ET-581(F)

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

Term-End Examination
December, 2012

ET-581(F) : MECHANICAL EQUIPMENT IN CONSTRUCTION

Time : 3 Hours   *Maximum Marks : 70*

*Note :   Answer **any seven** questions. All questions carry **equal** marks.   The answers shall be in your own language.*

1. (a) Define and Explain the terms 'Swell and   2
         Shrinkage'.

    (b) A construction Machine costs Rs 1,30,000
         and has an expected life of eight years and
         salvage value of Rs 20,000. It is expected to
         work 2000 hours in a year. Compute the
         yearly depreciation for the machine using :
         (i)   Straight line   4x2=8
         (ii) Double declining balance.

2. (a) What are the factors for the selection of type 5+5
         and size of a power shovel ?
    (b) What are the advantages of draglines ? How
         are they classified ?

3. Classify various types of cranes. Explain any two   10
    of them with the help of sketches.

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4. (a) What are the various steps involved in determining the number of trucks required for transporting sand ? **5+5**

   (b) Write a note on Belt conveyors.

5. (a) How does a sheep's foot roller compact the earth ? **5+5**

   (b) What factors affect the output of compactors ? Explain each in brief.

6. (a) Sketch and explain Drum type concrete miners. **5+5**

   (b) Describe various types of cable ways.

7. Describe : **5+5**

   (a) Vibrating Tables

   (b) Surface Vibrators

8. (a) What are stopper drills and where are they used ? **5+5**

   (b) Explain about Main line Drilling Jumbo.

9. Explain cylindrical gates with the help of a sketch. Give its advantages from **4+3+3**

   (a) Civil Engineer's point of view

   (b) Design and operations point of view.

10. Write short notes on *any two* : **5+5**

   (a) Aggregate cooling

   (b) Rippers.

   (c) Economic Life of Construction Equipment

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