

Index No : ..... Information and Communication Technology I Two - Hours

- **Answer all the Questions**
- **Write down your index number in the space provided in the answer sheet.**
- **In each of the questions 1 to 50, pick one of the alternative from (1), (2), (3), (4), (5) which is correct or most appropriate and mark your response on the answer sheet with a cross (×).**

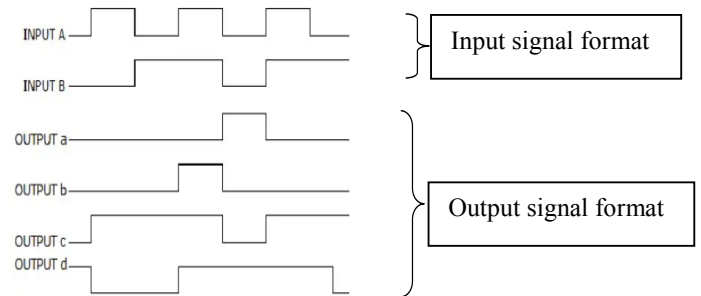
- 1

4. State the technology that is being removed at the beginning of the third generation  
 (1) Vacuum tube (2). Transistor (3). Integrated circuit  
 (4). Micro processor (5). Micro chips
5. The binary representation of 47  
 (1).  $110111_2$  (2).  $111011_2$  (3).  $110011_2$  (4).  $101111_2$  (5).  $110101_2$
6.  $101101_2 + 11011_2$  is?  
 (1).  $1001000_2$  (2).  $1011000_2$  (3).  $1001100_2$  (4).  $1101110_2$  (5).  $1010100_2$
7. The octal representation of  $FB_{16}$  is?  
 (1)  $377_8$  (2)  $375_8$  (3)  $373_8$  (4)  $573_8$  (5)  $537_8$
8.  $216_8 + 5A2_{16} =$   
 (1).  $1658$  (2).  $3034_8$  (3).  $1658_{16}$  (4).  $3120$  (5).  $1657_8$
9. Consider the following computer memories  
 A. Read Only Memory B. Secondary Storage C. Register Memory  
 D. Flash Memory E. Random Access Memory  
 What are the pair of Volatile Memory given above?  
 (1) A,B. (2). A,C. (3). A,D. (4). C,E. (5) D,E.
10. What is the 8 bits 1's complement representation of -16?  
 (1).  $00010000$  (2)  $11110000$  (3)  $11101111$  (4)  $00010011$  (5)  $10101010$
11. What is the incorrect BCD value?  
 (1).  $10011000$  (2).  $01011001$  (3).  $11001000$  (4).  $10001010$  (5).  $00110111$
12. The 2's complement representation of a number is  $01010101$ . What is the decimal representation of that number?  
 (1). -170 (2). -171 (3). 85 (4). 170 (5). -85
13. How many bits are required to represent a character according to the ASCII coding system?  
 (1). 4 (2). 12 (3). 8 (4). 16 (5). 7
14. Who invented the first automated computer called Mark-1 ?  
 (1) Charles Babbage (2) Gotfried Libnize (3) Howard Aiken  
 (4) John Morchly (5) Blaise Pascal

