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CT-611/CM&M/6th Sem/2013/M

**CONSTRUCTION METHODS
AND MACHINERY**

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer any *seven* questions.

1. (a) What are the need for construction management ? Explain. 5
- (b) What are the probable causes of excessive cost of construction of any project ? 5
2. What are the factors affecting a job-layout ? Draw a simple job-layout for a building project. 10
3. What are the duties of an engineer and a contractor with respect to construction economy ? 10

Or

What are factors affecting the construction cost. 10

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4. Explain the stages in construction. 7
Write down the construction stages for a new highway project. 3
5. Write short notes on placing concrete in cold weather and hot weather. 5
Write short notes on quality control of concrete. 5
6. What are the precautions to be taken during the construction of a multi-storeyed building? 10
7. (i) What are compressed air? Explain. 2
(ii) For what purpose can they be used in construction projects. 3
(iii) A quantity of 28m^3 of air at 10°C is compressed from the initial gauge pressure of 2 N/mm^2 at 43°C . Determine the volume of the compressed air. Assume atmospheric pressure as 0.1N/mm^2 . 5
8. (i) How can construction accidents be classified? 5

- (ii) On a particular construction project, the contractor on an average employed 100 workers with 50 hours per week. The project lasted for 35 weeks and during this period, 14 disabling injuries occurred. Work out the injury-frequency rate.

Also work out the injury-severity rate if the number of days lost due to injuries is 35 days.

5

9. (i) What are the causes of construction accidents? Explain. 5

- (ii) Explain any two earth compacting equipments. 5

10. (i) What are the safety measures that can be adopted to avoid construction accidents. 8

- (ii) Name some Hauling equipments. 2