Roll No. [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] Total No. of Pages : 2

Total No. of Questions : 09

B.Tech. (CE) (Sem.–3)

BUILDING MATERIALS & CONSTRUCTION

Subject Code : BTCE-305 (2011 Batch)

Paper ID : [A1117]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

   a) How are bricks classified? How do they differ in compressive strength?

   b) What is the purpose of glazing of tiles ?

   c) What is meant by hydration of current ?

   d) What is Reinforced Cement Concrete? What are its advantages over Plain cement concrete?

   e) Differentiate between exogenous and endogenous tress. How does the quality of timber vary?

   f) Distinguish between white washing and distempering.

   g) What are anti-syphonage pipes? Why are they provided in house plumbing?

   h) What are the causes of dampness in buildings?

   i) Name the types of Ashlar masonry.

   j) Sketch a King closer and a queen closer.

SECTION-B

2. What is meant by Natural bed in stones? Explain its importance in construction.

3. What are the characteristics of clay for the manufacture of good bricks? How does the composition of clay affect the quality of brick?

4. Explain the terms :

   (i) Bleeding of concrete

   (ii) Curing of concrete

5. What are differences between a combined footing and a cantilevered footing?

6. How do you proceed to paint on an old iron work?

SECTION-C

7. Write short notes on the following :

   a) Damp proofing in buildings.

   b) Bonding in Brick work.

   c) Manufacturing of cement concrete.

   d) Plastering of walls.

8. A two storyed bungalow with open verandah and flat roof is to be constructed in Punjab. Briefly describe and justify the type of materials and construction for roofs and floors you will propose.

9. a) Describe the various methods of preservation of timber.

   b) State the requirements of good timber.

Roll No. [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (CE) (Sem.–7th & 8th)

FOUNDATION ENGG.

Subject Code : CE-412

Paper ID : [A0629]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

(a) How depth of foundations is decided?

(b) Write Boussinerq's equation for a point load.

(c) Explain the term Damped Free Vibration.

(d) How spacing of Bore holes decided in soil investigation?

(e) List the types of pile driving hammers.

(f) Differentiate between open Box and Pneumatic coissons.

(g) Write the conditions for the stability of a well.

(h) Differentiate between SPT and SCPT.

(i) List the factors affecting the 'N' values.

(j) Differentiate between Immediate and Consolidation Settlement.

SECTION-B

2. Explain with sketches consolidation of soft saturated clays by Sand Piles.
3. Describe a plate load test for the determination of Bearing capacity of soils and its limitations.
4. Describe the various approaches for estimating vertical load capacity of a pile.
5. How can the natural frequency of a foundation soil system determined? What is the use of this determination?
6. How is the depth of soil exploration fixed?

SECTION-C

7. Describe how a Newmark's influence chart can be constructed for a given value of influence factor say 0.001. Explain the method of use.
8. Describe the sinking of a well foundation. Also list the forces for which a well foundation is designed.
9. Explain the geophysical exploration by seismic and resistivity methods.

[N-2-991]