

**SUBJECT CODE:- 358**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**F. E.(ALL) Examination Nov/Dec 2015**  
**Elements of Civil Engineering**  
**(Revised)**

[Time: two Hours]

[Max. Marks: 40]

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

- N.B i) Question number 1 is compulsory.  
 ii) Attempt any two questions from remaining questions.  
 iii) Draw neat sketch wherever necessary.

**Section A**

- Q.1 Attempt any five 10
- a) Define direct ranging
  - b) Explain quadrantal bearing
  - c) Define fore sight & back sight
  - d) Draw labeled diagram of soak pit.
  - e) Define sedimentation.
  - f) Enlist watershed structure.
  - g) Write down benefits of water shed management.
- Q.2 05
- a) Explain process of chaining.
  - b) The following consecutive reading were taken with a dumpy level & staff. 10  
 0.665,0.825,2.540,0.385,3.20,1.40,1.565,2.0,2.45. first reading was taken on a BM of 100.00m & instrument was shifted after 4<sup>th</sup> & 6<sup>th</sup> reading. Calculate R.L of various points by plane of collimation method.
- Q.3 05
- a) Write down the temporary adjustment of dumpy level.
  - b) Write down the adjustment of prismatic compass. 05
  - c) Determine the value of included angles in the closed traverse ABCD in clockwise direction for the following bearings. 05
- | LINE | AB | BC | CD               | DA               |
|------|----|----|------------------|------------------|
| F.B  | 40 | 70 | 210 <sup>0</sup> | 280 <sup>0</sup> |
- Q.4 05
- a) Explain Rural water supply 05
  - b) Explain Arithmetic increase method. 05
  - c) Using geometric increase method. Find the probable population for year 1980,1990 & 2000 05
- | YEAR  | 1940 | 1950  | 1960  | 1970   |
|-------|------|-------|-------|--------|
| POP N | 8000 | 12000 | 17000 | 22,500 |
- Q.5 05
- a) Explain earthen dam with neat sketch. 05
  - b) Write down necessity of irrigation. 05
  - c) Write down the requirement of good drainage system in building. 05