay windows
- (vii) King post roof truss

(a) Describe the uses of theodolites. 4

(b) Describe the advantages of plane-table survey. 6

(c) In a closed traverse the following included angles were measured by means of a dompass : A = 132°, B = 116°, C = 106°, D = 92°, E = 99° 50'. If F. B. of the line AB is 88°, find bearing of all remaining sides.

10

Or

- (a) Explain various obstacles encountered during chain survey. 4
- (b) How is E. D. M. method better than conventional method ? 6
- (c) The following readings were observed with a dumpy level : 0-795, 1-535, 2-855, 3-125, 0-945, 0-635, 0-555, 0-230, 1-550, 0-995, 2-015
- The instrument was shifted after 4th and 8th readings. The first reading was taken on a B. M. of RL 608-400. Write down the page of a level field book by making entries of above readings. Calculate R. Ls. of the points. Find the difference of levels between the first and last points. 10
4. (a) What are the characteristics of contour lines ? A sketch is necessary while explaining a characteristic features. 10 (b) Explain the applications of Remote Sensing. 10

Or

Explain any *two* of the following : 10 each

- (a) Survey Stations
- (b) Mapping details
- (c) Methods for measuring the area and volume
5. Write short notes on any *four* of the following : 5 each
- (a) Earthquake
- (b) Cyclone
- (c) Fire resistant buildings
- (d) Disaster rescue and relief
- (e) I. S. Codes for building design
- (f) Disaster management and planning
- (g) Disaster preparedness
- (h) Disaster resettlements
- (i) Rehabilitation and reconstruction
- (j) Reciprocal levelling

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