

[Total No. of Printed Pages: 1]

**CODE NO:- Z-129**

**FACULTY OF ENGINEERING**  
**F.E (ALL) - Year Examination June– 2015**  
**Element of Civil Engineering**  
**(Revised)**

[Time: Two Hours]

[Max. Marks: 40]

“Please check whether you have got the right question paper.”

- i) Question No.1 is compulsory.
- ii) Attempt any two questions from the remaining question.
- iii) Draw neat sketch wherever necessary

- Q.1 Attempt the five 10
- a) Define geodetic surveying
  - b) Define reduced level
  - c) Define magnetic meridian
  - d) Define fire demand
  - e) Enlist types of dam
  - f) Define water shed
  - g) Define screening
- Q.2 a) Explain principle of survey. (to work from whole to part) 05
- b) The following consecutive readings were taken with a dumpy level & staff. 10  
3.325,3.050,2.755,1.575,0.625,3.575,2.875,1.255,1.785,0.795,0.780. The level was shifted after.  
5<sup>th</sup> & 8<sup>th</sup> reading. B.M is on R.L of 245.755m calculate R.L of all the points by plane of collimation  
method
- Q.3 a) Explain in detail types of bench mark. 05
- b) Explain process of chaining 05
- c) Convert following W.C.B to R.B 05
- i)  $40^{\circ} 30'$  ii)  $116^{\circ} 15'$  iii)  $230^{\circ} 45'$  iv)  $277^{\circ} 49'$  v)  $338^{\circ} 10'$
- Q.4 a) Explain incremental increase method 05
- b) Draw and explain treatment unit flow diagram 05
- c) Forecast population of a city by incremental increase method for next three decades from the last  
known decade 05
- YEAR: 1940 1950 1960 1970
- POP<sup>n</sup>: 8,000 12,000 17,000 22,500
- Q.5 a) Explain roof top rainwater harvesting 05
- b) Explain multipurpose irrigation project 05
- c) Write down necessity of irrigation 05