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

II B. Tech I Semester, Regular Examinations, Nov – 2012
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 are the qualities of a good building stone? Discuss them.
   b) Enumerate the qualities of good bricks.

2. a) Discuss the comparative merits of various types of building units used for masonry.
   b) State the advantages and disadvantages of timber construction.

3. a) Distinguish between the Quick lime and slaked lime.
   b) What are the precautions which are to be taken for the briefly explain various laboratory test on cement.

4. a) Classify various types of lintels and discuss their relative use.
   b) Briefly describe various types of stairs.

5. a) Explain the Significance of grades of aggregates with reference to concrete making
   b) Explain different methods of measurement of moisture content of aggregates.

6. Briefly explain the functions, applications and tests of geo-textiles.

7. a) What are the short comings of bar charts? How are these removed?
   b) Define 'latest start time 'and latest finish time', and also explain how these can be determined?

8. The PERT network for a certain project is shown in Figure 1. Determine the expected time for each path. Which path is critical?

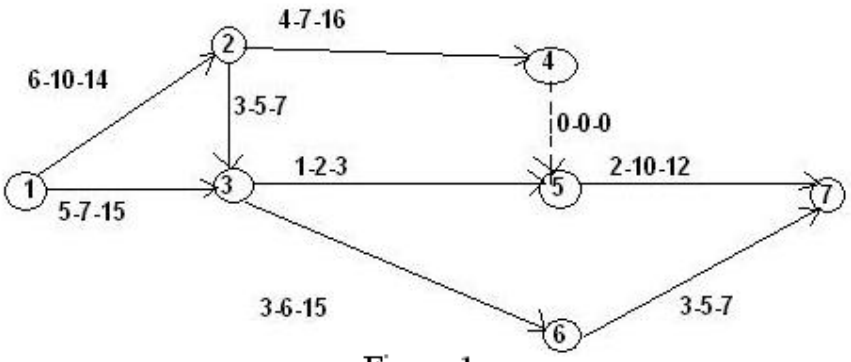

Figure 1
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Code No: R21012 **R10** SET - 2

II B. Tech I Semester, Regular Examinations, Nov – 2012
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 the methods of quarrying with hand tools.
   b) Compare clamp- burning with kiln –burning.

2. a) Classify various types of stone masonry. Draw typical sketches to illustrate the same.
   b) What is meant by seasoning of timber? What are its objects?

3. a) What is meant by artificial hydraulic lime? How it is manufactured?
   b) Enumerate the laboratory tests for cement and describe any two of them.

4. a) Draw a neat sketch of an arch and show on it various technical terms used in its construction.
   b) State briefly the essential requirements of a good roof.

5. Enumerate the laboratory tests for aggregates and describe any four of them?

6. Briefly explain functions, applications and tests of geo-grids.

7. a) What is a Gantt bar chart? Explain with the help of a suitable example, the method of preparing a bar chart.
   b) Defined 'earliest event time' and 'latest occurrence event time'. How these can be determined? Explain the tabular form for determining these.

8. Explain the method of time –cost optimization of project network.
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Code No: R21012 **R10** SET - 3

II B. Tech I Semester, Regular Examinations, Nov – 2012
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) Define a quarry and mention the factors to be considered while making a selection for its site.
   b) What are the uses of various types of good bricks?

2. a) Explain in brief various types of mortars used in stone masonry.
   b) What is meant by decay of timber? What are its causes?

3. a) What are the various uses of the lime?
   b) Explain the functions of ball mills and tube mills.

4. a) Discuss various modes of failures of an arch. What are the remedies?
   b) Draw plan and sections of a typical dog –legged stair of R.C.C. Coaly Rough Sketches

5. a) How we can control the Alkali-Aggregate reaction and explain?
   b) Mention the different tests to be conducted on Aggregates and explain in brief.

6. Briefly explain the functions, applications and tests of geo-membranes

7. a) What is a milestone chart? How does it differ from a bar chart? How can a mile stone chart be developed into a network ?
   b) What do you understand by 'earliest start time' and 'latest start time of an activity'? How are these determined?

8. The network of a certain project is shown in Figure.1 with the estimated durations of various activities. Determine the following: i) Earliest event time and latest event time
   ii) Earliest and latest start and finish times of each activity.
   iii) Total and free floats for each activity. iv) Critical path for the network.

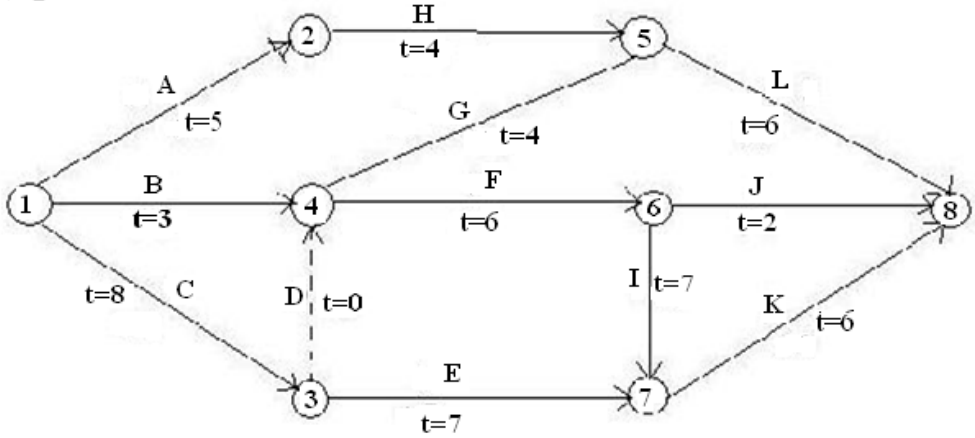

Figure 1
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Code No: R21012 **R10** SET - 4

II B. Tech I Semester, Regular Examinations, Nov – 2012
CONSTRUCTION MATERIALS AND MANAGEMENT
(Civil Engineering)

Time: 3 hours Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks

1. a) What is meant by dressing of a stone? Describe its various varieties.
   b) Describe the process of burning bricks in intermittent kilns.

2. a) What are the requirements of good mortars used in stone masonry?
   b) Mention the qualities of a good timber.

3. a) What are the constituents of lime stone?
   b) Differentiate between the ball mill and tube mill.

4. a) Distinguish clearly between a lintel and an arch. How does a flat stone arch differ from a stone lintel?
   b) Compare merits and demerits of flat and pitched roofs.

5. a) What do you understand by the term bulking of sand? Why does it occur and how do you make allowance for it.
   b) Describe the slump cone test in detail?

6. a) List and describe the basic similarities and differences between geo-grids and geo-textiles.
   b) What is the effect of high temperature on tensile strength of geo-grids?

7. a) Differentiate clearly between PERT and CPM network methods.
   b) What do you understand by critical path? How it is determined?

8. Draw a typical cost – duration curve and show on the optimum duration and minimum project Cost.