

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

Term-End Examination

00133

June, 2018

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

Time : 3 hours

Maximum Marks : 70

Note : Answer any *seven* questions. All questions carry equal marks.

1. (a) How are draglines classified ? What are the advantages and disadvantages of a dragline ? 6
- (b) Describe a gantry crane with neat sketch. 4
2. (a) How does a sheepsfoot roller compact earth ? 5
- (b) What factors affect the output of compactors ? Explain in brief. 5

3. How would you estimate the output of a vibratory roller ? What factors would affect the output of a vibratory roller ? 10
4. (a) Explain briefly the operation of a bulldozer and a tree dozer. 6
- (b) What are the causes for temperature rise during concrete operations ? 4
5. What are the factors and job conditions considered for the selection of type and size of a power shovel ? 10
6. (a) Explain the declining balance method to evaluate depreciation. 5
- (b) What is 'Burden' ? What are the factors which affect it ? 5
7. Explain various factors that affect a drilling pattern. Also explain the functioning of any one with the help of a neat sketch. 10
8. (a) List out the advantages of inclined drilling over vertical drilling. 5
- (b) Briefly explain the following : 5
- (i) Angle of swing of dragline
- (ii) Backhoe

9. Describe the following equipment with neat sketches : 10

- (i) Forklift truck
- (ii) Truck crane

10. Write short notes on any *four* of the following : $4 \times 2 \frac{1}{2} = 10$

- (a) Scraper
 - (b) Elevator
 - (c) Trencher
 - (d) Power Shovel
 - (e) Whirler Crane
 - (f) Flap Gate
-