

Paper Code: M-EPA-FESST-FS3004
Level 3

Fire, Emergency and Security Systems Technician EPA Mock Knowledge Test: Fire and Security

Information for registered centres

The seal on this examination paper must only be broken by the candidate at the time of the examination. Under no circumstances should a candidate use an unsealed examination paper.

Information for candidates

Under no circumstances should you, the candidate, use an unsealed examination paper.

This examination consists of **60 multiple-choice** questions.

The exam is worth **60 marks**, with a Pass being **40 marks**, and Distinction **50 marks**.

The duration of this examination is **90 minutes**.

You are **NOT** allowed any assistance to complete the answers.

You must use a pencil to complete the answer sheet - pens must **NOT** be used.

When completed, please leave the **examination answer sheet (EAS)** on the desk.

It is acceptable to use a calculator for this exam should you require one.

EXAMINATION ANSWER SHEET (EAS) INSTRUCTIONS:

For each question, fill in **ONE** answer **ONLY**.

If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in **ONE** answer circle only.

Please mark each choice like this:

01 A B C D **ANSWER COMPLETED CORRECTLY**

Examples of how NOT to mark your examination answer sheet (EAS). These will not be recorded.

01 A B C D **DO NOT** partially shade the answer circle
ANSWER COMPLETED INCORRECTLY

01 A B C D **DO NOT** use ticks or crosses
ANSWER COMPLETED INCORRECTLY

01 A B C D **DO NOT** use circles
ANSWER COMPLETED INCORRECTLY

01 A B C D **DO NOT** shade over more than one answer circle
ANSWER COMPLETED INCORRECTLY

All candidates **MUST** sign the Examination Answer Sheet (EAS) in the bottom right-hand corner of the page before leaving the examination room.

1

Where there is a risk of abrasion and mechanical damage, the **best** cables to use when low-voltage circuits need to be run through a duct and into an external compound are:

- A. polyvinyl chloride (PVC) cables
- B. steel wire armoured cables
- C. fire resistant cables
- D. composite alarm cables

2

What type of cables should be used in industrial applications where there is a high probability of electromagnetic interference?

- A. Shielded (screened) cables
- B. Standard alarm cables
- C. Multi-core data cables
- D. Low smoke halogen free (LSHF) cables

3

Lawfully, personal data about customers held by a company **must** be:

- A. shared with all relevant parties
- B. kept for no longer than necessary
- C. processed on a regular basis
- D. detailed and informative

4

What is the collection of documents that would be produced **prior** to commencing an installation?

- A. As fitted document
- B. Risk assessment and method statements
- C. Final invoice
- D. Completion certificates

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When preventive or corrective maintenance on a site is completed, it is **most** appropriate to record it in:

- A. the company expenses
- B. the systems logbook
- C. a HSE accident report book
- D. a diary for future reference

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What documentation is **least** likely to be provided to the client during handover by the commissioning technician?

- A. The logbook
- B. Alarm system component documentation
- C. The maintenance contract with a schedule of works
- D. Contact details of your company in case of fault or activation

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Carrying out a risk assessment and controlling the risks identified will **most** likely:

- A. increase the likelihood of accidents and ill health
- B. increase the severity of injury
- C. reduce the amount of documentation required
- D. reduce the likelihood of accidents

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In which of the following would you find details on personal information retention?

- A. Data Protection Act 2018
- B. Freedom of Information Act 2000
- C. Human Rights Act 1998
- D. Care Act 2014/16

9

It is **most** important to follow industry and company codes of practice to:

- A. enable companies to maximise profits
- B. minimise risks and hazards on sites
- C. maintain high standards of work and creditability
- D. stay ahead of the competition with up to date technology

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When sending data over a network, which protocol has error checking included so that no data is lost during transmission?

- A. UDP/IP
- B. TCP/IP
- C. RS485
- D. LINUX

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Building strong and positive customer relationships is **most** likely to lead to:

- A. fewer workplace accidents
- B. an increase in conflict and disputes
- C. an increase in profit margins
- D. an improved reputation and repeat business

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If you wilfully contribute to environmental harm and damage, the **most** serious consequence you may face is:

- A. prosecution, leading to a fine and/or imprisonment
- B. suspension from work
- C. disciplinary proceedings at work
- D. a verbal warning from the site foreman

13

The **best** definition of commercial awareness is:

- A. understanding what makes a business or organisation successful
- B. knowing the amount of profit a business makes annually
- C. knowing all of the products a business sells
- D. understanding the company structure

14

Which electronic device would **most** likely be used by a technician to allow them to communicate and control their daily work and job progress?

