

**DIPLOMA IN CIVIL ENGINEERING
DCLE(G) / DCLEVI**

Term-End Examination

00307

December, 2017

BCEE-052 : CONSTRUCTION EQUIPMENT

Time : 2 hours

Maximum Marks : 70

Note : Attempt any seven questions. All questions carry equal marks.

1. Explain Preventive Maintenance process. How does this affect the project execution and cost ? 10

2. How will you calculate the output of a motor grader in the following conditions ? 5+5=10
 - (a) While stripping
 - (b) While vee ditching

3. Explain the working principle of centrifugal pumps. Where are centrifugal pumps used ? 5+5=10

4. Differentiate between the following : $4 \times 2 \frac{1}{2} = 10$
- Storage vs Dumping
 - Centrifugal pumps vs Reciprocating pumps
 - Pneumatic tools vs Power tools
 - Cold mix plants vs Hot mix plants
5. List out at least ten (10) measures while working on pneumatic tools. $10 \times 1 = 10$
6. Assuming an axial flow pump having shape number 700, select a suitable type of pump and its speed for $Q = 8 \text{ m}^3/\text{sec}$, $H = 4 \text{ m}$. 10
7. Explain the functioning in point form (at least five each) of the following construction equipments : $4 \times 2 \frac{1}{2} = 10$
- Cranes (wheel and tower)
 - Elevators
 - Power shovel
 - Jib cum bucket
8. Describe the basic parts of a crawler tracker and list out its major functions. $5 + 5 = 10$
9. How is the cost worked out for owning an equipment ? Explain the depreciation cost of the same in detail. $6 + 4 = 10$

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

- (a) Documentation of Plant and Equipment
 - (b) Digging, Cutting and Levelling
 - (c) Air Filters and their Types
 - (d) Concrete Mixers
 - (e) Batching Plants
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