

BINDURA UNIVERSITY OF SCIENCE EDUCATION
FACULTY OF SCIENCE AND ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE
CS101 - INTRODUCTION TO COMPUTER SCIENCE

TIME: 2 HOURS

TOTAL MARKS: 100

JAN 2025

INSTRUCTIONS TO CANDIDATES

Answer all questions.

Section A carries 40 marks, Section B 40 marks and Section C 20 marks

SECTION A [40 marks]

1. Write the full meaning of the following abbreviations:
 - a. RAM
 - b. IoT
 - c. AI
 - d. USB 3.0

[4]
2. _____ is a type of malware that encrypts a user's files, demanding a ransom to restore access.

[1]
3. A device that uses biometric data to authenticate a user is an example of a _____.

[1]
4. TRUE/FALSE: A 3D printer is considered both an input and output device.

[1]
5. _____ is a popular cloud storage service provided by Google, offering storage and file sharing capabilities.

[1]
6. A virtual assistant is an example of AI technology. TRUE/FALSE

[1]
7. _____ is a temporary storage area used by the CPU to store intermediate data and instructions.

[1]
8. TRUE/FALSE: Quantum computing promises to solve certain types of problems much faster than classical computers.

[1]
9. TRUE/FALSE: A firewall is a type of software designed to detect and remove viruses.

[1]
10. What does the acronym "VR" stand for in the context of gaming technology?

- [1]
11. Which operating system is known for its use in servers and is open source? [1]
12. _____ is a type of non-volatile memory used for storing firmware and system software. [1]
13. Which operating system is known for its use in mobile devices and is developed by Apple? [1]
17. TRUE/FALSE: A smartphone is an example of a wearable device. [1]
18. TRUE/FALSE: AR (Augmented Reality) overlays digital content on the real world, viewed through devices like smartphones or AR glasses. [1]
19. What is the full form of the abbreviation "NFC" used in contactless payment technologies? [1]
20. RFID technology is often used for tracking the location of assets or vehicles? TRUE/FALSE [1]
21. A Man In The Middle attack is a common cybersecurity threat where an attacker intercepts and possibly alters the communication between two parties. TRUE/FALSE [1]
22. Write the full meaning of the following abbreviations:
- a. SaaS
 - b. VPN
 - c. DNS [3]
23. Give any two examples of cloud computing service models. [2]
24. Write the meaning of the following abbreviations in full:
- a) SMTP [1]
 - b) WWW [1]
25. TRUE/FALSE: AI systems can be trained to recognize images, translate languages, and play games by processing large amounts of data. [1]
26. TRUE/FALSE: AI systems can only operate within the specific tasks they were designed for and cannot adapt to new tasks without reprogramming. [1]
27. A "smart city" uses _____ technology to collect data and manage resources efficiently. [1]
28. _____ is a feature in Microsoft Excel that allows you to visually represent data using charts and graphs. [1]

29. _____ is the feature in Microsoft Word that allows you to check for grammatical and spelling errors. [1]
30. In Microsoft Excel, a formula that starts with _____ calculates the sum of a range of cells. [1]
31. TRUE/FALSE: In PowerPoint, you can use transitions to animate the movement between slides. [1]
32. TRUE/FALSE: In Microsoft PowerPoint, you can use slide layouts to ensure consistent formatting across your presentation. [1]
33. What is the default file extension for a Microsoft Word document? [1]
34. TRUE/FALSE: In Microsoft Excel, you can use the "Freeze Panes" option to keep specific rows or columns visible while scrolling through a large worksheet. [1]
35. _____ is the term used in Microsoft Word for a pre-designed document layout that you can use to create a new document quickly. [1]
36. TRUE/FALSE: In Excel, the "IF" function can be used to perform conditional logic and return different values based on specific criteria. [1]

SECTION B[40 Marks]

Question 1

- a. Explain the impact of Artificial Intelligence on job automation, including potential benefits and challenges. [6]
- b. Describe the importance of encryption in protecting sensitive data and explain how applications like WhatsApp use end-to-end encryption to secure communications. [5]
- c. Describe a recent data breach incident, highlighting the consequences for the affected company. [5]
- d. Give any 4 benefits of cloud computing. [4]

Question 2

1. Explain the following terms as known in computer security:
 - a. Man In The Middle Attack(MITM) [2]
 - b. Phishing [2]
 - c. Ad Fraud [2]
2. Describe the role of the Internet of Things (IoT) in smart homes, giving examples of common IoT devices on the market. [4]
3. Since the COVID-19 pandemic, there has been a shift to online learning.
 - a. Explain the role of the Internet in enabling personalized learning experiences in education. [6]
 - b. Describe how the Internet has facilitated collaborative learning among students and teachers, providing examples of tools and platforms used. [4]

SECTION C [20 Marks]

Question 1

You are working as a sales analyst for a company that sells electronic gadgets. The company needs a summary of sales data to evaluate the performance of different sales representatives. Below is a table that lists the sales data for the past month:

#	Sales Representative	Total Sales (Units)	Price per Unit (\$)	Commission Rate (%)	Total Revenue	Total Commission	Highest Total Revenue	Average Commission Earned
1	John Doe	120	50	5%				
2	Jane Smith	200	45	7%				
3	Michael Brown	150	55	6%				
4	Emily Davis	180	60	8%				
5	Chris Johnson	140	52	5%				

Using the data provided above, answer the following questions using MS Excel formulas:

- Calculate the total revenue generated by each sales representative. [3]
- Calculate the total commission earned by each sales representative. [3]
- Determine the highest total revenue generated among all sales representatives. [3]
- Calculate the average commission earned by the sales representatives. [3]
- Identify the sales representative who generated the highest total revenue. [3]

Question 2

- Describe the steps you would take to insert a table into a document in MS Word [5]

END OF PAPER