

ECS FESS Systems Operative Assessment Guide

The Fire, Emergency and Security Systems (FESS) industry has identified four occupations for a FESS Systems Operative in Fire Systems, Fire and Security Systems, Security Systems and Fire and Emergency Systems.

An Assessment is available from ECS for people to meet the requirements of this FESS Operative card. This Guide is designed to help employers, training providers and individuals prepare for the assessment and identify where training is required.

WHO IS THE ASSESSMENT FOR?

Experienced FESS personnel who do not have formalised industry approved training or recognised qualifications.

It is expected that individuals prepare for this assessment by undertaking training with their employer, a formal course of self-study to ensure a basic awareness of the industry standards and Codes of Practice. Please see below for areas assessed and details on what training should be delivered.

The ECS FESS Assessment is a separate and additional assessment to the ECS Health, Safety and Environmental (HSE) Assessment and both will be required for the FESS Systems Operative card (unless an exemption is held).

WHO IS THE ASSESSMENT NOT SUITABLE FOR?

New entrants into the industry who should consider an apprenticeship, formalised industry approved training and recognised qualifications or applying for a FESS Labourer card while they gain experience.

Working technical knowledge is needed to pass the assessment with basic awareness of expectations for installation, maintenance, and planning, as well as basic awareness of the industry standards and Codes of Practice.

WHAT ASSESSMENTS ARE AVAILABLE?

There are four multiple-choice assessments available:

- Fire
- Fire and Emergency Lighting
- Security
- Fire and Security

Please note the Fire & Security assessment is a mix of topics between Fire and Security and hence training and awareness of both sections below is recommended.

WHAT ARE THE ECS FESS OPERATIVE CARD REQUIREMENTS?

To apply for an ECS card as a FESS Systems Operative the applicant must:

1. Hold the ECS Health, Safety and Environmental (HS&E) assessment (or exemption)
plus
2. The specific FESS assessment for the ECS occupation that is being applied for (e.g. one of the four routes above) or a recognised qualification in fire & security.

For full details of FESS ECS card requirements please see www.ecscard.org.uk/fess-operative

The delegate MUST sit the correct multiple-choice assessment that corresponds to the ECS card occupation that they are applying for.

The expected health and safety knowledge expected of such a role, including electrical safety, working safely, communication and environmental awareness are contained within the separate ECS Health, Safety and Environmental Assessment. This ECS HSE assessment will also need to be passed unless a valid exemption is held.

Information on the content and questions for the [ECS HSE assessment can be found on the ECS website here](#).

Assessment Availability

All assessments are available through online software which can be taken remotely.

Assessments are also available to book in physical centres, such as at the JIB offices in Swanley, Kent. To book either an online or physical assessment, please call 01322 661633.

Employers can also book remote assessments for their employees through the ECS Employer Portal. Employees should speak to their employer about arranging any training and assessment. Employers can add these assessments to their account, if registered to deliver ECS HSE assessments, by emailing guidance.portal@ecscard.org.uk

Some training providers also offer the assessment. Please see the [ECS website](#) for more information.

About the Assessment

Each assessment consists of 30 questions across a range of topics relevant to the chosen FESS occupation to be completed in 30 minutes. Each question will require one correct answer to be selected from a choice of four possible answers given. The pass mark is 24 (80%) correctly answered questions.

The delegate will be informed of their result at the end of the assessment and their MyECS account will be automatically updated.

For full details of the Electrotechnical Certification Scheme (ECS) and the qualification requirements to ECS card applications please visit www.ecscard.org.uk

Criteria for Assessment

The below sets out the criteria for each technical assessment for the Fire, Emergency and Security Systems operative assessments in (i) Fire (ii) Fire and Emergency Lighting (iii) Security and (iv) Fire and Security.

Assessment area – Level 2	Criteria for assessment and number of questions	Notes / comments / resources
FIRE PATHWAY <i>Note: Applicable to Analogue and addressable fire systems</i>		
AWARENESS OF PLANNING AND DESIGN	<ol style="list-style-type: none"> Understand risk assessment and method statements for the installation (2 questions) Ability to select (and locate) the correct components for the fire alarm system (6 questions) 	Demonstrate awareness and adherence to BS 5839: fire detection and alarm systems for buildings - www.fia.uk.com/resources/british-standards/bs-5839-series.html
INSTALLATION	<ol style="list-style-type: none"> Ability to install to the agreed design proposal (specification) (4 questions) Is the system installed to relevant industry standards, codes of practice and legislation? (6 questions) Ability to electrically test cables and interconnections (3 questions) Correct programming of the fire alarm system to meet the design proposal? (1 question) 	Consider the correct cable containment and fixing methods are used Consider the correct type and use of cable re the right components used / locations are correct Are any changes to the design needed; if so, how is this communicated to company and/or client?
MAINTENANCE <i>Note: Applicable to preventative and corrective maintenance</i>	<ol style="list-style-type: none"> Ability to carry out preventative maintenance to the system in accordance with industry standards and code of practice (3 questions) Ability to identify & repair faults on a fire alarm system (3 questions) Correct completion of company maintenance documentation to relevant standard (2 questions) 	Faults on a system may include one or more of: <ul style="list-style-type: none"> components interconnections power environmental earth fault load testing, and notification faults. Smoke simulation to trigger detectors Correct operation of auto detection, manual call points, door release units etc. Types of compliance certificates & common fields to be filled The reason of a premises logbook and what is recorded. Importance of good documentation to include detector selection, application, system configuration, cause & effect Describe the responsible obligations on daily, weekly, and annual test procedures Describe how you instruct the responsible person on operating a system to fulfil their obligations

