

ECS FESS 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.

To apply for an ECS card as a FESS Systems Operative the applicant must hold a valid ECS Health, Safety and Environmental (HS&E) assessment plus the pathway specific FESS assessment for the ECS occupation that is being applied for. The ECS HS&E assessment must be booked and taken separately from the FESS assessment. For full details of FESS ECS card requirements please see www.ecscard.org.uk/fess

There are four multiple-choice assessments available:

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

The delegate MUST sit the correct multiple-choice assessment that corresponds to the ECS card occupation that they are applying for. (Note: If applicants require ECS card recognition in multiple pathways, they can sit additional tests. Emergency Lighting is not currently available as a stand-alone assessment. Operatives requiring this will need to take the combined Fire & Emergency Lighting assessment, along with the Security assessment if additional accreditation is required)

Assessment Availability

The FESS assessments are available from the JIB by request, ECA, Unite the Union and JIB Registered and Preferred Training Providers. In addition, some employers may be able to provide the assessments to their directly employed staff.

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 the correct answer to be selected from a choice of four possible answers given. The pass mark is 24 (80%) correctly answered questions.

The pathways topics and the detailed assessment criteria are set out later in this document. A separate revision guide for each pathway is available on the ECS website for free download. The guides contain sample questions and candidates are strongly encouraged to study these before undertaking the assessment.

At the assessment

Before sitting the chosen FESS assessment the delegate must show the following:

- Photographic identification such as a current passport, a UK photo driving license or their valid ECS card.
- National Insurance Number.

The delegate is monitored while they take the assessment as evidence that they took the assessment and complied with the assessment rules.

The delegate will be informed of their result at the end of the assessment and also will be able to see the correct answers for the assessment taken.

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

FIRE Pathway

	FIRE 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 fire alarm system	6
	INSTALLATION	
3	Ability to install to the agreed design proposal (specification)	4
4	Is the system installed to relevant industry standards, codes of practice and legislation?	6
5	Ability to electrically test cables and interconnections	3
6	Correct programming of the fire alarm system to meet the design proposal?	1
	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 fire alarm system	3
9	Correct completion of company maintenance documentation	2
	Total questions to be completed	30

SECURITY Pathway

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

FIRE & SECURITY Pathway

	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

FIRE & EMERGENCY LIGHTING Pathway

	EMERGENCY LIGHTING 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)	4
4	Is the system installed to relevant industry standards, codes of practice and legislation	6
5	Ability to test the emergency lighting installation	3
6	Correct programming of the system to meet the design proposal	4
	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	2
9	Correct completion of company maintenance documentation	1
	Total questions to be completed	30

Criteria for Assessment

Assessment area – Level 2	Criteria for assessment - general	Notes / comments / obs.
Safety critical – All pathways		
Electrical safety	Ability to identify and isolate the electrical circuit to be worked on	Describe Safe Isolation procedures and the test equipment / proving unit used Describe reinstatement process and handover to authorised persons
Core skills – All pathways		
Working safely	<ul style="list-style-type: none"> Understanding and application of H&S legislation ECS card obtained? 	<p>Check understanding, awareness and application of legislation / Codes of Practice's and safe working practices.</p> <p>Describe risk assessments responsibilities and reporting procedures</p> <p>Give examples of safety procedures when working at heights.</p>
Communication	Communicate in a clear, articulate and appropriate manner – oral, written etc.	<p>Communicate with clients, other trades, own personnel etc.</p> <p>Using oral, electronic, written medium</p> <p>Give an example of who you have communicated an important issues to clients other trades and colleagues</p>
Customer service	<ul style="list-style-type: none"> Understand the principles of good customer service Building relationships Managing conflict and dispute 	<p>Articulate an understanding of good practise and give examples of acceptable behaviours when dealing with clients</p> <p>Give Examples of relationship building with client and trades</p> <p>Explain complaints procedures and the escalation process and policies</p>
Commercial awareness	<ul style="list-style-type: none"> Managing time of self (and others if relevant) Demonstrate job planning considering the needs of others 	<p>Explain consequences of missing completion and handover target</p> <p>Describe escalation process for anticipated delays</p>
Environmental awareness	<ul style="list-style-type: none"> Understand and apply environmental legislation Understand the impact on the environment 	<p>Legislation such as WEEE, Asbestos,</p> <p>Company processes for recycling of electrical components / recycling of goods</p> <p>Hazardous material controls and storage</p>