- A. Personal digital assistant
- B. Electronic calculator
- C. Analogue watch
- D. GPS tracker

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The Electricity at Work Regulations requires that:

- A. portable electrical equipment must only be connected to a supply of 110 volts in buildings where more than 5 employees work
- B. all electrical equipment must have the fuse replaced every 5 years
- C. employers replace electrical equipment every 7 years
- D. all electrical systems shall be maintained so as to prevent danger

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What is the **main** purpose of system commissioning?

- A. To satisfy the requirements of the accreditation body
- B. To ensure the system is fully functional
- C. So that a completion certificate can be issued
- D. So that the system is in compliance with the relevant British Standard

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When carrying out an installation, at what stage is the system programmed and tested for correct operation?

- A. First fix
- B. Second fix
- C. Design
- D. Commissioning

18

When an installation is complete, it is important to update and finalise the system layout drawing. This is also known as the:

- A. design sample
- B. design drawing
- C. as fitted document
- D. system specification

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For certain types of public and commercial buildings, low smoke and fume (LSF) cables **must** be used because:

- A. they are smaller, lighter and more flexible than polyvinyl chloride (PVC) cables
- B. they are cheaper than other cables and minimises costs for public works
- C. they are smoke and flame retardant and will not produce poisonous gases when exposed to fire
- D. in the event of a fire, they produce less black smoke than polyvinyl chloride (PVC) cables

20

What is the required angle for a ladder to be safely positioned against a wall?

- A. Two metres out for every four metres up
- B. One metre out for every four metres up
- C. One metre out for every two metres up
- D. Two metres out for every six metres up

21

To protect yourself from harm, you should:

- A. complete the task assigned regardless of hazards
- B. be aware of personal safety and avoid taking risks
- C. only use safety rules when required
- D. always have safety clothing nearby

22

What is the **main** objective of the final handover for an alarm system?

- A. To demonstrate the full range of system operations for end users
- B. To train the operators how to set and unset the system, but not demonstrate any further functionality
- C. To highlight the locations of the principle high risk areas
- D. To gain the correct knowledge of what to do if the system fails

23

What is the correct formula for calculating current?

- A. $I = V \times R$
- B. $I = V / R$
- C. $I = V + R$
- D. $I = V - R$

24

If a multi-meter is connected in parallel with a battery, what is being measured?

- A. Resistance
- B. Current
- C. Voltage
- D. Volt drop

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When handing over an alarm system, what documentation would the customer be supplied with?

- A. User manual
- B. Installation manual
- C. Manufacturing manual
- D. Site survey manual

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What is the purpose of a NAS?

- A. A Wi-Fi service provider
- B. A telephone number storage server
- C. A supervised area network
- D. A data storage server

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When communicating with customers face to face, it is important to **always** use:

- A. technical terminology
- B. verbal communication only
- C. non-verbal communication only
- D. both verbal and non-verbal communication

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The **main** reason for good communication in a team is to:

- A. improve staff punctuality
- B. meet the company's standards
- C. ensure everyone knows what they are doing
- D. ensure there will be no disagreements

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To prevent misunderstandings between contractor and subcontractor, information should **always** be:

- A. put in writing
- B. communicated face-to-face
- C. shared online
- D. recorded via voicemail

30

Which of the following behaviours **most** suitably demonstrate active listening to a customer?

- A. Pre-empting what the customer may be asking
- B. Looking at the customer directly and asking questions to clarify certain points
- C. Ensuring you take detailed notes during each interaction
- D. Responding emotionally and carefully planning your response while the customer is speaking, to prevent conversation gaps

31

Which legislation states the general requirements for the segregation of excess/unused materials on sites?

- A. The Waste (Circular Economy) (Amendment) Regulations 2020
- B. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)
- C. The Health and Safety at Work etc. Act
- D. Personal Protective Equipment (PPE) Regulations

32

Every employer has a responsibility to ensure:

- A. that written instructions are provided for every task
- B. all electrical equipment is tested monthly
- C. the health, safety and welfare of all employees
- D. that employees are qualified in health and safety

33

What is the overall resistance value of two 2K Ohm resistors connected in parallel?

- A. 0.5K Ohm
- B. 1K Ohm
- C. 2K Ohm
- D. 4K Ohm

34

The **main** purpose of a system logbook is to:

- A. meet the insurance conditions for the installation
- B. provide useful information for the maintenance engineer
- C. record all instances of security breaches
- D. allow the customer to identify and fix any faults

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After completion of an installation job, it is **most** appropriate to:

- A. provide the customer with relevant information about their new equipment
- B. ask for payment immediately and ensure funds clear before leaving the premises
- C. move on to your next customer as soon as possible for efficiency
- D. attempt to sell further products and services to the customer

36

What are the commercial risks associated with the inappropriate behaviour of a representative of the installation company?

