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

TIME: 2 HOURS   AUG 2024   TOTAL MARKS: 100

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:
   i.   ROM
   ii. NIC
   iii. FTP
   iv. SSD   [4]

2. _____ is a type of malicious software, or malware, that spreads between computers and causes damage to data and software   [1]

3. _____ is an example of both input and output device.   [1]

4. A speaker and a printer are examples peripheral devices . TRUE/FALSE   [1]

5. _____ is primarily responsible for converting input (data) into meaningful output (information).   [1]

6. A computer program that functions as an intermediary between a computer user and the computer hardware is called_____   [1]

7. _____is temporary storage used to hold data that is used for arithmetic and logical operations and storing its results.   [1]

8. Plotter, Biometric sensor, light pen and a trackball are examples of input devices. TRUE/FALSE [1]

9. Any physical components of a computer system that we can see and touch is_____ [1]

10._____ are used for solving complex application such as Global Weather Forecasting. [1]

11. The invention of microprocessor (also called as single chip CPU) gave birth to the much cheaper microcomputers. TRUE/FALSE [1]

12. An operating system is an example of system software. TRUE/FALSE [1]

13. Software programs developed for performing particular tasks to related managing computer resources is called_____ [1]

14. Which application software can you use to create, edit, and print documents? [1]

15. A pixel is the smallest resolvable part of a picture. TRUE/FALSE [1]

16. The arithmetic and logic unit is the part of the CPU responsible for mathematical function only. TRUE/FALSE [1]

17. UNIX and MSDOS are examples of_____ [1]

18._____ describes a self-replicating malware that spreads by duplicating itself in order to infect other devices without user interaction [1]

19._____ is a malicious program, appearing to be legitimate, is commonly used to target banking and payment systems to access confidential information [1]

20. In MS Excel, the Greater Than sign (>) exemplifies a _____ operator. [1]

21._____ is the default file type(extension) for presentation created using MS PowerPoint 2007 or newer versions [1]

22. In MS PowerPoint, the key used to run Slide Show from the beginning is _____ [1]

23. The intersection between a row and a column in spreadsheets is known as a____ [1]

24. What is the purpose of the Paste Special option 'Keep Text Only' in

MS Word? **[1]**

25. In MS Word, the word document orientation is set _____ by default. **[1]**

26. _____ is the shortcut combination key to open a new blank page in MS Word.
[1]

27. Ctrl + E is a shortcut combination key used to 'align center' the selected text in MS Word **[1]**

28. In MS Word, if you want to display the meaning of a word in your text at the bottom of the page, the_____ feature will help you **[1]**

29. Write the full meaning of the following abbreviations:

   i.   WLAN

   ii.   VPN

   iii. DNS   **[3]**

30. Give any **two** examples of search engines **[2]**

31. A worm, spyware and a rootkit are all types of malware. TRUE/FALSE
[1]

32. A phishing attack refers to an attempt to steal sensitive information, or other important data to utilize or sell the stolen information. TRUE/FALSE **[1]**

33. A hard disk and flash memory are example(s) of non-volatile memory? TRUE/FALSE **[1]**

34. In a Word document, what is the feature that breaks line between long words and move to the next line when possible? **[1]**

40 MARKS

SECTION B [40 marks]

Question 1

a) Give a real-world example of a company doing something that violates their users' privacy. Additionally, discuss one way in which a company might protect a user's privacy. [5]

b) Describe a type of attack a hacker might perform to steal your data. In your answer, you should include:

i) The name of the attack

ii) A short description of the attack

iii) Why this type of attack could be bad for a user [6]

c) Give **three** online security measures individuals can take to protect their personal information while using the internet. [6]

d) Explain the following network topologies:

   i.   Start topology.

   ii.   Mesh topology. [4]

Question 2

Over the past years the learning classroom has continuously been moving online.

a. Give **four** benefits of the internet in education [8]

b. What does it mean that a messaging service is "end-to-end encrypted"? What is an example of a messaging service with "end-to-end encryption"? What is an example of a messaging service that does not "end-to-end encrypt" your messages? [6]

c. Explain the applicability of Artificial Intelligence (AI) in your field of study and the ethical challenges associated with it. [5]

40 MARKS

SECTION C [20 marks]

Question 1

Using the information given in the table below, calculate the total amount payable by the company to the employees. A Payroll consists of Basic Pay, Allowances, Gross Salary, Deductions and Net Salary. The basic pay is a product of hours worked and the rate, the Allowances are 23% of the Basic Pay while the Deductions are 12% of the Gross Salary. In the given worksheet, indicate in each cell what will be inserted, that is – a value or a formula. In the case of a formula, write down the formula in the cell.

	A	B	C	D	E	F	G	H
	Stationery Supplies LTD							
	Name	Hours Worked	Rate($)	Basic Pay	Allowances	Gross Salary	Deductions	Net Salary
1	Lewis	4	70	*****	*****	**********	*****	*****
2	Francis	5	100	*****	*****	*****		
3	Edwin	5	100	*****	*****	*****		
4								
5								
6								
	TOTAL			*****	*****	*****	*****	*****

Use the above spreadsheet to answer the following question.

a) State the formula to calculate:

    i.   Basic pay

    ii.   Allowances

    iii.   Gross salary

    iv.   Deductions

    v.   Net salary [15]

b) State the formulas for the Totals for all the calculations above [5]

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END OF PAPER