

**DIPLOMA IN FIRE SAFETY MANAGEMENT  
(DFSTYM)**

**Term-End Examination**

**December, 2011**

**BSE-045 : PUMP OPERATION AND  
DISTRIBUTION OF WATER**

*Time : 3 hours*

*Maximum Marks : 75*

*Note : Attempt all questions. Please write neatly.*

**GROUP - A**

1. Fill in the Blanks. 5x2=10
- (a) Another name for a gland is \_\_\_\_\_ .
- (b) A centrifugal pump with one impeller called \_\_\_\_\_ .
- (c) An empty space, ie one containing no matter in known as \_\_\_\_\_ .
- (d) A gauge designed to measure negative pressure only is called \_\_\_\_\_ .
- (e) The pressure at a hydrant or pump when the water in it is stationary mode is called \_\_\_\_\_ .

**GROUP - B**

2. Select the right answer. 5x2=10
- (a) The first pump in a water relay, taking its water directly from the source.
- (i) Ejector Pump
  - (ii) Base Pump.
  - (iii) Booster Pump.
- (b) A pump which lifts water by means of a partial - vacuum created by a jet of water under pressure from another pump.
- (i) Ejector pump
  - (ii) Centrifugal Pump.
  - (iii) Elect - Pump
- (c) The word PTO is related to :
- (i) Water Tender
  - (ii) Elect Pump
  - (iii) Portable Pump.
- (d) Which Portable Pump is preferable in fire service ?
- (i) Petrol Driven.
  - (ii) Diesel Driven.
  - (iii) Elect Driven.
- (e) Under ground water Tank.
- (i) Are more reliable than over head-tank.
  - (ii) Are less reliable than over head tank
  - (iii) Some reliable as underground water tank.

**GROUP - C**

**3. Write short notes on *any seven*.**

**7x5=35**

- (a) . Exhaust ejector primer.
- (b) Gland Packing and its Types.
- (c) Priming Valve.
- (d) Daily up keep of pumps.
- (e) What is the reason for not lifting of the water by the pump.
- (f) What do you under-stand by priming.
- (g) Oil pressure gauge.
- (h) Pressure and compound gauge.
- (i) Manifold induction primer system.

**GROUP - D**

**Answer any two**

**2x10=20**

4. Explain characteristics and performance of centrifugal pumps with performance graphs of the pump (Discharge and Pressure)
  
  5. Explain the working of electrical driven pumps with diagram.
  
  6. Explain the working of Reciprocating Primers with diagram.
-