



Introduction to computers

Final Exam

Introduction (26 Points)

Read the question and all answers carefully, some of the questions have more than one answer. In that case, indicate how many answers are correct. If you feel any question is wrong or there is no answer correct, feel free to write your ideas. NO COPY/PASTE IS ALLOWED AS AN ANSWER

1. Which set of the following devices are all input devices

- a. Keyboard, Monitor, Speaker
- b. Keyboard, Printer, Joystick
- ☒ c. Keyboard, Mouse, Scanner
- d. Pinter, Monitor, Microphone

2. Which is used to perform arithmetic operations.

- ☒ a. ALU
- b. Cache
- c. Control Unit
- d. Modem

3. Which is the fastest volatile memory

- a. R.A.M
- b. R.O.M
- ☒ c. Cache
- d. ALU



4. *What does the Stepped Reckoner do*

- e. Predict Astronomical positions
- ☒ f. Perform all four arithmetic operations
- g. Decipher codes from the Enigma machine
- h. Nothing, the Stepped Reckoner is made up

5. *\vee is what in a truth table*

- a. AND
- b. OR
- ☒ c. XOR
- d. NOR
- e. None of the above

BACKUP

*Answer **with your own words** (no Copy/Paste) the following questions:*

- 6. What is the difference between Differential and Incremental Backup?
- 7. What is the Advantage of RAID 0?
- 8. Which types of RAID use Parity System?
- 9. Why do we need backup?

10. *Compilers*

- a. Read the code and immediately execute on the code
- ☒ b. Translate code from a high-level language to low level-languages
- c. Start the computer BIOS
- d. Join the RAM and CPU



11. What do logic gates do?

- ☒ a. Take inputs and produce outputs depending on the rules or logic that is used
- b. It translates assembly language into machine language
- c. Converts Binary into Hexadecimal
- d. It is an interface between hardware and user

Conversion

12. Convert:

- a. $129_{(10)} = ?_{(16)}$
- b. $F2569_{(16)} = ?_{(10)}$

13. Convert:

- $10111010_2 = ?_{(10)}$
 - $753_8 = ?_{(10)}$
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Part II (24 Points)

Indicate which sentence is true or false, choosing only true or false will not be enough. Explain your answers completely.

- 14. **ALU is responsible for saving the data in Hard Drives.**
- 15. **All data in RAM is deleted when you turn off your computer**
- 16. **Truth Table Concept is only used in I.T**
- 17. **Backup is only used to protect data from viruses.**
- 18. **Monitors are input devices.**
- 19. **An input device is used to enter data into a computer**
- 20. **Speakers are Input devices.**
- 21. **Backup is only necessary for programmers**



- 22. *Incremental backup relies completely on RAID 5*
- 23. *Cache is the slowest memory in the computer*
- 24. *MAC Address is a type of IP*
- 25. *Truth Tables can have half truths and multiple possibilities for truth*

Part III (50 points)

Explain the questions with your own words

- 26. *What is Moore's Law?*
- 27. *What's the difference between a CPU and ALU*
- 28. *Describe overclocking and underclocking?*
- 29. *What is and XNOR gate?*
- 30. *What is a Database?*
- 31. *Write out a truth-table*
- 32. *Why is the web estimated to weigh 50 grams?*
- 33. *If the place vales for decimal numbers are related to the successive powers of 10, explain how we calculate the place values of binary.*