

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Diploma in Fire Technology**  
**Semester: III**

**Subject Name: Fundamental of Fire Safety**

<b>Sr. No.</b>	<b>Course Content</b>
<b>1.</b>	<b>1.1. Chemistry &amp; Physics of fire:</b>  1.1.1. Effect of Heat 1.1.2. Heat units 1.1.3. Thermal Expansion 1.1.4. Charles Law 1.1.5. Transmission of Heat 1.1.6. Chemistry of Combustion 1.1.7. Ignition Temp 1.1.8. Burning of Carbon & Differents Matters <b>1.1.9. Back Draught</b>  <b>1.2 Fire Extinguishen:</b> 1.2.1 Starvation 1.2.2 Cooling 1.2.3 Classification of fires 1.2.4 Spreading of fires 1.2.5 Fire Extinguishing Media
<b>2.</b>	<b>Storage of Hazardous Goods:</b>  2.1 Explosive tendencies 2.2 High inflammability 2.3 Liability to intensity a fire 2.4 Generation of intense heat when buring 2.5 Liability to extend the fire zone 2.6 Difficulty to extinguish 2.7 Spontaneous combustion tendencies
<b>3.</b>	<b>Fix Fire Fighting Installation:</b>  3.1 Types of installation 3.2 Fix foam installation 3.3 Fix CO2 Installation 3.4 Steam Fixed Installation 3.5 Autometically Sprinklar

4.	<b>Rural Fire:</b> <ul style="list-style-type: none"> <li>4.1 Relative comparison between rural fire &amp; urban fire</li> <li>4.2 Causes of rural fire</li> <li>4.3 Fire extinguishing media in rural fire</li> <li>4.4 Counter fire method</li> <li>4.5 Gas Fire- Classification of gases</li> <li>4.6 Fire fighting procedure in gas fire</li> <li>4.7 LPG fire</li> <li>4.8 CNG fire</li> <li>4.9 LNG fire</li> </ul>
5.	<b>Forest &amp; Snow Fire:</b> <ul style="list-style-type: none"> <li>5.1 causes of forest fire</li> <li>5.2 counter fire method</li> <li>5.3 Gas Fire- Classification of gases</li> <li>5.4 Fire fighting procedure in gas fire</li> <li>5.5 Hydro carbon gases - stored in snow of north &amp; south pole</li> <li>5.6 Ocean - sea fire</li> </ul>

### Reference Books:

1. D.R.Varma, Agni Suraksha.
2. K.K. Binsoi- Fire Science Equipment and Management Part- I&II.
3. Post H.S.C. Diploma in Fire Service Engineering, NIFDEM-Nagpur.
4. Station Officer and Instructor Course- Home department of India National fire Service College.
5. B.S.C Fire Gujarat University Ahmedabad.
6. Safe handling of Hazardous Materials – A.K. Rohatagi –Mumbai.
7. Fire Chief's Hand Book - James F. Casey, Newyork.
8. Fire Service Drill Book - by Home Office- Fire Dept. London.