



F.E. (Sem. – I) Examination, 2011
BASIC CIVIL AND ENVIRONMENTAL ENGINEERING
(2008 Pattern)

Time : 3 Hours

Max. Marks : 100

Instructions: 1) Answers to the *two* Sections should be written in *separate* books.

2) *Neat* diagrams must be drawn *wherever* necessary.

3) *Use of Logarithmic Tables, Slide Rule, Mollier Charts, Electronic Pocket Calculator and Steam Tables is allowed.*

4) Assume *suitable* data, if *necessary*.



SECTION – I

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| 1. A) Explain the role of civil engineer in construction of expressway. | 5 |
| B) Explain the importance of an interdisciplinary approach in engineering. | 5 |
| C) Explain two application of : | 6 |
| a) Project management. | |
| b) Environmental Engineering. | |
| c) Earthquake engineering. | |

OR

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|--|---|
| 2. A) Explain two application of : | 6 |
| a) Remote sensing. | |
| b) Town planning. | |
| c) Fluid mechanics. | |
| B) Write a note on “Need and application of earthquake engineering”. | 5 |
| C) Explain necessity and application of project management. | 5 |

P.T.O.



3. A) Write a short note on : “Automation in construction industry”. 5
- B) Explain the uses of steel and its types. 6
- C) What do you understand by the following terms ? 5
- a) M15 (1:2:4) b) D.P.C c) P.S.C d) P.C e) P.C.C

OR

4. A) State and explain differential settlement. 5
- B) Explain artificial sand and its properties. 5
- C) Enlist any four materials used in construction and give two uses of each of them. 6
5. A) Following table shows some reading in a check levelling work (started and ended on same B.M.). Calculate the missing readings shown as ‘X’. Tabulate the same and apply usual arithmetical check. 6

ST NO	B.S	I.S	F.S	Rise	Fall	R.L.	Remarks
1	X					463.875	B.M.1
2		X		0.550		X	
3	0.965		3.655		X	X	C.P. 1
4	X		1.400		X	461.885	C.P. 2
5			1.025	X		463.875	B.M.1

- B) Differentiate between :
- a) Collimation plane method and rise and fall method. 6
- b) Permanent bench mark and Arbitrary bench mark. 6
- C) Define contour, its uses and characteristics. 6

OR