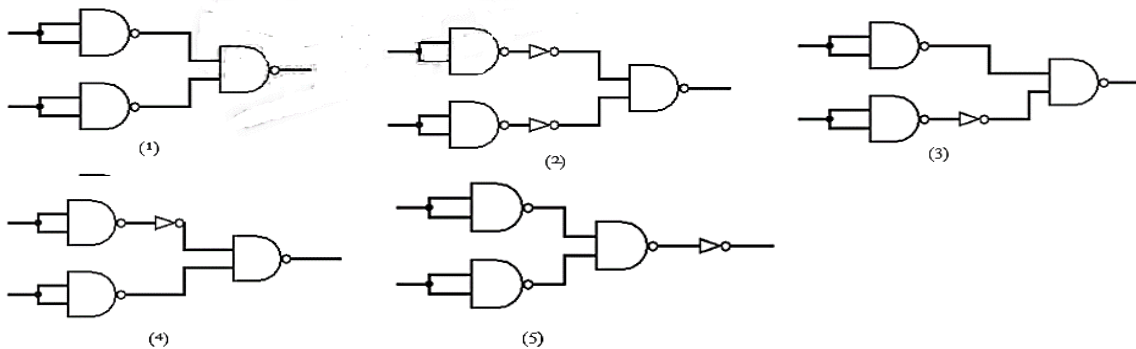


21. The correct processing order of the fetch execute cycle is,  
A - Fetch next instruction                                      B - Encode the instruction  
C - Decode the instruction                                      D - Execute the instruction
- (1) A, B, and C    (2) A, B and D    (3) A, C and D    (4) B, C and D    (5) A, B, C and D
22. The device that input the text in an editable format of a hard copy  
(1). Optical character reader                      (2). Optical Mark reader                      (3).Magnetic Ink character reader  
(4). Bar Code reader                                  (5). Closed circuit TV
23. A. Capability of using the softwares stored in the server without installing in the personal computer  
B. High efficiency  
C. There is no possibility of doing the payments based on the usage  
D. provide platform for developing softwares  
What are the statement/statements are true regarding the cloud computing?  
(1) A only                                      (2) A and B only                                      (3) A, B and C only  
(4) A, B and D only                                      (5) A, B, C and D all
24. What is the incorrect statement regarding the manual and computerized data input methods  
(1) accuracy is high                                      (2) faster data input  
(3) cost effectiveness                                      (4) minimal requirements of data verification  
(5) compulsory to verify all the data inserted using computerized method
- .25 Consider the statements related to an Operating System  
A. System Software coordinate hardware, software and the user of a computer system  
B. Most of the time only one Operating system exist in a computer  
C. It is not possible to work with a computer without a system software  
What are the statement/statements are true regarding the above?  
(1) A only                                      (2) B only                                      (3) C only                                      (4)A and B only                                      (5) all statements are correct
26. The simplification of the booleon expression  $F_{(X,Y)} = (X'.Y')' . (X+Y)'$  using DE Morgan's law is?  
(1). 0                                      (2). 1                                      (3). X                                      (4). Y                                      (5). X.Y
27. The result of the simplification of  $\left(\overline{ABC}\right)+\left(\overline{ABC}\right)$  is ?  
(1). 0                                      (2). 1                                      (3). A                                      (4). B.C                                      (5). A.B.C
28. The output of the given logic circuit is equal to  
(1) XOR                                      (2) XNOR                                      (3) AND                                      (4) NAND                                      (5) NOR
- 
- The logic circuit consists of a single input labeled 'A'. This input splits into two parallel branches, each leading directly to one of the two inputs of a NAND gate symbol.

29. Which of the following is the correct output digital wave format when A,B two digital waves are input to a XNOR logic gate with two inputs ?  
 (1) OUTPUT A (2) OUTPUT B  
 (3) OUTPUT C (4) OUTPUT D  
 (5) None of the above



30. According to the Boolean law  $A+1 =$   
 (1) 1 (2) A (3) 0 (4)  $A'$  (5) X
31. Select the expression/expressions which is not equal to  $X.(X'+Y)+Y$   
 (1)  $x . x' + y.(1 + x)$  (2)  $0 + x \cdot y + y$  (3)  $x \cdot y$  (4)  $y$  (5)  $x$ .
32. Inserting a photo of a rose flower in your garden with a digital camera is considered as  
 (1) Batch input (2) Direct input (3) Distance input (4) Online input (5) Offline input
33. The binary number equal to  $345.56_8$   
 (1)  $10001001.101001_2$  (2)  $11001001.101001_2$  (3)  $110001001.101001_2$   
 (4)  $110001001.0001_2$  (5)  $11100101.10111_2$
34. Which one of the following is equal to an OR gate



35. Consider the following statement about firmware  
 a. Firmware are the programs needed to start the computer  
 b. Firmware is included in washing machines  
 c. Firmware can be edited easily  
 The correct statement/statements of above is/are  
 (1) A only (2) B only (3) A and B only (4) A and C only (5) B and C only
36. Input is the inserting of data or instructions to a computer. The false statement regarding input is:  
 (1) Input devices are devices that enter data into the computer.  
 (2) The input data is processed by a program stored in its memory and converted into meaningful instructions.  
 (3) Information is generated after processing data

