DIPLOMA IN FIRE SAFETY

00572

Term-End Examination

June, 2010

BSEI-029 : RADIO-ACTIVE AND EXPLOSIVE MATERIALS

Time : 3 hours *Maximum Marks : 100*

Note : *(i) All parts of questions are* ***compulsory*** *except optional parts.*

(ii) No Answer will be repeated again.

PART-A

1. Write ***yes*** or ***no, one*** mark each : **18x1=18**

(a) Radio - Active materials give no harm to our body when entered. ( )

(b) We should use 2 to 3 dosimeters for reading R.A materials for safety purposes. ( )

(c) Apply water jet to point of leak in tank container for stopage of leaking.

(d) Wash away any suspicious material which may have contacted the body with copious amount of water. ( )

(e) In case of contact with Radio-Active substances immediately flush skin or eyes with running water. ( )

(f) During R.A. Contamination there is no need to extent of the contamination. ( )

(g) Use dry absorbent material on wet spills. ( )

(h) Taping the area of contamination with warning signs. ( )

(i) Propagating a premixed flame with a normal speed is called explosion. ( )

(j) Ammunition comes under class 5 category of explosives. ( )

(k) Nitroglycerin is an example of class-I explosive. ( )

(l) Chemical formula of Butane is C_3H_4. ( )

(m) Petrol vapours forms ignitable mixture between 1.3% to 6.0% in volume with air. ( )

(n) The flow of electrons is called Electromotive Force. ( )

(o) Thermoplastics are materials that can be softened repeatedly by the application of heat. ( )

(p) Class "A" Petroleum products has flash point less than 23°C. ( )

(q) Flash point of vegetable oils is 162 to 282°C. ( )

(r) Boiling point of a varnish is 56°C. ( )

PART-B

Match the followings : **10x1=10**

(a)	U-235	(i)	Radio - Activity
(b)	Alpha Particle	(ii)	Class 8 Explosive
(c)	Nitro Compounds	(iii)	R.A. Material
(d)	LOx	(iv)	Flammable Gas
(e)	LPG	(v)	Explosives
(f)	C_2H_2	(vi)	Methane
(g)	CH_4	(vii)	Extinguishing Agent
(h)	CO_2	(viii)	Inert Gas
(i)	Nitrogen	(ix)	Acetylene
(j)	A C	(x)	Alternate Current

2. Short answer type **7** out of **10** will be attempted : **7x6=42**

(a) What are Petrochemicals ? Define briefly.

(b) Specify the general considerations for protection of petrochemicals.

(c) What are the first - aid measures for paints and varnishes ?

(d) How is the vegetable oils used in our life ?

(e) How many types of dangers caused by radio-active materials ?

(f) Define about BLEVE ?

(g) What is dust explosion ? Define briefly.

(h) Write down the common characteristics of Gases ?

(i) Write a brief note on fundamentals of electricity ?

(j) What are the common causes of electrical fires and their remedial measures ?

3. Long Answer Type **3** out of **5** will be attempted : **3x10=30**

(a) Point out the procedures in the event of a R.Active spill ?

(b) Write down the general classifications of explosives ?

(c) Define the following :

(i) Flash Point

(ii) Fire Point

(iii) Ignition Temperature

(iv) Spontaneous Ignition

(v) Spontaneous Combustion

(d) Write a note on L.P.G ?

(e) Write a long note on generation and distribution of electricity ?