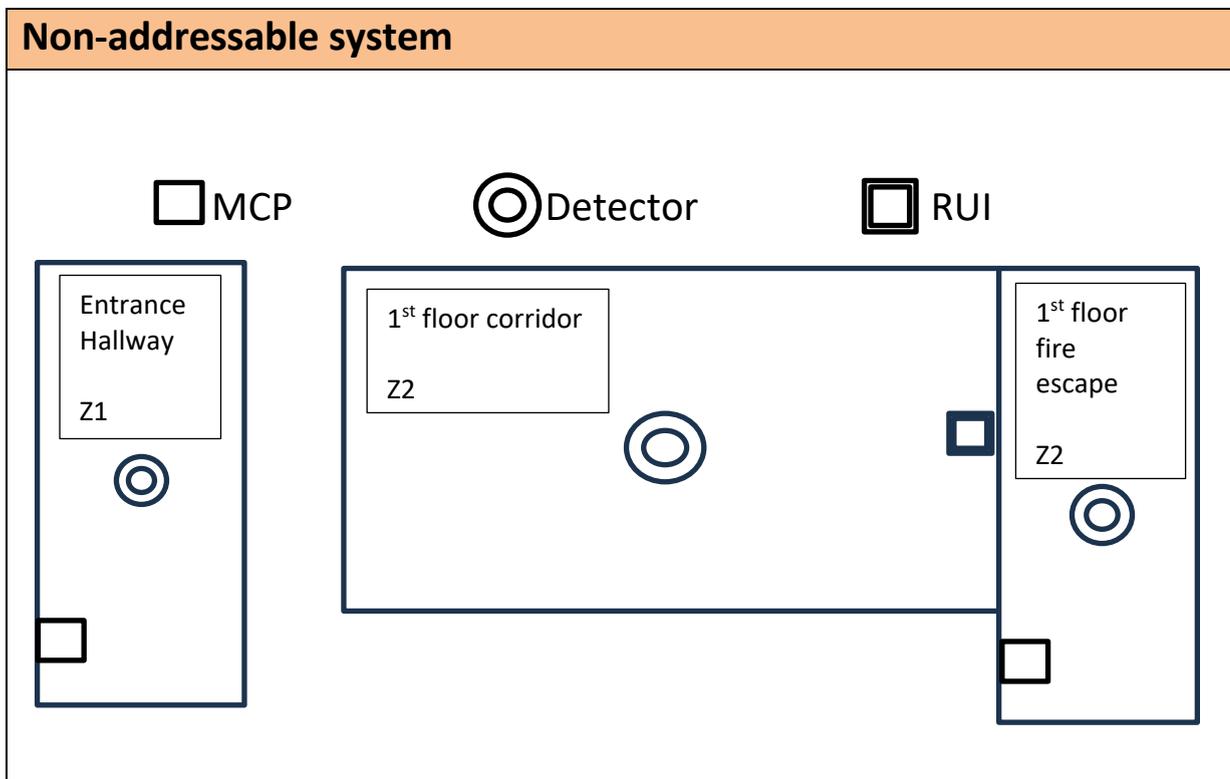


# Fire Emergency and Security Systems (Fire tasks)

## Mock Practical Assessment – Assessment Form

### Task Two: Installing additions



## Specification for additions – Conventional (Non-addressable)

Correctly identify device type and complete 'as fitted specification' before proceeding to carry out installation work following specification supplied.

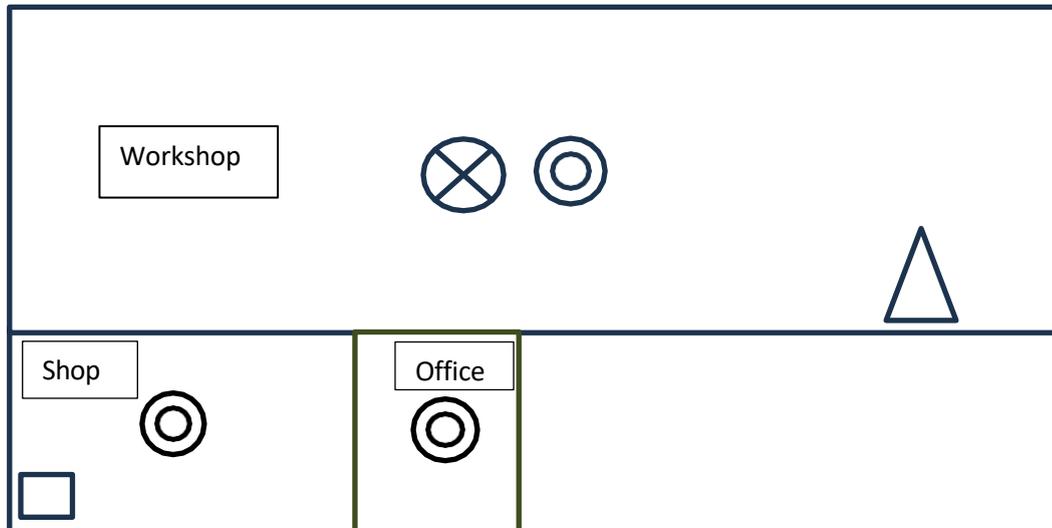
- Install a suitable detector for specific room type.
- Install correct indication unit for additional detection.
- Install a Manual Call Point to system.