<p>Security pathway</p> <p><i>Note: Applicable to I&HAS, VSS or Access Control</i></p>		
<p>Planning & design</p>	<ul style="list-style-type: none"> • Understand risk assessment and method statements for the installation • Ability to select (and locate) the correct components for the application 	<p>Demonstrate awareness and adherence to TS 50131-7 & PD 6662 for Intruder & HAS</p> <p>BS EN 62676-4 for Video Surveillance Systems</p> <p>BS EN 60839-11-1 for Access Control</p>
<p>Installation</p>	<ul style="list-style-type: none"> • Ability to install to the agreed design proposal (specification) • Is the system installed to relevant industry standards, codes of practice and legislation? • Ability to electrically test cables and interconnections • Correct programming of the security system to meet the design proposal? • Ability to demonstrate handover of non-complex security systems to the client or their representative 	<p>Consider the correct cable containment is used</p> <p>Consider the correct type and use of cable</p> <p>Are the right components used / locations correct?</p> <p>Are any changes to the design needed; if so, how is this communicated to company and/or client?</p>
<p>Maintenance</p> <p><i>Note: Applicable to preventative and corrective maintenance</i></p>	<ul style="list-style-type: none"> • Ability to carry out preventative maintenance to the systems in accordance with industry standards and codes of practice • Ability to identify & repair faults on security system • Correct completion of company maintenance documentation 	<p>Faults on a system may include one or more of the following: components, interconnections, power, environmental, network or notification faults and operator error.</p>

<p>Fire pathway</p> <p><i>Note: Applicable to Analogue and addressable fire systems</i></p>		
<p>Planning & design</p>	<ul style="list-style-type: none"> • Understand risk assessment and method statements for the installation • Ability to select (and locate) the correct components for the fire alarm system 	<p>Demonstrate awareness and adherence to BS 5839</p>

<p>Installation</p>	<ul style="list-style-type: none"> • Ability to install to the agreed design proposal (specification) • Is the system installed to relevant industry standards, codes of practice and legislation? • Ability to electrically test cables and interconnections • Correct programming of the fire alarm system to meet the design proposal? 	<p>Consider the correct cable containment and fixing methods are used</p> <p>Consider the correct type and use of cable</p> <p>Are the right components used / locations correct?</p> <p>Are any changes to the design needed; if so, how is this communicated to company and/or client?</p>
<p>Maintenance</p> <p><i>Note: Applicable to preventative and corrective maintenance</i></p>	<ul style="list-style-type: none"> • Ability to carry out preventative maintenance to the system in accordance with industry standards and code of practice • Ability to identify & repair faults on a fire alarm system • Correct completion of company maintenance documentation • Ability to demonstrate the fire detection and alarm to the client or their representative 	<p>Faults on a system may include one or more of the following: components, interconnections, power, environmental, earth fault, load testing, and notification faults.</p> <p>Demonstrate the smoke simulation to trigger detectors</p> <p>Correct operation of auto detection, manual call points, door release units etc.</p> <p>Describe the types of compliance certificates there are and the common fields need to be filled</p> <p>Describe the reason of a premises logbook and what is recorded.</p> <p>Describe the importance of good documentation to include detector selection, application, system configuration cause and effect</p> <p>Describe the responsible obligations on daily weekly and annual test procedures</p> <p>Describe how you instruct the responsible person on operating a system to fulfil their obligations</p>

<p>Emergency lighting pathway</p> <p><i>Note: Applicable to self-contained and central battery systems</i></p>		
<p>Planning & design</p>	<ul style="list-style-type: none"> • Understand and apply risk assessment to allow the planning of the installation • Ability to select (and locate) the correct components for the system 	<p>Demonstrate awareness and adherence to BS5266 and BS 7671</p>

<p>Installation</p>	<ul style="list-style-type: none"> • Ability to install to the agreed design proposal (specification) • Is the system installed to relevant industry standards, codes of practice and legislation? • Ability to test the emergency lighting installation • Ensure correct programming and operation of devices to meet the design proposal 	<p>Consider the correct cable containment is used</p> <p>Consider the correct type and 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>Describe the correct positioning to achieve relevant Lux levels.</p>
<p>Maintenance</p> <p><i>Note: Applicable to preventative and corrective maintenance</i></p>	<ul style="list-style-type: none"> • Ability to carry out preventative maintenance to the system in accordance with industry standards and code of practice • Ability to identify & repair faults on the system • Correct completion of company maintenance documentation • Ability to demonstrate the system to the client or their representative 	<p>Faults on a system may include one or more of the following: components, interconnections, power / charge fail, environmental, earth fault, load fault, tube / lamp / LED failure</p> <p>Devices could include: self –contained NM , ME lights, Central battery systems , Test points, switches , appropriate diffusers and 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>