- A. There are no risks
- B. The detrimental outcome falls on the individual not the company
- C. Loss of reputation and retention of business
- D. The individual may be arrested

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The **main** purpose of putting a date on a standby battery is to:

- A. make it look official
- B. allow the customer to be informed
- C. highlight its periodical update
- D. ensure it does not get mixed up with others

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Optical is an example of which type of fire alarm device?

- A. Manual call point
- B. Visual alarm device
- C. Heat detection
- D. Smoke detection

39

What is the operating voltage of a door contact?

- A. Volt free
- B. 12 volts
- C. 24 volts
- D. 240 volts

40

All batteries installed in the fire alarm control panel **must** be:

- A. dated and labelled
- B. unused
- C. discharged
- D. registered with COSHH

41

What is the BS5839 categorisation for a fire alarm system with automatic fire detectors installed throughout all areas?

- A. P
- B. P1
- C. P2
- D. M

42

Real-time recording in a CCTV system Network Video Recorder means the unit is capable of:

- A. recording 24/7
- B. capturing images and recording 20-30 fps
- C. capturing images and recording 25-30 fps
- D. capturing images and recording 35-45 fps

43

When selecting a suitable lens size to give a wide field of view, which of the following is the **most** suitable?

- A. 4mm
- B. 8mm
- C. 12mm
- D. 25mm

44

Where **must** the oriented zone plan be sited on a fire alarm system?

- A. Outside on the main reception door
- B. Adjacent to all control equipment
- C. Inside the main control equipment
- D. Visible in the main reception area

45

When commissioning an intruder alarm system, the **main** purpose of a walk test is to ensure the:

- A. customer is happy with the installation standard
- B. detection devices are located in the correct locations
- C. sounders are working correctly
- D. detection devices are communicating with the control panel correctly

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According to BS5839, the **minimum** standard standby battery time for a fire alarm system should be:

- A. 8 hours
- B. 12 hours
- C. 24 hours
- D. 48 hours

47

What is the role of the FSA within the Fire and Security Industry?

- A. Trade association
- B. Advisory body
- C. Government agency
- D. Auditors

48

According to BS5839, the sensing element of a heat detection device should **not** be less than:

- A. 25mm below the ceiling
- B. 50mm below the ceiling
- C. 100mm below the ceiling
- D. 150mm below the ceiling

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The recommended weekly test method for fire alarm users is to:

- A. test the evacuate button on the control panel
- B. light a safe fire in a metal container
- C. remove a detector head
- D. operate a manual call point

50

An emergency release call point should **always** remove power to the locking device by:

- A. sending a signal to the local controller to allow egress
- B. disconnecting both the positive and the negative wire to the lock
- C. sending a signal to the reader to allow egress
- D. disconnecting the 230V AC mains supply

51

Which British Standard applies to the components of a permanent fire alarm system?

- A. BS8591
- B. BSEN 50292
- C. BS5446
- D. BSEN 54

52

The **main** difference between a passive infrared sensor (PIR) detector and a dual technology detector is that:

- A. a PIR is a better detection device for picking up movement
- B. dual technology has two different detection technologies within it
- C. dual technology can be fixed on its side
- D. a PIR only detects large objects

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An installation engineer can wire devices in series when they want to:

- A. isolate a circuit
- B. share the power source from another device
- C. connect more than one device on the same circuit
- D. disconnect only one device

54

When installing the remote key pad on an intruder alarm system, which of the following locations is preferred?

- A. In a public space
- B. Outside the main entrance door
- C. At a high level so children cannot touch it
- D. A safe location within the protected area

55

The outcome of installing a grade 2 device onto a grade 3 intruder alarm system is that the:

- A. system will still be classed as a grade 3 system
- B. system will not set
- C. whole system grade is reduced to grade 2
- D. customer will need to set this zone separately

59

What is the function of an end of line resistor in a fire alarm circuit?

- A. To allow current flow in one direction
- B. To amplify the signal
- C. To terminate the protective loop
- D. To act as an electrical switch

60

What is the expected reduction of sound pressure provided by a fire door?

- A. 15dBA
- B. 20dBA
- C. 25dBA
- D. 30dBA

56

Which of these circuits is **not** classified as a Critical Signal Path on a fire alarm system?

- A. Detection loop
- B. Sounder circuit
- C. Mains supply
- D. Door retainer circuit

57

Which type of Automatic Fire Detection Device (AFD) is fitted with a thermistor?

- A. Smoke detection
- B. Heat detection
- C. Manual call point
- D. Beam detection

58

What is the **recommended** mounting height for a manual call point?

- A. 1.1 metres
- B. 1.4 metres
- C. 1.9 metres
- D. 2.1 metres







**Level
3**

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