

86000

**CERTIFICATE IN RESCUE AND FIRE
FIGHTING (CRFF)**

Term-End Examination

June, 2011

**BAV-007 : FIRE ENGINEERING SCIENCE AND
EQUIPMENTS .**

Time : 3 hours

Maximum Marks : 100

*Note : All questions carry equal marks. Answer **any five** questions only.*

1. (a) Expand the following. 5
- (i) UVCE
 - (ii) ODP
 - (iii) ACFT
 - (iv) CAFS
 - (v) FDR
- (b) (i) Removal of oxygen from fire is 5
_____ .
- (ii) Landing valve is a part of _____ .
 - (iii) Argon is a _____ gas.
 - (iv) Carbon dioxide is _____ than air.
 - (v) Watt is a unit of _____ .

- (c) Explain, methods of Heat transfer. 5
- (d) Define Critical Temperature. How it helps in fire service study. 5
2. Write short notes on. 20
- (a) Ohm's law.
- (b) BLEVE.
- (c) Flammability Range.
- (d) Flash Point.
- (e) Density.
3. (a) Electricity is considered as one of the main hazard in Fire Safety. Discuss with examples. 10
- (b) What are the classification of fire ? How extinction can be attained in each class ? 10
4. (a) What is the relation between Head and Pressure ? Calculate the Pressure of water in a vertical pipe line at ground level is connected with a tank kept at 30 mts. height. 5
- (b) Find the jet reaction, if water is discharged through a delivery hose with a branch of 20 mm. dia nozzle at 5 Bars. 5
- (c) Briefly explain about extension ladder used in Fire Service. Also explain the tests for each part. 10

5. (a) What are the causes of damage of delivery hose ? Discuss the procedure for stacking delivery hose safely. 10
- (b) What are the hose fittings commonly used in Fire Service ? Explain about the advantages of four hose fittings. 10
6. What do you mean by fixed fire fighting installations ? Explain about two installation which are not using water for fire suppression. 20
7. (a) Write in details about the Common Breathing Apparatus sets used in Fire Service. Briefly explain the advantages and disadvantages of the same. 10
- (b) With the help of a neat sketch explain 10
- (i) DCP Fire Extinguisher
- (ii) Mechanical Foam Fire Extinguisher.
8. (a) What are the foam making equipments used in Fire Service ? What types of equipment you suggest for a fuel tank protection and why ? 10
- (b) Briefly explain the aircraft related emergencies in an airport. What are the important information required for an airport fire service during emergencies ? 10