

00205

**B. TECH. Civil (Construction Management)**

**Term-End Examination**

**December, 2012**

**ET-523 (B) : Operation and Maintenance of  
Construction Equipment**

*Time : 3 hours*

*Maximum Marks :70*

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

1. (a) Discuss the advantages and disadvantages of renting of equipment over purchasing it. When do you prefer renting ? 5
- (b) What are the various costs considered while fixing hire charges ? Explain each type of cost consideration briefly. 5
2. (a) What do you understand by the "Fast-Fill Fuel system" ? Describe briefly various types of lubricants used in construction equipment. 5
- (b) Write notes on "Licence" and "Permit". 5

3. (a) Why is the output during night shifts less than that in day ? How does weather affect the output of an equipment ? 5
- (b) What do you understand by “downtime” ? How do you control it ? 5
4. (a) What are the various features to be considered in the planning of a project ? 5
- (b) How will you plan for repairs and maintenance of construction equipment. 5
5. (a) Describe the four major types of inspections. 5
- (b) What is preventive maintenance and what are its principal objectives ? 5
6. (a) What is the need for maintenance after every working season ? Discuss what features are to be inspected. 5
- (b) Describe the role of project manager in maintenance. 5
7. (a) Why is a log book a historical record ? What information do you get from a log book ? 5
- (b) What is priming ? What are different methods of priming a pump ? 5

8. With the help of a neat sketch explain the working of : 10
- (a) Centrifugal pump
  - (b) Reciprocating pump
9. (a) Explain different methods of cooling the IC Engine. Why is a cooling system required on an IC engine ? 7
- (b) What are the functions of an air receiver ? 3
10. Explain the following with a neat sketch :
- (a) Leather cup type packer 5
  - (b) Barrel type of grout mixer 5
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