

(c) Distinguish between the following:

- (i) Horizontal plane and Level surface
- (ii) Line of collimation and Line of sight
- (iii) Longitudinal section and cross-section.

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NAG-204

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 180222**

Roll No.

**B.Tech. (SEM.II)**

**CARRY OVER EXAMINATION, 2015-16**  
**SURVEYING AND LEVELLING**

*Time : 3 Hours]*

*[Total Marks : 100*

**Note:** Attempt all questions.

1. Attempt all parts of the following: 2×10=20
- (a) Define plane and geodetic surveying.
  - (b) Write the name of the instrument used in chain surveying.
  - (c) Define scale.
  - (d) What is meant by error and accuracy?
  - (e) Explain representative fraction with an example
  - (f) Define the Magnetic declination.
  - (g) What do you mean by local attraction?

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(h) What do you mean by surveying and levelling? Write down the object of survey?

(i) Define level line and horizontal line.

(j) What is mean by mean sea level.

2. Attempt any four parts of the following:  $5 \times 4 = 20$

(a) What is chaining? Explain the detailed procedure of chaining.

(b) What are face left and face right observations? Why it is necessary to take both face observation?

(c) What do you mean by local attraction? How the observed bearings are corrected for local attraction.

(d) Explain the temporary adjustment of transit.

(e) What are the different types of levelling staff? State its merit and demerit.

(f) Discuss the advantages and disadvantages of plane table surveying over other methods.

3. Attempt any four parts of the following:  $10 \times 4 = 40$

(a) How will you continue chaining past the following obstacles? Explain in detail.

(i) a pond (ii) a river (iii) a hill

(b) Determine the value of included angle in a closed compass traverse ABCDA conducted in the clockwise direction, given the following fore bearings of their respective lines:

Line	AB	BC	CD	DA
Fore Bearing	$40^\circ$	$70^\circ$	$210^\circ$	$280^\circ$

(c) Explain with the help of a neat sketch the working of prismatic compass.

(d) What do you mean by temporary adjustment of Transit theodolite? Give a list of them and define briefly.

(e) Define three point problems. How it may be solved by tracing paper method?

4. Attempt any two parts of the following:  $10 \times 2 = 20$

(a) What are the different methods of locating a point by plane table survey? Explain any one in brief.

(b) Describe the height of instrument method. Also write their advantages and disadvantages.