GANPAT UNIVERSITY
B.TECH SEM – I (CE/EC/BM/IT/MARINE/CIVIL INT/ME INT)
REGULAR EXAMINATION NOV/DEC - 2014
2CI101 ELEMENTS OF CIVIL ENGINEERING

Max Time: 3 Hours   **Max Marks: 60**

Instructions: -

(1) This question paper has two sections. Attempt each section in separate answer books.

(2) Figures on right indicate marks

(3) Be precise and to the point in answering the descriptive questions.

SECTION - I

Q1(A)	What is scheduling? Explain Gantt bar chart. Write down advantages and disadvantages of Gantt bar chart.	(5)
(B)	Write a short note on Watershed development.	(5)

OR

Q1(A)	What are the requirements of good building stones?	(5)
(B)	Draw a highway cross-section and show various components.	(5)

Q2(A)	Enumerate various principles of planning and briefly explain them.	(5)
(B)	Explain CPM. Write down its advantages and disadvantages also.	(5)

OR

Q2(A)	Explain components of road pavements.	(5)
(B)	Write a short note on concreting operations.	(5)

Q3(A)	Explain BOT projects	(3)
(B)	Define: (a) Concrete (b) Bulking of sand (c) Seasoning of timber.	(3)
(C)	What is mortar? Explain different types of mortar.	(4)

Q4(A) What is surveying? What are the applications of theodolite, (5) triangulation, hydrographic and compass survey?

(B) Write a short note on: (1) Line ranger (2) Ranging by eye with neat (5) sketch.

OR

Q4(A) Define the following terms: - (1) Base line   (2) True meridian (5) (3) Offset (4) Contour   (5) Bearing.

(B) Write a short note on: (1) Whole circle bearing and Reduced (5) Bearing (2) Ranging rod and Offset rod

Q5(A) What is Ranging? Explain Reciprocal ranging with neat sketch. (5)

(B) The details of observed bearings are mentioned below. Compute the (5) included angles for traverse and also show the check.

Line	F.B. of Line
AB	124° 30'
BC	68° 15'
CD	312° 45'
DA	197° 45'

OR

Q5(A) Convert the following bearings with figure. (5)

1) 180° 30'

2) S 60° 30' W

3) 215° 15'

4) N 75° 30' W

5) 310° 30'

Q5(B) What is GPS? Explain its use in civil engineering field. (5)

Q6(A) Write down characteristics of contour. (3)

Q6(B) The following observations were taken with a dumpy level and 4 m (7) Leveling staff. The instrument was shifted after 4th and 7th readings. The readings are:

0.565, 1.250, 1.675, 3.695, 0.125, 2.345, 3.245, 0.500, 1.785 and 2.535.

Enter the above readings in a page of level book and calculate the RL of points. If the first reading was taken with a staff held on bench mark of 50 m. Apply arithmetic checks also. Use any method of elevation measurement.

END OF PAPER