

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

**Term-End Examination**

00523

**December, 2018**

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

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : Attempt any **ten** questions. All questions carry equal marks.*

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1. What are scrapers ? What are the different types of scrapers available ? How is the capacity of a scraper determined ? 7
  
2. What is a Concrete Batching and Mixing Plant ? How is water measured in a concrete batching and mixing plant ? 7
  
3. Give a schematic layout for a typical aggregate processing plant for a large concrete construction project and explain its operation. 7

4. Enumerate the factors which affect the output of a dragline. 7
5. Enumerate the precautions required for any *two* of the following :  $2 \times 3 \frac{1}{2} = 7$
- (a) Concreting in very hot weather
  - (b) Concreting in very cold weather
  - (c) Concreting under water
6. Discuss the various means for hauling the materials. 7
7. Discuss the role of tractors in earth moving. What considerations govern selection of wheel type or crawler type tractor on a job ? 7
8. Describe the applications of different types of compacting rollers. 7
9. What principal types of dump trucks are used on heavy construction ? Compare the rear dump and bottom dump trucks. 7
10. Describe the requirements for safe operation of crane. How is this achieved ? 7

11. What are the advantages of using belt conveyors for the transport of concrete aggregate in large quantities ? How will you extend the life of a belt conveyor in operation ?

7

12. Write short notes on any *two* of the following :

$$2 \times 3 \frac{1}{2} = 7$$

- (a) Clamshells
  - (b) Fork Truck
  - (c) Trenchers
  - (d) Dredges
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