System Components			
Component	Location	Type Required	Effect
Detector	1 <sup>st</sup> Floor fire escape	Please state	Cause FIRE activation
Indicator Unit	1 <sup>st</sup> floor corridor	Remote Indicator unit	Activated from new detector to provide visual indication of fire escape detection
Manual Call Point	Adjacent to 1 <sup>st</sup> floor fire escape door	MCP resettable break glass unit	Cause FIRE activation

Component	Zone
Entrance hallway MCP	1
Entrance Hallway detector	1
1 <sup>st</sup> floor corridor detector	2
1 <sup>st</sup> floor fire escape detector*	2
1 <sup>st</sup> floor fire escape MCP	2

\* RUI fitted within 1<sup>st</sup> floor corridor

## Addressable System



## Specification for additions – Addressable

Correctly identify device type and complete 'as fitted specification' before proceeding to carry out installation work following specification supplied.

- Install a suitable detector for specific room type.
- Install correct VAD unit within new workshop
- Install interface relay to sprinkler system.
- Change programming per specification

System Components			
Component	Location	Type Required	Effect
Detector	New workshop area	Please state	Cause FIRE activation
Visual Alarm Device (VAD)	New workshop area	Please state	Sounder output
Interface Relay Unit	Workshop (Adj sprinkler system)	Dry contact relay unit	Provide open circuit to sprinkler system upon FIRE activation

Component	Address
Shop MCP	1
Shop detector	2
Office detector	3
Workshop detector	4
Workshop VAD	5
Sprinkler relay	6

**Task Three: Commissioning**

Non-addressable Commissioning Checklist				
Installed and commissioned by:		Date:		
Site address:				
Control panel type:		No. of zones:		
Standard(s) installed to:		No. of loops:		
<b>Mains power</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Satisfactory continuity of supply				
System on a dedicated circuit				
Satisfactory labelling of supply				
Any residual current protection				
Fire resistant cable used				
<b>Standby power</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Batteries secured				
Suitable wiring to stand by power supply				
Quiescent current reading available				
Alarm current reading available				
Battery calculations available				
Rating of charger adequate for full load				
Batteries of suitable type				
Batteries of adequate capacity				
<b>Wiring</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Cables adequately protected from mechanical damage				
Cables adequately protected against fire				
Cables of suitable type				
Cables suitably supported				

Cable joints correctly terminated				
<b>Wiring</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Junction boxes suitably labelled				
Insulation resistance test results satisfactory and recorded				
Fire alarm cables suitably segregated from other sources				
Area of loop satisfactory				
Number of zones per loop satisfactory				
Short circuit isolation adequate				
Location of short circuit isolators appropriate				
Call points remain operative in event of detector removal				
Conventional sounder circuits not spurred				
<b>Control and indicating equipment</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Siting appropriate and to specification				
Controls secure from unauthorised access				
Zone plan and operating instructions adjacent to controls				
Internal wiring and workmanship satisfactory				
Tested to specification				
Cause and effect checked for correct operation				
Spare fuses and breakglass or resettable elements left on site				
<b>Manual alarm call points</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Siting appropriate and to specification				
Mounted at correct height				
Common type throughout building				
Tested to specification				
<b>Detection devices</b>	<b>Checked satisfactory</b>			
	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Comments</b>
Siting appropriate and to specification				

Type of detectors suitable for risk				
Tested to specification				

Visual and audible alarms	Checked satisfactory			
	Yes	No	N/A	Comments
Sound level readings available				
Minimum of 2 sounder circuits				
Visual alarm devices installed (where appropriate)				
Ancillary equipment	Checked satisfactory			
	Yes	No	N/A	Comments
Relays suitably housed				
Interfacing correct				
Tested to specification				
Remote signalling systems	Checked satisfactory			
	Yes	No	N/A	Comments
Remote signalling systems installed				
System documentation	Checked satisfactory			
	Yes	No	N/A	Comments
System log book available				
Power readings and battery standby verification				
PSU Voltage:		Standby battery capacity:		PSU current rating:
Load test (quiescent current):		Location:		Load test (alarm current):
<b>Duration:</b>		<b>x quiescent load</b>		<b>+ alarm load</b>
				<b>=</b>
				<b>Battery capacity</b>

