

Paper Code: M-EPA-FESST-FI3004

Level 3

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

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) **ANSWER COMPLETED CORRECTLY**

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

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

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

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ANSWERS

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

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**

3

What is the correct formula for calculating current?

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

4

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

5

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

6

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

7

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**

8

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

9

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

10

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

11

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

12

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

- A. Looking at the customer directly and asking questions to clarify certain points
- B. Pre-empting what the customer may be asking
- 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

13

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

14

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

15

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

16

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

17

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

18

Which type of repeat control and indicating equipment is typically used to silence and reset the main control panel?

- A. an active repeater panel
- B. a passive repeater panel
- C. a mimic repeater panel
- D. an indicating repeater panel

19

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 credibility
- D. stay ahead of the competition with up to date technology

20

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

21

What will be the total resistance value of three 2.2 Ohm resistors wired in series, in a circuit?

- A. 0.7 Ohm
- B. 2.2 Ohm
- C. 4.4 Ohm
- D. 6.6 Ohm

22

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

23

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

24

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

25

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 and not the company
- C. Loss of reputation and retention of business
- D. The individual may be arrested

26

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

27

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

28

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

29

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

30

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

31

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

32

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

33

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

34

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**

35

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 voice mail

36

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

37

In BS5839-1, how many **main** categories of fire alarms are there?

- A. Two
- B. **Three**
- C. Four
- D. Five

38

A residential care home with 10 or more permanent residents will require which type of fire alarm system?

- A. Addressable system
- B. Conventional system
- C. System connected to the Alarm Receiving Centre
- D. Combined system

39

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

40

The codes of practice for the design, commissioning and maintenance of fire alarm systems are provided by the:

- A. individual fire companies
- B. local authority
- C. Government
- D. British Standards Institution

41

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

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

42

What is the minimum number of service visits recommended over a 12-month period according to BS5839?

- A. Two
- B. Four
- C. Six
- D. Twelve

43

The **main** purpose of a fire alarm zone chart is to:

- A. identify the building layout
- B. locate the fire extinguishers only
- C. locate a specific area of a fire alarm
- D. identify the location of fire doors only

44

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

45

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

- A. 1.1 metres
- B. 1.4 metres
- C. 1.7 metres
- D. 1.9 metres

46

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

47

PVC SWA cable is better known as:

- A. fire protected cable
- B. armoured cable
- C. coaxial cable
- D. low smoke and fume cable

48

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

49

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

50

BSEN 54 part 23 specifies which colours of light for Visual Alarm Devices?

- A. Blue or white
- B. Blue or red
- C. Red or yellow
- D. Red or white

51

Which type of fire alarm system employs radial circuits of detectors, grouped into zones?

- A. Conventional
- B. Intelligent
- C. Addressable
- D. Multiplex

52

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

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

53

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

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

54

Which of the following is a type of fire alarm detection device?

- A. Ionisation
- B. Microwave
- C. Red wall
- D. Dual technology

58

On a fire alarm system design certificate, what **must** be clearly stated?

- A. The category of the system
- B. The total cost of the installation
- C. A revised quotation
- D. Survey notes

55

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

59

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

56

What is the individual coverage area of a ceiling mounted, standard smoke detector?

- A. 5.3 metre radius
- B. 6 metre radius
- C. 6.5 metre radius
- D. 7.5 metre radius

60

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

57

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







Level
3

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