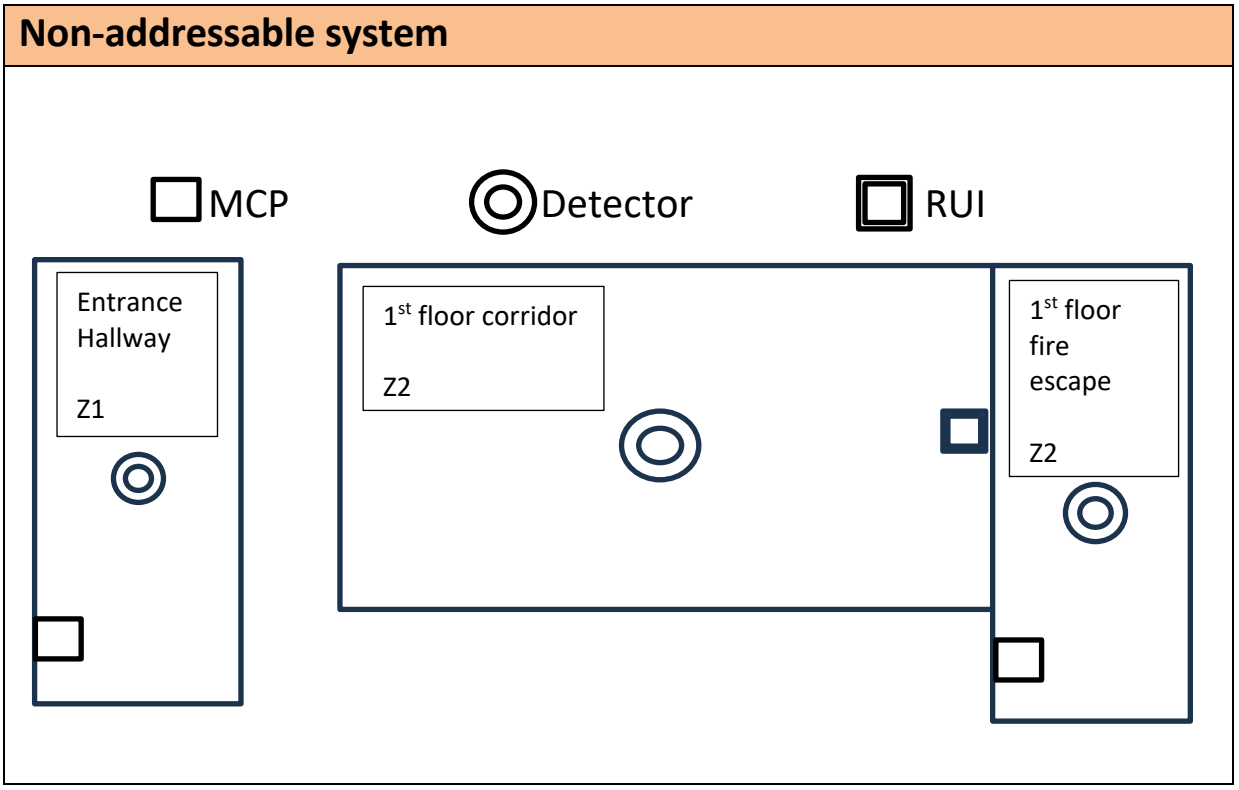
Fire, Emergency and Security Systems (Fire tasks)

Mock Practical Assessment – Assessment Form

Task Two: Installing additions

Non-addressable system



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.

