

YDT-17 / 18 GENERAL DAMAGE CONTROL

Name: _____ Rate / Rank / Position: _____

1. **Describe the necessary conditions for a fire to exist.**

2. **Define the following terms:**
 - a. Flash point
 - b. Ignition temperature
 - c. Fire point
 - d. Spontaneous combustion
 - e. Fire triangle

3. **Describe the classes of fire:**
 - a. Type of material burning
 - b. Type of smoke giving off

4. **Explain how the following type of extinguishing agents work:**
 - a. Water
 - b. Co2
 - c. Purple-K-powder (PKP)
 - d. Aqueous film forming foam (AFFF)
 - e. FM-200

5. **Explain what is the proper agent to use on each class of fire**

6. **Define the following terms:**
 - a. Mechanical isolation
 - b. Electrical isolation
 - c. Smoke boundary
 - d. Fire boundary
 - e. Positive ventilation
 - f. Negative ventilation
 - g. Fire overhaul
 - h. Fire out of control
 - i. Fire contained / under control
 - j. Fire out
 - k. Reflash
 - l. Hangfire / hotspots

- m. Progressive flooding
 - n. Hydrogen sulfide (H₂S)
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PORTABLE DAMAGE CONTROL EQUIPMENT

7. Locate and describe the following equipment:

- a. P-100 pump and associated accessories
 - b. AFFF inline foam eductor
 - c. Perijet eductor
 - d. VARI-nozzle / all purpose nozzle
 - e. Firefighters ensemble
 - f. CairnsAir SCBA
 - g. Firefighters helmet / light
 - h. Carbon dioxide fire extinguisher (Co₂)
 - i. Potassium Bicarbonate PKP fire extinguisher
 - j. Stokes litter
 - k. Emergency escape breathing devices
 - l. 1 ½ fire hose
 - m. 2 ½ fire hose
 - n. Wye gate valve
 - o. Box fan
 - p. Shoring equipment, steel
 - q. Emergency Water Activated Repair Patch / pipe patching equipment
 - r. Plugging kit
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ALARMS AND SENSORS

8. Locate and describe the following equipment:

- a. Notifier AFP-200 Analog Fire Panel**
 - Power supply
 - Audible warning device
 - Ionization sensor (smoke detector)
 - Thermal sensor

- b. 2E SAS Monitoring System**
 - Display unit
 - Power supply
 - Flooding sensors
 - H₂S sensor

FIXED DAMAGED CONTROL SYSTEMS

9. Locate and describe the following systems:

- a. AFFF Overhead sprinkler fire suppression system
 - What is the tank capacity / how long will it last
 - How is the tank refilled
 - What space is protected
 - Trace AFFF piping and valve system
 - Describe the interface between fire pump and AFFF system
 - Explain how AFFF suppresses a fire
 - What conditions must exist before using the AFFF system to combat a fire
 - What safety precautions should be considered when activating the AFFF system
 - Who will authorize the activation of the AFFF flooding system

- b. FM-200 Fire Suppression System
 - Locate and describe the FM-200 System
 - What space is protected
 - What is FM-200 / how does it extinguish a fire
 - Safety considerations when discharging FM-200
 - Who authorizes discharge of FM-200
 - Where can FM-200 be activated from
 - What is the interface between FM-200 and the ventilation / Main Propulsion Diesel Engine

- c. Fire Pump and Firemain System
 - Fire pump (location / GPM / PSI)
 - Firemain system
 - Fire stations (Location and numbering system)
 - Importance of a discharge when pump is running

PRACTICAL EVALUATIONS

10. Practical evaluations may be done as a team effort; however supervisors must ensure that all members demonstrate sufficiently that they can accomplish the task. Do not allow one member of the team to carry the rest.

a. Rig 1 ½ fire hose and nozzle to a fire station as directed

- (1) Charge hose and demonstrate:
 - Proper use and operation of nozzle
 - Solid stream
 - Narrow "V" pattern
 - Wide "V" pattern
 - Relieving active hose
 - Advance and backing out a hose using proper commands and repeat backs
 - Restow gear

b. Retrieve portable PKP fire extinguisher

- Demonstrate how to inspect extinguisher
- Use of extinguisher
- Explain how PKP puts out a fire and drawbacks of PKP

c. Retrieve portable CO2 fire extinguisher

- Demonstrate how to inspect extinguisher
- Use of extinguisher on type of fire
- Explain how CO2 puts out fire

d. Rig and use perijet eductor to dewater space

- Explain importance of suction lines being wrench tight
- Explain how an eductor works

e. Rig and operate P-100 pump to provide water to nozzle

- Ensure oil and fuel levels are checked
- Rig suction hose
- Trigate
- Exhaust hose
- Fire fighting hose
- Start pump and prime
- Charge hose
- Flush pump with fresh water and stow

f. Set up and use inline AFFF eductor

- * A bucket of water will be used to simulate AFFF

g. Locate and utilize the following communications equipment:

- Steenhans intercom system
- Sound-powered phone system
- Motorola sprint radios
- Cellular phone system (simulate)

h. Don fire fighting ensemble, flash gear, helmet, and Cairns air pack.

* 1:30 seconds is the maximum time allowed to be dressed out and air pack lit off.

i. Don fire fighting coveralls, flash gear, helmet and Cairns air pack.

* 1:30 seconds is the maximum time allowed to be dressed out and air pack lit off.

j. What are the proper procedures for reporting a fire while:

- in port
- at-sea

Recommended for qualification

- Craftmaster: _____
- Chief Engineer _____
- Craft Officer _____
- Executive Officer _____
- Commanding Officer _____
- Service Record Entry Admin Officer (Military) _____
- Contractor Personnel File Entry _____