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Date: 17/05/2016

Student Exam No:

GANPAT UNIVERSITY
B.TECH SEM - I ALL BRANCH OF ENGINEERING
REGULAR & Remedial April - June 2016
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) Explain CPM. Write down its advantages and disadvantages also. (5)
- (B) What are the requirements of good quality timber? (5)

OR

- Q1(A) How will you check the fineness property of cement? (5)
- (B) Discuss the role of transportation in national development. What are advantages of road transportation? (5)

- Q2(A) How a site for residential building is selected? (5)
- (B) Enlist the advantages and disadvantages of bituminous roads and cement concrete roads. (5)

OR

- Q2(A) Write a short note on watershed development. (5)
- (B) Explain the importance of planning in a construction project. Write down its advantages also. (5)

- Q3(A) Differentiate between coarse and fine aggregates. (3)
- (B) Define the terms:- (1) Segregation (2) Bleeding (3) Bulking of sand (3)
- (C) What are the requirements of good quality mortar? (4)

SECTION – II

- Q4(A) Write a short note on principles of surveying. (5)
- (B) Define ranging. Explain direct ranging with a neat sketch. (5)

OR

- Q4(A) Explain various obstacles in chaining and illustrate the procedure to solve one case in each obstacle. (5)
- (B) The length of a line was measured with 30 m chain and it worked out be 530.00 m. it was subsequently found out that the chain was 0.04 m too short. What is true length of line? (3)
- (C) Differentiate between whole circle bearing and quadrantal bearing (2)
- Q5(A) Differentiate between : (1) Plane surveying and Geodetic surveying (5)
(2) Prismatic Compass and Surveyor's Compass
- (B) The following are the bearings of closed traverse ABCDA. Calculate the included angles and also apply necessary checks. (5)

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

OR

- Q5(A) Write a short note on different types of benchmarks. (5)
- (B) What are the various characteristics of contours? (5)
- Q6(A) Write a short note on total station. (5)
- (B) The following observations were taken with a dumpy level and 4 m levelling staff. The instrument was shifted after 3rd and 6th readings and the first reading was taken with a staff held on bench mark of 240m. The readings are:

2.665, 3.225, 2.905, 1.850, 0.980, 2.620, 1.585, 0.960, and 0.425

Enter the above readings in a page of level book and calculate the RL of all points by using either HI method or Rise and fall method. And also apply necessary arithmetic checks.