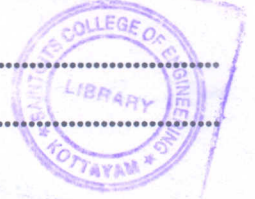


G 1281

(Pages : 2)

Reg. No.....

Name.....



B.TECH. DEGREE EXAMINATION, MAY 2015

First and Second Semester

EN 010 106—BASIC CIVIL ENGINEERING

[Common for all branches]

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. List the different defects in timber.
2. What is the effect of grade of cement on strength of concrete ?
3. Compare and contrast isolated footing and combined footing.
4. List the instruments used in chain surveying.
5. List the *six* types of roads in our country.

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. Sketch any *two* structural steel sections.
7. List and briefly explain the properties of good mortar ?
8. What is meant by safe bearing capacity of soil ? Explain.
9. Explain chain line check line and tie line. What are the functions of each one ?
10. What is intelligent building ? What are its subsystems ?

(5 × 5 = 25 marks)

Part C

Answer all questions.

Each full question carries 12 marks.

11. What are the different types of preservation of Timber ? Discuss. What are their merits and demerits ?

(12 marks)

Or

12. With neat diagrams, describe the wet process of manufacture of Portland Cement.

(12 marks)

Turn over

13. Describe the preparation and applications of cement mortar in all the different stages in a building construction.

(12 marks)

Or

14. (a) Describe the slump test and compaction factor test for determining workability of concrete ?
(8 marks)
- (b) Explain the different types of tiles used for roofing and their advantages. (4 marks)
15. With neat diagrams, describe any *four* types of foundations and their merits. Where they are generally recommended.

(12 marks)

Or

16. What is the need for bonds in brickworks ? Draw the neat sketches of : (i) Flemish bond and ; (ii) RR masonry in stone and explain.
(12 marks)
17. (a) Explain the principles of GPS and GIS. How they are made use of in surveying ?
(6 marks)
- (b) What are the different types of bench marks ? Explain. (6 marks)

Or

18. Plot the following cross staff of a field ABCDEFG and calculate the area.

	D	
	750	
	650	210 E
C 180	490	
	300	250 F
B 160	180	
	100	50 G
	0	
	A	

(12 marks)

19. A Plot is rectangular shaped PQRS with $PQ = 150$ m and $QR = 350$ m. The side QR faces to a Panchayath road and the other three sides have residential plots as neighbourhood. A private school building of plinth area of about 600 sq. m. is proposed. Locate the position of the building, assuming suitable data required. prepare the site plan.

(12 marks)

Or

20. (a) Explain covergae, floor area ratio and its recommended values according to building rules.
(8 marks)
- (b) Sketch the typical cross section of the Highway. (4 marks)

[5 × 12 = 60 marks]

