FINALPREPS ASSESMENTS AND EVALUATIONS

Mock Examination for B.E.C.E Candidates

January 2026

COMPUTING 2 & 1
(ESSAY AND OBJECTIVE TEST)

2 hours

Name: .....

Index Number: .....

INSTRUCTIONS

Do not open this booklet until you are told to do so. While you are waiting, read and observe the following instructions carefully. Write your name and index number in ink in the spaces provided above.

This booklet consists of two papers. Answer Paper 2 which comes first, in your answer booklet and Paper 1 on your Objective Test answer sheet provided. Paper 2 will last 75 minutes after which the answer booklet will be collected. Do not start Paper 1 until you are told to do so. Paper 1 will last 45 minutes.

INSTRUCTIONS: *This paper is made up of two parts,* **Paper 1** *and* **Paper 2**. *You are to answer* ***all*** *questions in* **Paper 1**. **Paper 2** *is made up of two Sections,* ***A*** *and* ***B.*** *Answer all questions in Section* ***A (24 marks)*** *and any* ***three (3)*** *questions from* ***Section B (36 Marks)***. *The total mark for this paper is* ***100***.

PAPER 2 (ESSAY) – [60 marks]

SECTION A – [24 marks]

Answer Question 1 (Compulsory)

1. The diagram shows a network of devices in a school. The devices include a central switch, desktop computers, a printer, a router, a laptop and an IP phone. All communication between devices passes through this central device. Study the diagram carefully before answering the questions that follow.



a) A student tried to share files between two computers, but the data could not reach the intended device.

i. State the type of network topology used by the school. **[2 marks]**

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ii. Identify a possible reason for this problem. **[2 marks]**

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ii. State two advantages of using the network topology shown in the image. **[4 marks]**

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b) The school intends to connect its computer laboratory to another branch on the other side of town.

i. Identify the type of network suitable for connecting the two locations. **[2 marks]**

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ii. State two areas where the type of network identified above is suitable. **[2 marks]**

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iii. State two benefits the school will gain by networking its branches. **[4 marks]**

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c. During network setup, the technician referred to the OSI model for proper configuration.

i. Write down the full meaning of OSI. **[1 marks]**

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ii. State the seven layers of the OSI model in correct order. **[7 marks]**

SECTION B – [36 marks]

2. **(*a*)** Briefly explain communication protocol. **[3 marks]**

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b) Distinguish between IPv4 and IPv6. **[4 marks]**

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c) Each computer connected to a network has a unique IP address. Explain what an IP address is. **[3 marks]**

ii) List two examples of documents that can be created using Desktop Publishing software. **[2 marks]**

3. A teacher downloaded paid educational software from an unauthorised website and distributed it to colleagues for free.

a. Identify the legal issue involved in this action. **[2 marks]**

b. Explain why this act is considered a violation of intellectual property rights. **[4 marks]**

c. State two negative effects of such actions on software developers. **[4 marks]**

d. Suggest two lawful alternatives the teacher could have chosen. **[2 marks]**

4. A school decides to implement eLearning using the lab network and online platforms.

a. Define eLearning. **[3 marks]**

b. State two benefits of eLearning to students in this context. **[4 marks]**

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b) Explain what e-commerce is. **[3 marks]**

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c) State two types of e-commerce. **[2 marks]**

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5. a) Briefly describe two cashless payment systems used in Ghana. **[4 marks]**

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b. A student is designing a flyer for a school programme.

i. State two tools the student will use from the Insert tab. **[2 marks]**

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ii. Explain why grouping will be useful in the design. **[2 marks]**

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c) Define the following words as used in Publishing **[4 marks]**

i. Object

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ii. Layering

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PAPER 1

OBJECTIVES – [40 Marks]

1. **Which component of the computer acts as the "brain" by performing calculations and processing data?**
   A) RAM B) Hard Drive
   C) Motherboard D) Processor (CPU)

2. **Which feature in MS Word allows you to join two or more selected cells in a table into a single cell?**
   A) Split Cells B) Join Cells
   C) Merge Cells D) Format Cells

3. **In a flowchart, which symbol is used to represent a decision point (e.g., Yes/No or True/False)?**
   A) Diamond B) Rectangle
   C) Parallelogram D) Oval

4. **The "Undo" command is a lifesaver when you make a mistake. Which shortcut key is used for this?**
   A) Ctrl + Z B) Ctrl + X
   C) Ctrl + U D) Ctrl + Y

5. **Which of these software types allows a user to try it for free for a limited time before buying?**
   A) Shareware B) Open Source
   C) Freeware D) Firmware

6. **What is the main function of a device driver?**
   A) To allow the OS to communicate with hardware like printers
   B) To speed up the internet connection
   C) To help the user type faster
   D) To protect the computer from viruses

7. **Which file extension is used to identify a Microsoft Excel workbook?**
   A) .pdf B) .xlsx C) .pptx D) .docx

