Code No: R21012   **R10**   SET - 1

II B. Tech I Semester Supplementary Examinations, September – 2014
CONSTRUCTION MATERIALS AND MANAGEMENT
(Civil Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Enumerate the various properties of good building stones in relation to their structural requirements.
    b) Describe briefly the tests to which bricks may be put before using them for engineering purpose   (8M+7M)

2. a) What is English and Flemish bond? Explain with neat sketches.
    b) Explain the structure of Timber by drawing the cross section of a tree.   (8M+7M)

3. a) Discuss the various ingredients of Lime.
    b) What is hydration of cement? Explain the importance of cement compounds in the strength.
                                                                         (7M+8M)

4. a) Explain lean to roof, coupled roof and King post truss.
    b) What is damp proofing? What are the materials used?   (8M+7M)

5. a) Discuss the terms bond strength and moisture content of aggregate.
    b) Explain the Marshall's method of bituminous mix design.   (8M+7M)

6. a) What are the tests on geogrids and geotextiles? Explain in detail.
    b) Explain resources allocation.   (8M+7M)

7. a) What are the functions (phases) of project management?
    b) What is a float? Explain various floats and bring out the relation between them.   (7M+8M)

8. A project consists of six activities (jobs) designated A to F with the following relationships Draw the network diagram.
    i) A is the first job to be performed.
    ii) B and C can be done concurrently, and must follow A
    iii) B must precede D
    iv) E must succeed C but cannot start until B is complete
    v) The last operation F is dependent on completion of both.   (15M)

Code No: R21012   (**R10**)   (SET - 2)

II B. Tech I Semester Supplementary Examinations, September – 2014
CONSTRUCTION MATERIALS AND MANAGEMENT
(Civil Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) What do you understand by rock forming minerals? Explain in brief the physical properties of Felspar, Mica and Gypsum group of minerals
    b) Discuss the characteristics of first class building bricks and indicate how they are influenced by the nature of clay used.   (8M+7M)

2. a) Explain the purpose and importance of partition walls in a building.
    b) What is meant by natural reasoning of wood? What is its purpose?   (7M+8M)

3. a) Draw a flow diagram for lime manufacturing.
    b) Explain setting and fineness of cement.   (7M+8M)

4. a) Explain pitched roof, flat roof and curved roof.
    b) What are the constituents of Paint? Explain various types of paints.   (8M+7M)

5. Briefly describe the following tests on aggregate
    a) Specific gravity test   b) Crushing test   c) Impact test   (5M+5M+5M)

6. a) Explain functions and applications of geosynthetics.
    b) Discuss the direct and indirect costs of a project.   (7M+8M)

7. a) Discuss about planning scheduling, monitoring and controlling of projects.
    b) Explain Fulkerson's rule of numbering events and activities in a project. (8M+7M)

8. Write short notes on
    a) Cost time optimisation
    b) Event slack
    c) Network updating   (5M+5M+5M)

Code No: R21012   **R10**   SET - 3

II B. Tech I Semester Supplementary Examinations, September – 2014
CONSTRUCTION MATERIALS AND MANAGEMENT
(Civil Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Discuss the classification of rocks based on Geological formation.
   b) What is quarrying of stones? Give list of tools commonly used in quarrying.   (8M+7M)

2. a) Explain the cavity wall construction with neat sketches and state why and when t is adopted.
   b) What is artificial seasoning of wood? Discuss any two methods with neat sketches.

                                                                              (7M+8M)

3. a) Explain the terms: i) Poor lime   ii) hydraulic lime   iii) slaked lime   iv) fat lime
   b) Describe how to test the quality of cement at the construction site.   (8M+7M)

4. a) Explain various methods of modern flooring.
   b) Write short notes on form work and scaffolding.   (7M+8M)

5. a) Explain: i) Properties of good coarse aggregate   ii)Fineness modulus
   b) What is bulking of sand and what are its effects?   (8M+7M)

6. a) What is crashing for optimum cost? Define cost slope? How do you determine it?
   b) What is a geo membrane? Explain?   (8M+7M)

7. a) What is a bar chart? Explain with the help of suitable example the method of preparing a bar chart.
   b) Discuss in detail PERT and CPM networks. List out the differences between them.
                                                                              (7M+8M)

8. Activity X is followed by activity Ywhich in turn is followed activity Z.The direct cost of these activities in relation to the choice of feasible duration table is given below. Find out the minimum possible direct cost for a total duration of 21 days, taking together all the three activities.   (15M)

	Activity X			Activity Y			Activity Z		
Duration in days	7	6	5	8	7	6	9	8	7
Direct cost in Rs	12	14	15	20	23	27	40	42	45

Code No: R21012   **R10**   SET - 4

II B. Tech I Semester Supplementary Examinations, September – 2014
CONSTRUCTION MATERIALS AND MANAGEMENT
(Civil Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Describe any two methods of brick manufacturing with neat sketches.
    b) Discuss the use of non-ferrous metals as building materials.   (8M+7M)

2. a) Explain Rubble and Ashlar Masonry with neat sketches.
    b) What is seasoning of timber? What are its objectives?   (8M+7M)

3. a) Describe one method of lime manufacturing with neat sketch.
    b) Enumerate various types of cement and their properties.   (7M+8M)

4. a) Explain various types of staircases and Arches.
    b) What is water proofing? What are the materials used.   (7M+8M)

5. a) What are the sources of fine aggregates? Give the characteristics and uses of sand.
    b) Explain Road note no.4 method of grading of fine and coarse aggregates.   (7M+8M)

6. a) What are Geo composite and Geo membranes? Discuss their uses and functions.
    b) Explain resource levelling.   (8M+7M)

7. a) Define 'Event' and 'Activity'. Bring out the differences between them.
    b) For a given activity the optimistic time, pessimistic time and most probable time estimates
       are 5,17 and 8 days respectively .Find out the expected time in days.   (6M+9M)

8. Write short notes on:
    a) Network planning
    b) Computation of total float
    c) Optimum cost of a project.   (5M+5M+5M)