

**POST GRADUATE DIPLOMA IN FIRE SAFETY  
AND DISASTER MANAGEMENT  
(PGDFSTYDM)**

**Term-End Examination**

**June, 2013**

**00431**

**MSEE-001 : AIRPORT FIRE SAFETY**

*Time : 3 hours*

*Maximum Marks : 100*

- Note :**
- (i) Question No. 1 is **compulsory**.
  - (ii) Attempt **any four** questions from remaining.
  - (iii) Marks allotted to each question are shown against each question.
  - (iv) Questions may be answered in **any** order.
  - (v) Sketches or diagrams should be used wherever necessary to make answers more precise.

1. (a) **Tick the correct answer :** **10x2=20**
- (i) What is category of Aircraft 62 m. long and 5 metre wide ?  
(A) Cat-6      (B) Cat-7  
(C) Cat-8      (D) Cat-9
  - (ii) Which group aircraft Hanger will fall with 45000 sq. feet single undivided space ?  
(A) Group-I    (B) Group-II  
(C) Group-III (D) Group-IV

- (iii) AVTUR fuel will fall under which class of Petroleum as per Petroleum Act 2002 ?
- (A) Class 'A' (B) Class 'B'  
(C) Class 'C' (D) None
- (iv) What is maximum size of each GRID in grid map of ARFF ?
- (A) 100 m<sup>2</sup> (B) 250 m<sup>2</sup>  
(C) 500 m<sup>2</sup> (D) 1000 m<sup>2</sup>
- (v) Which surface control of aircraft is associated with 'Yaw' motion of Aircraft ?
- (A) Aileron (B) Elevator  
(C) Rudder (D) Flaps
- (vi) What should be maximum crawling speed of ARFF Vehicles ?
- (A) 5.5 kmph (B) 8 kmph  
(C) 10 kmph (D) 12 kmph
- (vii) What emergency would be instituted at airport for an aircraft parked at isolation bay for suspected Bomb Threat ?
- (A) Full Emergency  
(B) Ground Incident  
(C) Local Standby  
(D) Disaster

(viii) The requirement of dry chemical powder as per ICAO for cat. 9 airport should be enough for how much period ?

- (A) 30 secs      (B) 50 secs  
(C) 80 secs      (D) 100 secs

(ix) For convenient egress and ingress in ACFT, what should be minimum angle of opening of door ?

- (A) 45°              (B) 75°  
(C) 90°              (D) 120°

(x) What does "Strength-3" in R.T. Transmission indicate ?

- (A) Unreadable  
(B) Readable with difficulty  
(C) Intermittent  
(D) Loud and clear

(b) Fill in the blanks : **10x2=20**

- (i) Minimum range of visibility for Aircraft stand by is \_\_\_\_\_ meters.
- (ii) In an aircraft Full Emergency, information on "Nature of defect" enables Fire crew to \_\_\_\_\_.
- (iii) Seriously injured passengers in aircraft accident are given priority \_\_\_\_\_ tags.



- (iv) In case of use of Dry powder and Foam on same fire \_\_\_\_\_ should be used first.
- (v) AVGAS falls under class \_\_\_\_\_ of Petroleum Act.
- (vi) Airport fire station should be located in such a way so that \_\_\_\_\_ is minimum.
- (vii) The slope of Airport fire station garrages should be \_\_\_\_\_.
- (viii) 24 meters long Helicopter shall be categorised as \_\_\_\_\_.
- (ix) Red flashing light signal to ACFT means \_\_\_\_\_.
- (x) All military aircraft Hanger shall fall under Group \_\_\_\_\_ Hangers.

2. What do you understand by "Critical-Area" of an aircraft ? Based on suitable formula find out the quantity of water required for an aircraft of 65 meters length and 6 meters fuselage width, when AFFF is used. 15

3. Write short notes on *any three* of the following :

- (a) Rendezvous point 3x5=15
- (b) Emergency access roads
- (c) Black box
- (d) Size up
- (e) Triage

4. What is watch room procedure at an airport during Aircraft accident ? Also Justify the importance of watch room at an airport fire station. 15
5. In an aircraft accident give details of activities under following sequence. 15  
Response, Approach, Position, Sizeup, Attack and Rescue.
6. (a) List out Airport Fire Hazards 8  
(b) List out Aircraft Fire Hazards 7
7. Various materials are used in construction of Aircraft. List out materials used extensively and their properties w.r.t. Fire Safety. 15
8. Water supply at an airport bears very important aspect for aircraft fire safety. List out primary and secondary means of water supply and their utility in case of aircraft accident. 15
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