Note: for 24hr standby: Duration factor = 30, for 48hr standby: Duration factor = 60, for 72hr standby: Duration factor = 90

Observations and variations	
Areas checked and non-compliances observed	Recommendations


Test instrumentation		
Type of instrument	Serial number	Calibration date

KEY TO DEVICE TYPE	I = Isolation Smoke	F = Fixed Temp	B = Beam Detection	A = Aspirating	C = Carbon Monoxide
M = Manual Call Point	O = Optical Smoke	R = Rate of Rise	F = Flame Detection	VAD = Visual Alarm Device	S = Multi Sensor
Loop / Zone	Device			Check	
	No	Type	Location	Fault	Alarm

In this task you must:

- ensure that the zones/devices are displayed on the panel correctly and as per spec
- change programming per specification

<b>Addressable Commissioning Checklist</b>				
Installed and commissioned by:		Date:		
Site address:				
Control panel:		No. of zones:		
Standard(s) installed to:		No. of loops:		
<b>Mains power</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Continuity of supply satisfactory				
System on a dedicated circuit				
Labelling of supply satisfactory				
Any residual current protection				
Fire resisting cable used				
<b>Standby power</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Batteries secured				
Wiring to stand by power supply suitable				
Quiescent current reading available				
Alarm current reading available				
Battery calculations available				
Rating of charger adequate for full load				
Batteries of suitable type				
Batteries of adequate capacity				
<b>Wiring</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Cables adequately protected from mechanical damage				
Cables adequately protected against fire				
Cables of suitable type				

Cables suitably supported				
Cable joints correctly terminated				

<b>Wiring</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Junction boxes suitably labelled				
Insulation resistance test results satisfactory and recorded				
Fire alarm cables suitably segregated from other sources				
Area of loop satisfactory				
Number of zones per loop satisfactory				
Short circuit isolation adequate				
Location of short circuit isolators appropriate				
Call points remain operative in event of detector removal				
Conventional sounder circuits not spurred				
<b>Control and indicating equipment</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Siting appropriate and to specification				
Controls secure from unauthorised access				
Zone plan and operating instructions adjacent to controls				
Internal wiring and workmanship satisfactory				
Tested to specification				
Cause and effect checked for correct operation				
Spare fuses and breakglass or resettable elements left on site				
Changed the access level 3 code				
<b>Manual alarm call points</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Siting appropriate and to specification				
Mounted at correct height				
Common type throughout building				
Tested to specification				
<b>Detection devices</b>	Checked satisfactory			
	Yes	No	N/A	Comments

Siting appropriate and to specification				
Type of detectors suitable for risk				
Tested to specification				

<b>Visual and audible alarms</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Sound level readings available				
Minimum of 2 sounder circuits				
Visual alarm devices installed (where appropriate)				
<b>Ancillary equipment</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Relays suitably housed				
Interfacing correct				
Tested to specification				
<b>Remote signaling systems</b>	Checked satisfactory			
	Yes	No	N/A	Comments
Remote signaling systems installed				
<b>System documentation</b>	Checked satisfactory			
	Yes	No	N/A	Comments
System logbook available				
<b>Power readings and battery standby verification</b>				
PSU Voltage:		Standby battery capacity:		PSU current rating:
Load test (quiescent current):		Location:		Load test (alarm current):
<b>Duration:</b>	<b>x quiescent load</b>		<b>+ alarm load</b>	<b>=</b>
				<b>Battery capacity</b>

Note: for 24hr standby: Duration factor = 30, for 48hr standby: Duration factor = 60, for 72hr standby: Duration factor = 90

<b>Observations and variations</b>	
Areas checked and non-compliances observed	Recommendations


Ensure that the device descriptions are added and corresponding with the addresses on the panel as follows:

Component	Address
Shop MCP	1
Shop detector	2
Office detector	3
Workshop detector	4
Workshop VAD	5
Sprinkler relay	6

Test instrumentation		
Type of instrument	Serial number	Calibration date

KEY TO DEVICE TYPE		I = Isolation Smoke	F = Fixed Temp	B = Beam Detection	A = Aspirating	C = Carbon Monoxide
M = Manual Call Point	IO = Interface unit	O = Optical Smoke	R = Rate of Rise	F = Flame Detection	VAD = Visual Alarm Device	S = Multi Sensor
Loop / Zone	Device			Check		
	Address	Type	Location (refer to spec / diagram)	Fault	Alarm	