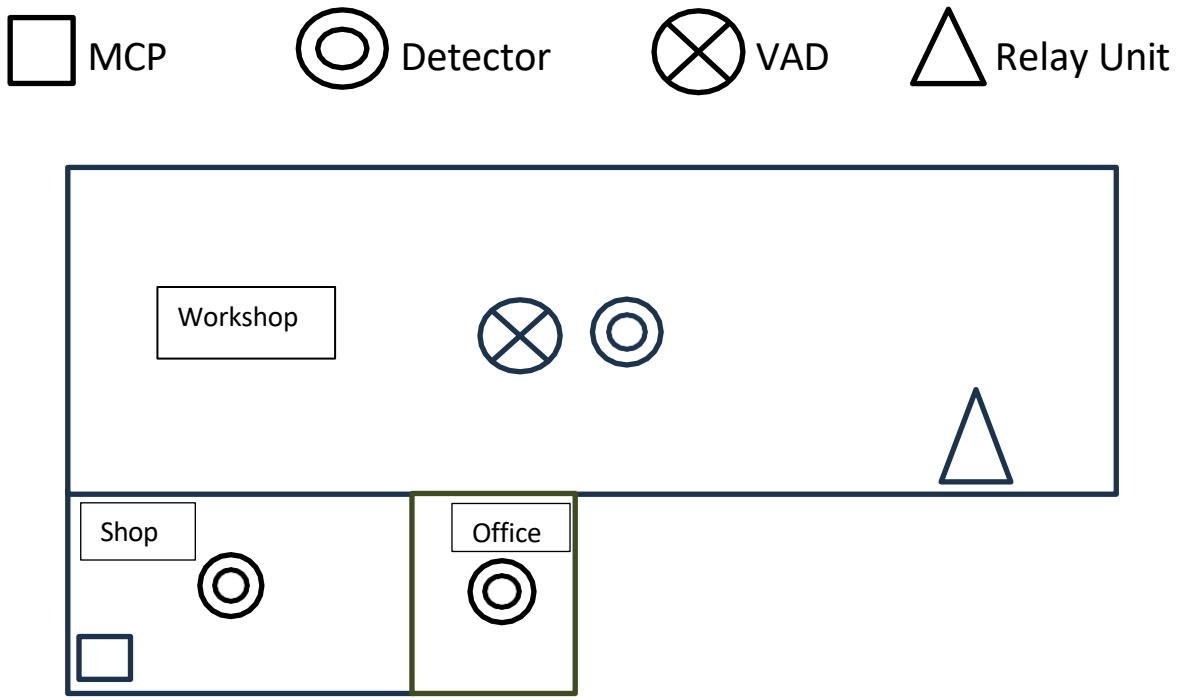
- Install a suitable detector for specific room type.
- Install correct indication unit for additional detection.
- Install a Manual Call Point to system.

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

Component	Zone
Entrance hallway MCP	1
Entrance Hallway detector	1
1st floor corridor detector	2
1st floor fire escape detector*	2
1st floor fire escape MCP	2

* RUI fitted within 1st 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:	

Mains power	Checked satisfactory			
	Yes	No	N/A	Comments
Satisfactory continuity of supply				
System on a dedicated circuit				
Satisfactory labelling of supply				
Any residual current protection				
Fire resistant cable used				

Standby power	Checked satisfactory			
	Yes	No	N/A	Comments
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				

Wiring	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				
Wiring	**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				
Control and indicating equipment	**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				
Manual alarm call points	**Checked satisfactory**			
	Yes	**No**	**N/A**	**Comments**
Siting appropriate and to specification				
Mounted at correct height				
Common type throughout building				
Tested to specification				
Detection devices	**Checked satisfactory**			
	Yes	**No**	**N/A**	**Comments**
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):				
Duration:		**x quiescent load**		**+ alarm load**		**=**		**Battery capacity**

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

Addressable Commissioning Checklist			
Installed and commissioned by:		Date:	
Site address:			
Control panel:		No. of zones:	
Standard(s) installed to:		No. of loops:	

Mains power	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				

Standby power	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				

Wiring	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				

Wiring	**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				
Control and indicating equipment	**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				
Manual alarm call points	**Checked satisfactory**			
	Yes	**No**	**N/A**	**Comments**
Siting appropriate and to specification				
Mounted at correct height				
Common type throughout building				
Tested to specification				
Detection devices	**Checked satisfactory**			
	Yes	**No**	**N/A**	**Comments**

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 signaling systems	**Checked satisfactory**			
	Yes	**No**	**N/A**	**Comments**
Remote signaling systems installed				
System documentation	**Checked satisfactory**			
	Yes	**No**	**N/A**	**Comments**
System logbook available				

Power readings and battery standby verification								
PSU Voltage:		Standby battery capacity:		PSU current rating:				
Load test (quiescent current):		Location:		Load test (alarm current):				
Duration:		**x quiescent load**		**+ alarm load**		**=**		**Battery capacity**

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**

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