Assessment area – Level 2	Criteria for assessment and number of questions	Notes / comments / resources
<p>Fire and Emergency lighting pathway <i>Note: Applicable to self-contained and central battery systems</i></p>		
<p>AWARENESS OF PLANNING AND DESIGN</p>	<ol style="list-style-type: none"> Understand and apply risk assessment to allow planning of the installation (2 questions) Ability to select (and locate) the correct components for the system (5 questions) 	<p>Demonstrate awareness and adherence to BS5266 and BS7671</p> <ul style="list-style-type: none"> www.fia.uk.com/resources/british-standards/bs-5266-emergency-lighting.html https://electrical.theiet.org/bs-7671/
<p>INSTALLATION</p>	<ol style="list-style-type: none"> Ability to install to the agreed design proposal (specification) (4 questions) Is the system installed to relevant industry standards, codes of practice and legislation? (6 questions) Ability to test the emergency lighting installation (3 questions) Correct programming of the system to meet the design proposal (4 questions) 	<p>Consider the correct cable containment is used</p> <p>Consider the correct type and correct use of cable</p> <p>Are the right components used and locations correct?</p> <p>Location at points of emphasis and spacing</p> <p>Disability glare</p> <p>Are any changes to the design needed; if so, how is this communicated to company and/or client?</p> <p>Correct positioning to achieve relevant Lux levels</p>
<p>MAINTENANCE</p> <p><i>Note: Applicable to preventative and corrective maintenance</i></p>	<ol style="list-style-type: none"> Ability to carry out preventative maintenance to the system in accordance with industry standards and code of practice (3 questions) Ability to identify & repair faults on the system (2 questions) Correct completion of company maintenance documentation to relevant standard (1 question) 	<p>Faults on a system may include one or more of the following:</p> <ul style="list-style-type: none"> components interconnections power / charge fail environmental earth fault load fault tube / lamp / LED failure <p>Devices could include self –contained NM, ME lights, central battery systems, test points, switches, appropriate diffusers & signage.</p> <p>Carry out electrical tests such as earth fault loop impedance</p> <p>Describe the reason of a premises logbook and what is recorded.</p> <p>Describe the importance of good documentation.</p> <p>Describe the responsible obligations on daily, weekly, monthly, and annual test procedures.</p> <p>Describe how you instruct the responsible person in operating a system to fulfil their obligations</p>

Assessment area – Level 2	Criteria for assessment and number of questions	Notes / comments / resources
SECURITY PATHWAY <i>Note: Applicable to I&HAS, VSS or Access Control</i>		
AWARENESS OF PLANNING AND DESIGN	<ol style="list-style-type: none"> Understand risk assessment and method statements for the installation (3 questions) Ability to select (and locate) the correct components for the application (7 questions) 	Demonstrate awareness and adherence to: <ul style="list-style-type: none"> TS 50131-7, PD 6662, BS 9263, BS 8243 for Intruder & Hold-up Alarm Systems (HAS) BS EN 62676-4 for Video Surveillance Systems BS EN 60839-11-1 for Access Control BS 8418 Detector Activated CCTV Systems BS 8591 Remote Centres receiving signals from alarm systems An example of a standards list can be found here - https://www.nsi.org.uk/wp-content/uploads/2021/02/NSF-700.11-NACOSS-Gold-and-Systems-Silver-Scheme-Standards-Feb-2021.pdf
INSTALLATION	<ol style="list-style-type: none"> Ability to install to the agreed design proposal (specification) (5 questions) Is the system installed to relevant industry standards, codes of practice and legislation? (6 questions) Ability to electrically test cables and interconnections (1 question) Correct programming of the security system to meet the design proposal? (1 question) 	Consider the correct cable containment is used Consider the correct type and use of cable Are the right components used / locations correct? Are any changes to the design needed; if so, how is this communicated to company and/or client?
MAINTENANCE <i>Note: Applicable to preventative and corrective maintenance</i>	<ol style="list-style-type: none"> Ability to carry out preventative maintenance to the system in accordance with industry standards and code of practice (1 question) Ability to identify & repair faults on a security system (2 questions) Correct completion of company maintenance documentation to relevant standard (2 questions) Ability to demonstrate security systems to the client or their representative (2 questions) 	Faults on a system may include one or more of the following: <ul style="list-style-type: none"> components interconnections power environmental network or notification faults operator error

FIRE & SECURITY Pathway

For the joint Fire and Security pathway, although guidance for both sections should be used, the number of questions per topic is as follows:

	FIRE & SECURITY Topics to be covered	Questions to be completed per topic
Topic	PLANNING	
1	Understand risk assessment and method statements for the installation	2
2	Ability to select (and locate) the correct components for the application	5
	INSTALLATION	
3	Ability to install to the agreed design proposal (specification)	5
4	Is the system installed to relevant industry standards, codes of practice and legislation	5
5	Ability to electrically test cables and interconnections	2
6	Correct programming of the system to meet the design proposal	2
	MAINTENANCE	
7	Ability to carry out preventative maintenance to the system in accordance with industry standards and code of practice	3
8	Ability to identify & repair faults on a system	3
9	Correct completion of company maintenance documentation	2
10	Ability to demonstrate system to the client or their representative	1
	Total questions to be completed	30