8. **In Excel, which function would you use if you want to find the highest score in a class list?**
   A) MAX() B) TOP() C) HIGH() D) SUM()

9. **What does the term "Ergonomics" deal with in a computer laboratory?**
   A) Designing a comfortable and safe workspace for users
   B) Fixing broken computers
   C) Installing the latest software
   D) Setting up a network

10. **Which of these is a biometric security method?**
    A) Using a firewall
    B) Installing an antivirus
    C) Using a very long password
    D) Fingerprint scanning

11. **Which type of network covers a small area like a single room or a school laboratory?**
    A) PAN B) LAN C) MAN D) WAN

12. **Which protocol is primarily used for sending and receiving emails over the internet?**
    A) SMTP B) HTTP C) FTP D) IP

13. **Which of these provides the widest coverage, connecting computers across countries and continents?**
    A) Wide Area Network
    B) Local Area Network
    C) Metropolitan Area Network
    D) Personal Area Network

14. **A "Digital Footprint" refers to:**
    A) The trail of data you leave behind when using the internet
    B) A type of computer virus
    C) The size of your computer screen
    D) The physical marks on a keyboard

15. **Which software is used to view and navigate through web pages on the internet?**
    A) Web Browser B) Web Server
    C) Search Engine D) Social Media

16. **Buying a textbook from an online store like Amazon or Jumia is an example of:**
    A) E-commerce B) Teleworking
    C) Social Media D) eLearning

17. **The "C" in the CIA Triad of information security stands for:**
    A) Communication B) Control
    C) Computer D) Confidentiality

18. **If a student changes their grades on the school's digital portal without permission,**

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which security principle is violated?
A) Integrity B) Authentication
C) Privacy D) Availability

19. Which of these is a major threat to "Availability"?
A) A system crash during a registration period
B) Someone stealing your password
C) A virus deleting your files
D) A hacker reading your private emails

20. The process of converting readable data into an unreadable format to keep it secret is:
A) Encryption B) Compression
C) Decryption D) Formatting

21. A fake email sent to trick you into revealing your bank password is a form of:
A) Phishing B) Coding
C) Spamming D) Hacking

22. Which of these acts as a barrier between a trusted internal network and an untrusted external network (the internet)?
A) Firewall B) Router C) Bridge D) Antivirus

23. "Authentication" is the process of:
A) Checking if the user is who they claim to be
B) Encrypting a message
C) Giving a user permission to delete files
D) Backing up data

24. What is the main purpose of "Two-Factor Authentication" (2FA)?
A) To add an extra layer of security beyond just a password
B) To allow two people to use the same account
C) To save energy
D) To make the internet faster

25. Which threat involves an unauthorized person "listening in" or reading data as it travels across a network?
A) Interception B) Fabrication
C) Interruption D) Modification

26. Creating a fake news article and posting it online as if it were true is an example of:
A) Fabrication B) Interruption
C) Modification D) Interception

27. Which legal protection is given to creators of original music, books, and software?
A) Copyright B) Licence
C) Patent D) Trademark

28. A company logo (like the Apple logo or the MTN logo) is protected by:
A) Trademark B) Patent
C) Shareware D) Copyright

29. Illegal copying and distribution of copyrighted software is called:
A) Piracy B) Phishing C) Hacking D) Browsing

30. A "Patent" is usually used to protect:
A) An invention or a technical process
B) A poem written by a student
C) A company's name
D) A photo posted on Instagram

31. Digital Forensics is used to:
A) Collect and analyze digital evidence for criminal cases
B) Fix broken computer hardware
C) Design websites
D) Teach students how to code

32. Which programming language is currently the most popular for developing Artificial Intelligence (AI)?
A) Python B) HTML C) Scratch D) CSS

33. Which AI tool is used to understand and respond to human speech or text?
A) Natural Language Processing (NLP)
B) Robotics
C) Data Mining
D) Image Recognition

34. Which of these is an example of "Internet of Things" (IoT)?
A) A smart fridge that can notify you when milk is finished
B) A printed textbook
C) A standard desk lamp
D) A standalone calculator

35. Which type of sensor allows a robot to "feel" or detect how close it is to an object?
A) Proximity sensor B) Sound sensor
C) Light sensor D) Temperature sensor

36. In programming, which operator is used to compare if two values are exactly equal?
A) = = B) != C) = D) <>

37. A set of step-by-step instructions written to solve a specific problem is called an:
A) Algorithm B) Hardware
C) Input D) Interface

38. A website that is updated regularly and written in a conversational style is called a:
A) Blog B) Server C) Browser D) Protocol

39. What is the correct binary value for the decimal number 2?
A) 10 B) 01 C) 00 D) 11

Which protocol is used to securely browse the web (look for the padlock icon)?
A) HTTPS B) HTTP C) FTP D) IP

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