

**B.Tech. Civil (Construction Management) /  
B.Tech. Civil (Water Resources Engineering)**

**Term-End Examination**

**December, 2010**

**ET-581(F) : MECHANICAL EQUIPMENT IN  
CONSTRUCTION**

*Time : 3 hours*

*Maximum Marks : 70*

- Note :** (i) *Answer any seven questions.*  
(ii) *All questions carry equal marks.*  
(iii) *Use of calculator is allowed.*

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1. (a) What are the components of cycle time of a machine ? Explain with examples. 5  
(b) How does draw bar pull differ from rim pull ? 5
2. Describe the following equipments with neat sketches:- 10  
(a) Cam Shell bucket.  
(b) Ripper.
3. Describe various types of cranes with sketches. 10
4. How are dumpers different from trucks ? How can you select a truck and number of trucks required for particular job of earth work ? 10

5. Sketch and distinguish between elevators and escalators. Discuss their merits and demerits. 10
6. Describe various aggregate cooling methods. 10
7. With sketches explain the construction and working of internal vibrators. Give some areas of applications. 10
8. What are different types of drilling jumbos used in tunnel construction ? Explain with sketches. 10
9. (a) What are Sluice gates and how do they work ? 5  
(b) How is sliding gate operated ? Where do you use it ? 5
10. Write short notes on *any four* :- 10
- (a) Book Value.
  - (b) Tree Doters.
  - (c) Mobile crane.
  - (d) Idlers.
  - (e) Tamping rollers.
  - (f) Batches.
  - (g) Spill ways.
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