



Kafrelsheikh University
Faculty of Artificial Intelligence
Final Term Exam 2019/2020

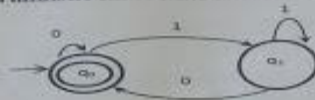


Subject code: CS101 Level:1
Time:2 H Date:1/1/2020
Subject: Computer Fundamentals
No. of questions: 2
Total marks: 60marks

Question 1: Choose the correct answer from A, B, C, or D. Only highlight the correct choice on the answer sheet.

1. An electronic device able to calculate, process, retrieve data is called.....
A. Computer B. Internet C. Data D. Information
2. The raw material to produce information is called.....
A. Computer B. Internet C. Data D. Information
3. The result of data processing is called
A. Computer B. Internet C. Data D. Information
4. The data processing in input/output system consists ofdata
A. Capture B. manipulate C. both A and B D. None
5. Computer processor is measured by
A. Byte B. Hz C. GB D. MB
6. Handling the errors that may occur to be attributed to human error is called theof computer.
A. Speed B. Accuracy C. Reliability D. Diligence
7. The ability of computer to handle and pass the instructions in a correct manner is called
A. Speed B. Accuracy C. Reliability D. Diligence
8. A computer is free from tiredness, lack of concentration, fatigue is called
A. Speed B. Accuracy C. Reliability D. Diligence
9. capacity to perform completely different type of work is called
A. Speed B. Versatility C. Reliability D. Diligence
10. The smallest unit in computer storage capacity in 0 or 1 form is called
A. HZ B. Byte C. Bit D. Bit/Sec
11. Choose the largest unit from the following
A. TB B. KB C. MB D. GB
12. Once the instructions fed into computer it works without any human intervention until the completion of execution of program or meets logical instructions to terminate the job is called
A. Speed B. Automation C. Reliability D. Diligence

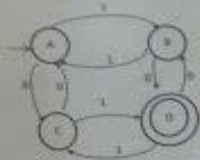
13. All of the following are computers designed to be used by one person at a time except.....computers
 A. Desktop B. Workstations C. Supercomputers D. Smart phones
14. All of the following are multi-user computers except.....computers.
 A. Handheld B. Mainframe C. Network server D. Supercomputers
15.Refers to the efforts made toward reducing the environmental impact in the manufacture, use, and disposal of computers.
 A. Cloud Computing B. Green Computing C. Fog Computing D. Health Care
16. The person that conduct surveys, determine feasibility and define user requirements.....
 A. Programmer B. System analyst C. Administrator D. Web designer
17. Consider M1 is a deterministic finite state machine in the following figure,



All of the following accepted by M1 except.

- A. 010010 B. 1010110 C. 1000101 D. 01000100
18. In M1 the q_0 is
 A. Initial State B. Final State C. Both A, B D. None
19. In M1 the transition matrix of q_0 when receiving 1 the respond will be
 A. Initial State B. Final State C. q_0 D. q_1
20. The unit responsible for operation +, -, *, / and &&, ! is called
 A. ALU B. CU C. MU D. PC
21. One of these units used in both input and output operations
 A. Touch Screen B. Printer C. Keyboard D. Mouse
22. All of the following are storage devices except.....
 A. USB B. UPS C. CD D. Floppy disk
23. Finite Automata is classified into
 A. FA with output B. FA without output C. Both A, B D. None
24. A simplest model of computation with a very limited memory.....
 A. DFA B. NFA C. Both A, B D. None
25. Language $L1 = \{ \text{Strings that ends with 1} \}$ is an example of
 A. DFA B. NFA C. Mealy D. Moore
26. In order to design DFA for strings with odd numbers of a's, we need at leaststates.
 A. Two B. Three C. Four D. One
27. One of the input devices used to convert a person's speech into digital form is called.....
 A. Speaker B. Microphone C. Amplifier D. Repeater
28. In Haskell functional programming language thetype of integers that fit into a word on the computer
 A. int B. float C. Single D. double

29. Consider M2 is a deterministic finite state machine in the following figure.



The accepted M1 language is

- A. 101000 B. 101010 C. 0110101 D. 000110100

30. In M2 the Final State is

- A. State A B. State B C. State C D. State D

31. In M2 the Initial State is

- A. State A B. State B C. State C D. State D

32. In M2 When state D received 0 it goes to state

- A. State A B. State B C. State C D. State D

33. In Haskell functional programming language the equality refers to

- A. = B. == C. ## D. /=

34. In Haskell functional programming language the True&&False is

- A. False B. True C. && D. True + False

35. In Haskell functional programming language [0..9] is

- A. 9 B. 0 C. [0,1,2,3,4,5,6,7,8,9] D. "0".."9"

36. The binary number 101010 is equivalent to (.....)10

- A. 25 B. 42 C. 40 D. 300

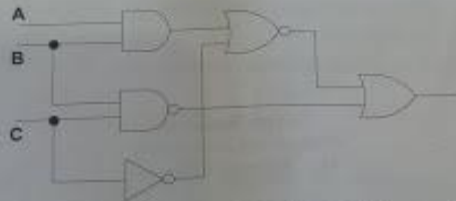
37. The decimal number 170 is equivalent to (.....)2

- A. 111001 B. 1021001 C. 10010100 D. 10101010

38. The octal number 4674 is equivalent to (.....)16

- A. 9AC B. 9BC C. 9CC D. 8BC

39. For the following logic gate the final output is.....



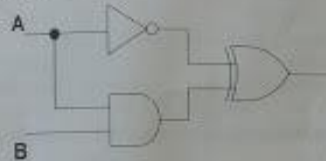
- A. ABC B. $F = \overline{(AB+C)} + \overline{BC}$ C. $F = \overline{(AB+C)} + BC$ D. $F = \overline{(AB+C)} + \overline{BC}$

40. The XOR logic gate can be replaced by

- A. $F = \overline{XY} + \overline{XY}$ B. $F = X\overline{Y} + \overline{XY}$ C. $F = \overline{XY} + \overline{Y}$ D. $F = \overline{(X+Y)}X$

Question 2: Highlight the correct choice True (T) or False (F) on the answer sheet.

1. not \bar{A} is represented as Baal -> Baal
2. Type variables must begin with lower case letters and are usually named a, b, c, etc.
3. A digital signal is continuous representation, to the actual information it represents
4. Memory unit is The 'brain' of the computer, the component that actually executes instructions.
5. One Byte is consists of 16 bit.
6. Finite State Machine also called Finite Automata (FA).
7. The speed of the internet is measured by GByte.
8. $A(B+C) = A.B+A.C$
9. $A+\bar{A} = 1$
10. $(1001)_2 \times (101)_2 = (101100)_2$
11. $(100011)_2 + (1001)_2 = (10010)_2$



12. The following logic gate the output is $F = A \oplus A \bar{B}$
13. Software is the physical components of computer that can be touched and handled.
14. Emails myyds2020@ai.kfs.edu.eg is commercial with ai.kfs domain.
15. The complement of $(100011)_2$ is $(011100)_2$
16. The decimal complement of decimal number 100 is 110
17. The XOR gate for 3-input is equivalent to XNOR.
18. NAND gate output is one all inputs are zero.
19. DE-Morgan law stated that $(A'+B'+C') = ABC$
20. The binary number 11001 is equivalent to $(31)_8$

*End of the Exam
With all my best wishes
Dr. Mahmoud Shams*