Total No. of Questions: 6 *Total No. of Printed Pages:2*

Enrollment No.....

Faculty of Engineering

End Sem (Even) Examination May-2019

FT3CO17 Fire Engineering II

Programme: B.Tech. Branch/Specialisation: FT

Duration: 3 Hrs. **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1 i. Wet riser pipe diameter is not less than? **1**
(a) 90mm (b) 100mm (c) 65mm (d) 85mm

ii. AFD stands for **1**
(a) Analogous fire detectors (b) Alarm film detection
(c) Automatic fire detection (d) All fire detection

iii. IS for Fog Nozzle..... **1**
(a) IS 952 (b) IS 592 (c) IS 9522 (d) IS 5552

iv. Which nozzle is also known as London pattern? **1**
(a) Fog nozzle (b) Navy Type
(c) Hand control nozzle (d) Constant flow

v. FFFP stands for **1**
(a) Film forming fluoroprotein foam
(b) Film formation foam protein
(c) Foam firming protein foam
(d) None of these

vi. IS for triple purpose nozzle **1**
(a) IS 2872 (b) IS 2870 (c) IS 2871 (d) IS 2888

vii. TAC stands for **1**
(a) Tariff advisory committee (b) Tray advisory committee
(c) Trend adverb committee (d) All of these

viii. MCP stands for **1**
(a) Mean call point (b) Manual call point
(c) Minus call point (d) Make call point

P.T.O.

ix. Decibel (db) is a unit used to measure **1**
(a) Light (b) Sound (c) Frequency (d) None of these

x. A safety programme consists of **1**
(a) Three E's (b) Four E's (c) Five E's (d) Six E's

Q.2 i. List the stages of fire. **2**

ii. Explain hydraulic platform with proper diagram. **3**

iii. Explain the working principle of ARFF with neat sketch. **5**

OR iv. Explain the construction & working of fire engine with diagram. **5**

Q.3 i. Define flash fire & pool fire. **2**

ii. Explain the detail case study of Bhopal gas tragedy. **8**

OR iii. Explain water cum foam monitor with the help of diagram & different types of nozzles. **8**

Q.4 i. List any two uses of: **3**
(a) Turn table (b) Ropes
(c) Small gears

ii. Explain the features of extension & hook ladder with sketch. **7**

OR iii. Describe explosion hazard & their relative risks. **7**

Q.5 i. Explain the methods of JSA. **4**

ii. Explain the designing & working of SCBA with the help of diagram. **6**

OR iii. Describe the working principle of MCABA with a neat sketch. **6**

Q.6 Attempt any two:

i. What are the duties of safety officer? **5**

ii. How to make accident investigation report? Give one example. **5**

iii. Write three points on unsafe act, unsafe condition, audit, safety display & importance of training. **5**

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Marking Scheme
FT3CO17 Fire Engineering II

Q.1	i.	Wet riser pipe diameter is not less than? (b) 100mm		**1**
	ii.	AFD stands for (c) Automatic fire detection		**1**
	iii.	IS for Fog Nozzle..... (a) IS 952		**1**
	iv.	Which nozzle is also known as London pattern? (c) Hand control nozzle		**1**
	v.	FFFP stands for (a) Film forming fluoroprotein foam		**1**
	vi.	IS for triple purpose nozzle (c) IS 2871		**1**
	vii.	TAC stands for (a) Tariff advisory committee		**1**
	viii.	MCP stands for (b) Manual call point		**1**
	ix.	Decibel (db) is a unit used to measure (b) Sound		**1**
	x.	A safety programme consists of (b) Four E's		**1**
Q.2	i.	List of stages of fire.		**2**
	ii.	Hydraulic working Diagram.	2 marks 1 mark	**3**
	iii.	Working principle of ARFF Diagram	4 marks 1 mark	**5**
OR	iv.	Construction & working of fire engine Diagram.	4 marks 1 mark	**5**
Q.3	i.	Definition flash fire Definition pool fire	1 mark 1 mark	**2**
	ii.	Case study of Bhopal gas tragedy.		**8**
OR	iii.	Working of water cum foam monitor Diagram Eight types of nozzles 0.5 mark for each (0.5 mark * 8)	3 marks 1 mark 4 marks	**8**

Q.4	i.	(a) Turn table		**3**
		Definition	0.5 marks	
		Uses	0.5 marks	
		(b) Ropes		
		Definition	0.5 marks	
		Uses	0.5 marks	
		(c) Small gears		
		Definition	0.5 marks	
		Uses	0.5 marks	
	ii.	Six features of extension	3 marks	**7**
		Six features of hook ladder	3 marks	
		Diagram	1 mark	
OR	iii.	Hazard due to explosion Five hazards name them and explanation Relative risks	5 marks 2 marks	**7**
Q.5	i.	Methods of JSA.		**4**
	ii.	Working of SCBA Diagram.	5 marks 1 mark	**6**
OR	iii.	Working principle of MCABA Diagram	5 marks 1 mark	**6**
Q.6		Attempt any two:		
	i.	Duties of safety officer		**5**
	ii.	Accident investigation report with example.		**5**
	iii.	Unsafe act	1 mark	**5**
		Unsafe condition	1 mark	
		Audit	1 mark	
		Safety display	1 mark	
		Importance of training	1 mark	

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