



SunRise University

Approved by Govt. of Rajasthan vide Sunrise University Act, 2011
Recognized by UGC Act, 1956 u/s 2 (f)

Syllabus

Diploma in Fire Officer

Semester-1

| Name of Paper | Code | Internal | External | Total |
|------------------------------|--------|----------|----------|-------|
| Fire Engineering Science | DFO101 | 40 | 60 | 100 |
| Fire Prevention & Protection | DFO102 | 40 | 60 | 100 |
| Fire Extinction Science | DFO103 | 40 | 60 | 100 |
| Practical | DFO104 | 40 | 60 | 100 |

Semester-2

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|-------------------------------|--------|----|----|-----|
| Practical | | | | |
| Fire Administration & General | DFO201 | 40 | 60 | 100 |
| Rescue & Emergency Management | DFO202 | 40 | 60 | 100 |
| First Aid & Paramedics | DFO203 | 40 | 60 | 100 |
| Practical | DFO204 | 40 | 60 | 100 |

Fire Engineering Science

Fundamentals of Computer Engineering, Mathematics, Fundamentals of Mechanical Engineering, Fluid Mechanics & Fluid Flow Operations, Computer Programming, Community Internship, Fire Codes & Standards, Engineering of Materials, Fundamentals of Electrical & Electronics Engineering, Thermal Engineering, Heat Transfer Operations, Engineering Mechanics, Fire Ground Operations, Fire Service Hydraulics, Fire Dynamics, Petroleum Refinery Operations, Structural Fire Protection, Fire Suppression Systems, Explosions and Industrial Fire Safety, Fire Ground Operations.

Fire Prevention & Protection

Fire Protection and Prevention Safe Work Practices, Flammable and Combustible Liquid Storage, Handling Flammable Gases, Fire extinguisher operation, Fire extinguisher Maintenance, Points to remember, fire control technology, principle of industrial safety and accident prevention, leadership and communication risk management and hazard control system, health safety, environmental engineering and construction safety, disaster management, emergency planning & first aid, History of fire service , Force, resultant force , Mass and weight, work, power, energy, Law of conservation of energy , Mechanics – rest and motion , Distance and displacement , Speed and velocity.

Fire Extinction Science

Chemistry of Combustion- Triangle of fire, Fire tetrahedron, classification of fire, fire behavior, stages of fire, method of fire extinguishment and some important definitions like, flash point, fire point- ignition temperature, Auto-ignition temperature, flammability Range etc, Discipline: – introduction, importance of discipline, General principles of discipline, essentials for discipline and outward signs, Fire Extinguishers; – Types of fire extinguishers, method of operation and care & maintenance, Hydrant & Fittings, Pump & Primers, Foam & Foam Making equipment, Extension Ladder, Breathing Apparatus set, Anatomy of Fire.

Fire Administration & General

Emergency Operations, Fire discovery, Fire reported, Dispatch, Response, Arrival and setup, Rescue and fire attack, Fire containment and control, Extinguishment, Overhaul and salvage, Investigation, How Stakeholders Can Help, fire apparatus access, Fire Hydrant Features, Fire Hydrant Placement, Position and Protection, premises identification, firefighter access, Room and Floor Designations, Utility and Equipment Identification, hazards to firefighters, Hazardous Materials, Energy Conservation and Alternative Energy Features, Photovoltaic Systems.

Rescue & Emergency Management

present status of SDRF, need of sop, purpose, responsibilities, methodology, procedure, medical first responder, collapsed structure, search & rescue, disaster management courses, Hemorrhages and Shock, Soft Tissue Injuries, Musculoskeletal Injuries, Skull, Spinal & Chest Injuries, Burn & Environmental Injuries, First Group Presentation, Cardiovascular Emergencies and Abdominal Distress, Respiratory Emergencies, Seizures, Diabetic Emergencies & CVA, Lifting and Moving of Patient, Report Writing and Preparation for the Next Call, Final Test.

First Aid & Paramedics

What Does First Aid Mean? First Aid in Different Cases, First aid for Drowning, First aid for Fire Injuries, First Aid for Severe Burns, First Aid for Mild Burn, First Aid for Injuries on the Play Field, Transporting the Person for Medical Help After Giving First Aid, Teaching faculty and infrastructure, Medium of instruction, introduction to the first responder programmed, Understand the healthcare scenario in India, Understand the duties and responsibilities of an First Responder, Understand relevant medico-legal principles, Learn how to identify rapidly changing situations and adapt accordingly, Understand the importance of and process for first aid and triage, Understand his/her role in disaster preparedness and management, The Human Body.