

Enrollment No.....



Faculty of Engineering
End Sem (Odd) Examination Dec-2018
FT3CO15 Occupational Health & Hygiene System
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. Industrial safety management is that branch of management which is concerned with _____ hazards from the industries. **1**
(a) Reducing (b) Controlling
(c) Eliminating (d) All of these
- ii. The following is(are) physical hazard agent(s) **1**
(a) Falls (b) Electricity (c) Inhalation (d) All of these
- iii. Check list for Job Safety Analysis (JSA) consists of **1**
(a) Work area, material, machine, tools
(b) Men, machine, material, tools
(c) Men, machine, work area, tools
(d) Men, work area. Material, tools
- iv. A safety programme consists of **1**
(a) Three E's (b) Four E's (c) Five E's (d) Six E's
- v. For household wiring and small units, the following should be used for safety measure **1**
(a) MCB (b) ACB (c) OCB (d) MCCB
- vi. Which of the following colour is used for radiation hazard? **1**
(a) Red (b) Orange (c) Green (d) Purple
- vii. Decibel (db) is a unit used to measure **1**
(a) Light (b) Sound (c) Frequency (d) None of these
- viii. A hazard analysis can be used to evaluate a potential hazard; what other information should be considered? **1**
(a) Injury reports (b) Statistical data
(c) Risk assessment (d) Fatality investigations

P.T.O.

[2]

[3]

- ix. Which of the following techniques would be most likely to increase the motivation and satisfaction of people at your?
(a) Job placement (b) Responsibility of workers
(c) Satisfaction of workers (d) Job enrichment **1**
- x. What are the two main causes of incidents in the workplace?
(a) Wrong working (b) Misuse of Place
(c) Poor structure (d) Unsafe acts and unsafe conditions **1**
- Q.2 i. What are the advantages of good lighting? **2**
ii. Explain about thermal stress with its types. **3**
iii. An employee is exposed to following levels during a work day
85dBA for 3.75 Hours, 90dBA for 2 Hours, 95dBA for 2 Hours,
110dBA for 0.25 Hours. Calculate the daily noise dose. **5**
- OR iv. Describe in detail about various noise control programmes. **5**
- Q.3 i. List out the various types of notifiable occupational diseases. **4**
ii. Explain the types and effects of ionizing radiation and controlling programmes related to it. **6**
- OR iii. What radioactivity would remain for 1ei of eo = 60 (5.24 years half life after a 20 year period)? **6**
- Q.4 i. Write any three differences between Industrial Hygiene & Occupational Health. **3**
ii. Explain the purpose and types of air sampling and what are the factors you will consider while deciding sampling strategies? **7**
- OR iii. What do you mean by the term ERGONOMICS? Write the applications of ergonomics for safety & health. Mention the problems also. **7**
- Q.5 i. Explain the need & characteristics of personal protective equipment's. **2**
ii. Enlist the various types of non-respiratory equipment's & explain any one of them with proper diagram. **8**
- OR iii. List out the various types of respiratory equipments & classify the types of respirators. **8**

Q.6

Attempt any two:

- i. Write notes on types of Dressing & Bandages. **5**
ii. Differentiate between Open injuries & Closed injuries. **5**
iii. Explain degree of burn & percentage of burn. **5**

Marking Scheme

FT3CO15 Occupational Health & Hygiene System

Q.1	i. Industrial safety management is that branch of management which is concerned with _____ hazards from the industries. (d) All of these	1			4
	ii. The following is(are) physical hazard agent(s) (d) All of these	1			6
	iii. Check list for Job Safety Analysis (JSA) consists of (a) Work area, material, machine, tools	1			6
	iv. A safety programme consists of (b) Four E's	1			6
	v. For household wiring and small units, the following should be used for safety measure (a) MCB	1			6
	vi. Which of the following colour is used for radiation hazard? (d) Purple	1			6
	vii. Decibel (db) is a unit used to measure (b) Sound	1			6
	viii. A hazard analysis can be used to evaluate a potential hazard; what other information should be considered? (c) Risk assessment	1			6
	ix. Which of the following techniques would be most likely to increase the motivation and satisfaction of people at your? (d) Job enrichment	1			6
	x. What are the two main causes of incidents in the workplace? (d) Unsafe acts and unsafe conditions	1			6
Q.2	i. Any 4 points advantages of good lighting	2			6
	ii. Definition of thermal stress Types of thermal stress	1 mark 2 marks	3		6
	iii. Numerical Table Solution	1 mark 2 marks 2 marks	5		6
OR	iv. Noise control programmes names Explanation of each	2 marks 3 marks	5		6
Q.3	i. Names of notifiable diseases and explanation. ii. Types of ionizing radiation Effects and controlling methods	2 marks 4 marks	6		6
OR	iii. Formula Solution	2 marks 4 marks	6		6
Q.4	i. Difference b/w occupational health & industrial hygiene 6 points 0.5 mark for each (0.5 mark *6)	3			6
	ii. Purpose of air sampling Types of air sampling Factors responsible for air sampling	2 marks 2 marks 3 marks	7		6
OR	iii. Definition of ergonomics Applications of it Problems related to it	1 mark 3 marks 3 marks	7		6
Q.5	i. Characteristics of PPE'S 4 points ii. Types of non respiratory equipment's Explanation of any one Labelled diagram	2 marks 2 marks 3 marks 3 marks	2		8
OR	iii. Types of respirators Explanation of any one of them Labelled diagram	2 marks 3 marks 3 marks	8		8
Q.6	Attempt any two: i. Types of dressing and bandages Explanation of any one with neat sketch ii. Difference between open & closed injuries 10 points 0.5 mark for each (0.5 mark *10)	2 marks 3 marks 10 points 0.5 mark *10	5		5
	iii. Degree of burn Percentage of burns	2 marks 3 marks	5		5
