

S.B. Roll No.....

SURVEYING-I
3rd Exam/Civil/0515/0951/Nov'17

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. a) Fill in the blanks.

10x1.5=15

- i. Surveying is the art of determining the----- of objects on earth surface.
- ii. The imaginary line joining Centre of eyepiece to the optical centre of object glass is called----
- iii. Angle between the mirrors of optical square is-----
- iv. Leveling work should always commence from a-----
- v. Resection method is also called----- method.

b) State True or False.

- vi. Prismatic compass reads whole circle bearing:
- vii. The reduced level is also called elevation.
- viii. Cross staff is used for setting right angle.
- ix. At magnetic pole the dip of the needle is zero degree.
- x. Plane Table surveying is used for small area

SECTION-B

Q2. Attempt any five questions.

5x6=30

- a. Define Surveying, What are its basic principles?
- b. How the ranging is done in plane and hilly areas?
- c. Write down the difference between Chain Surveying and Compass Surveying.
- d. Explain the term Local attraction.
- e. What is Orientation? Explain Orientation by back sighting.
- f. Explain the Temporary adjustments of Dumpy Level.
- g. List the various instruments used in plane table surveying, what are their uses?

SECTION-C

Q3. Attempt any three questions.

3x10=30

- i. A 20 m chain was found to be 60 mm too long after chaining a distance of 3800 mt. and 90 mm too long after chaining a total distance of 7000 mm. If the chain was correct at the start of work. Find the true length.
- ii. Calculate the interior angles of a traverse with the following observed bearings, also apply the check.

Line	.F.B.
AB	40°-15'
BC	118°-15'
CD	176°-0'
DA	284°-30'

- iii. Explain in details two point problems.
- iv. The following consecutive readings were taken with the help of Dumpy level:
1.810, 2.110, 1.225, 1.455, 0.905, 2.435, 2.810, 2.075 and 1.765. The level was shifted after 4th and 7th reading. The first reading was taken on the staff held on the B.M. of RL 50.000m
rule out the page of level book and calculate the R.Ls. of all points and apply arithmetical check.