

Final Integrated Competence Assessment (FICA)
Mock Paper A – With Answers



Question 1

What should you do if you witness someone receiving an electric shock?

- a) Try to pull them to safety
- b) Shut off the power and send for the first aider**
- c) Nothing, someone else will deal with it
- d) Inform your supervisor

Question 2

A notch in a flat roof joist should be at a maximum depth of:

- a) 0.25 of span
- b) D/4
- c) D - 100mm
- d) D/8**

Question 3

When carrying out a visual inspection of a new installation which of the following must be verified?

- a) Correct connection of accessories and equipment
- b) Connection of conductors
- c) Identification of conductors
- d) All of the above**

Question 4

The Health & Safety at Work Act 1974 is:

- a) Guidance only
- b) Advisory
- c) Legally Binding**
- d) Legally Binding for Employers with more than 5 employees

Question 5

Which one of the following is excluded from the Scope of BS 7671?

- a) Outdoor Lighting
- b) Equipment on board ships covered by BS 8450**
- c) Swimming Pools
- d) Caravans and motor caravans

Question 6

When designing a TT Earthing system, which one of the following is NOT a suitable earth electrode?

- a) An earth rod or pipes
- b) A metal pipe of a water utility supply**
- c) An earth plate
- d) Structural metalwork embedded in foundations

Question 7

Which one of the following may be a relevant correction factor when designing the size of a cable?

- a) The type of equipment being supplied
- b) The use of a BS EN circuit breaker as the over-current protective device
- c) The design current
- d) Ambient temperature**

Question 8

What is the maximum permissible volt-drop on a lighting circuit supplied directly from a public low voltage distribution system?

- a) 3%**
- b) 4%
- c) 5%
- d) 6%

Question 9

Fault protection by automatic disconnection of supply shall be provided by means of an overcurrent protective device in each:

- a) Neutral conductor
- b) Earth conductor
- c) Line conductor**
- d) All the above

Question 10

On a TN system what is the maximum disconnection time for a final circuit not exceeding 32A supplying fixed current using equipment?

- a) 5 seconds
- b) 0.2 seconds
- c) 0.1 seconds
- d) 0.4 seconds**

Question 11

With regards to the protective measure placing out of reach. Under normal conditions the maximum extent of overhead arm's reach from a surface should be:

- a) 1m
- b) 2.5m**
- c) 3m
- d) 2m

Question 12

What is the maximum operating temperature of a cable with thermoplastic insulation?

- a) 70°C at the conductor**
- b) 30°C at the conductor
- c) 50°C at the conductor
- d) 90°C at the conductor

Question 13

In a location where there is a risk of fire due to the nature of processed or stored materials unless otherwise recommended by the manufacturer, the minimum distance a spotlight with 150 W lamp must be installed from combustible materials is:

- a) 0.5m
- b) 0.8m**
- c) 0.7m
- d) 1m

Question 14

One of the reasons for a polarity test being carried out on a final circuit is to verify:

- a) That cables are securely connected
- b) That cables are correctly located and neatly installed
- c) That the protective device is correctly rated
- d) That the overcurrent device and single pole devices are connected in the line conductor only**

Question 15

When verifying the effectiveness of an RCD with a rated residual operating current not exceeding 30 mA, BS 7671 requires a test to be carried out at:

- a) 100% of the rated residual operating current ($I_{\Delta n}$)**
- b) 50% of the rated residual operating current only
- c) 200% of the rated residual operating current
- d) 5% of the rated residual operating current

Question 16

The values of earth fault loop impedance given in GN3 and the On-Site Guide are:

- a) Maximum permissible measured values**
- b) Approximate values
- c) Design values
- d) Acceptable minimum values

Question 17

In which of the following situations would a company NOT be required to have prepared a written Health & Safety Policy?

- a) Never – Always needed
- b) When they have created Method Statements for any hazardous tasks
- c) Where they employ less than 5 employees**
- d) Where they employ more than 5 employees

Question 18

Which of the following statements is the final step in a Risk Assessment?

- a) Review your Assessment and update**
- b) Record your findings
- c) Hold a team talk on the Risk Assessment
- d) File the Risk Assessment

Question 19

Which type of safety sign category would be Triangular, on a yellow background, with black writing and black edging?

- a) Prohibitory
- b) Warning**
- c) Mandatory
- d) Fire Fighting

Question 20

Which of the following statements is FALSE in relation to working on ladders?

- a) Suitable tool for use on a task where it takes no more than 30 min to complete
- b) Only one person should use a ladder at any one time
- c) Ladders should be set at an angle of 75°
- d) Suitable for tasks where the ladder is side-on**

Question 21

A Site has been issued with an HSE Prohibition notice this would mean that:

- a) Work that is covered by the notice must stop immediately**
- b) You can continue with all work.
- c) All work must stop on Site
- d) Work must stop within 7 days

Question 22

According to the Electricity at Work regulations, when deciding whether to work live, a person should:

- a) Not go ahead as live working is prohibited
- b) Carry out a Risk Assessment**
- c) Follow Guidance from a supervisor
- d) Hold a valid ECS card

Question 23

Under the Electricity at Work Regulation an Electrician working on a system has duties placed on them that are equivalent to their employer in which circumstances:

- a) When they are in a supervisory role
- b) When matters are under their control**
- c) When working dead
- d) Never - they just need to follow the guidance given by their Employer

Question 24

An Electrical Permit to work is:

- a) A permit that authorises Live Working
- b) An Electrical Risk Assessment for a specific task
- c) A statement that a circuit or equipment has been isolated and is safe to work on**
- d) An Electrical Method Statement for a specific task

Question 25

Which of the following statements is FALSE in relation to Escape Lighting:

- a) Escape lighting should be supplied by a protected circuit, but can utilise normal lighting
- b) All under-ground car-parks must have emergency lighting**
- c) An emergency lighting system can be used as escape lighting
- d) Emergency Lighting would be required in a room in a non-domestic building whose maximum occupancy was 80

Question 26

Which type(s) of smoke alarms are most suited in a two-storey house with a combined Livingroom and kitchen?

- a) Optical smoke alarms
- b) Heat smoke alarms
- c) Ionisation Alarm or Multi-sensor alarm
- d) Optical smoke alarms or Multi-sensor alarm**

Question 27

Which of the following does not comply with the guidance on positioning of electrical fixtures given in SBS technical handbooks?

- a) A light switch located at a height of 925mm
- b) A door entry phone located at a height of 1000mm
- c) A tv telephone socket located at a height of 350mm**
- d) A socket-outlet located at a height of 600mm

Question 28

Which type of lighting control is recommended by the Scottish Building Standards for a shared, multi-occupied space, such as an open-plan office, that receives little natural light?

- a) Flexible Manual Switching**
- b) Manual, by door
- c) Photoelectric switching
- d) Presence or absence detection

Question 29

The maximum earth fault loop impedance for a 16A BS 88-3 fuse system C for a 5s disconnection time with U_0 of 230 V?

- a) 5.08 Ω
- b) 3.9 Ω**
- c) 30.2 Ω
- d) 3.64 Ω

Question 30

When carrying out an insulation resistance test of a final circuit, what is the minimum value acceptable?

- a) 0.5 M Ω
- b) 1 M Ω**
- c) 2 M Ω
- d) 500 M Ω