- (4) Manual & automatic methods are the two ways to insert data and instructions into the computer.
- (5) Keyboards, mouse, scanner are input devices
37. What is the false statement regarding The Golden Rule of Information?
- (1) The information gets its highest value at the moment it is generated
  - (2) The value of the information is very high when the time value is zero
  - (3) The value of information is depend on the timeliness
  - (4) The value of the information is decreasing when time passes and finally it becomes data
  - (5) Time can represent graphically against the value of the information
38. Which of the following pair of terms is the best answer to fill in the blanks in the statement below?  
Video conferencing is best described as a ..... And ..... discussion between two or more people in different locations
- (1) Television, Video
  - (2) Telephone, Audio
  - (3) Network, Audio
  - (4) Television, Audio – Visual
  - (5) Network, Audio – Visual
39. The most appropriate statement to describe the booting process of the computer is,
- (1) It is the process of copying the data from main memory into cache memory
  - (2) Loading of data from the hard disk to the main memory
  - (3) Loading the operating system from cache memory into the main memory
  - (4) Loading the operating system into main memory via a secondary storage device such as a hard disk, compact disk, or floppy disk.
  - (5) Loading data from the hard disk into the cache memory
40. Similar to the Boolean expression  $X \oplus Y \oplus Z$  is
- (1)  $X'YZ + XY'Z + XYZ'$
  - (2)  $XY'Z' + X'YZ' + X'Y'Z$
  - (3)  $X'YZ + XY'Z + XY'Z + XYZ$
  - (4)  $XY'Z' + X'YZ' + X'Y'Z + XYZ$
  - (5)  $XY' + X'Y + XZ' + X'Z + YZ' + Y'Z$
41. The world's first electronic digital computer was invented by
- (1) Blaise Pascal
  - (2) Charles Babbage
  - (3) John Presper Eckert
  - (4) Von Neumann
  - (5) John V. Atanasoft
42. The 8 bits 2's complement representation of the number  $5_{10}$  and  $-9_{10}$  respectively is?
- (1) 00000101 and 11110111
  - (2) 11111011 and 11110111
  - (2) 00000101 and 10001001
  - (3) 00000101 and 11110110
  - (5) 11111011 and 11110110
43. Which of the following is the most appropriate answer to fill in the blank  
Cached memory is usually used to store .....

- (1) Large volume of data temporarily
- (2) The least frequently accessed data permanently
- (3) Least frequently accessed data temporarily
- (4) Most frequently accessed data temporarily
- (5) Most frequently accessed data permanently

44. The microprocessor is generally compared by the clock speed measured in ..... or by is the word size of..... that can be set in a single clock cycle. What is the most appropriate answer to fill in the blanks of the above statement

- (1) Bit, MHz              (2) Byte, GHz              (3) GHz, Byte              (4) MHz, Bit              (5) Second, Bit

45. Which of the following is best suited to fill in the blank of this statement?

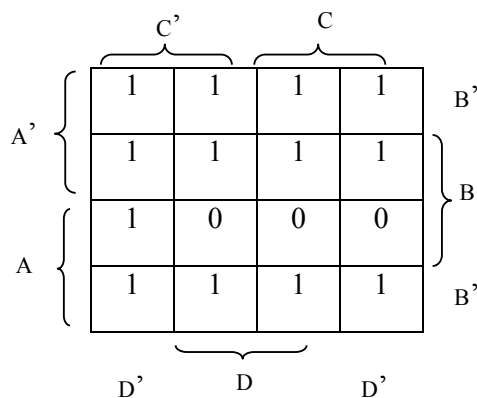
Laser technology is used to read data stored in a.....

- (1) Floppy disk              (2) Magnetic Tape              (3) Compact disk
- (4) Magnetic hard disk              (5) Flash memory

46. The least capacity of a portable flash drive needed to store a presentation of having 10,256 bits is

- (1) 1KB              (2) 1MB              (3) 1GB              (4) 8bit              (5) 256 byte

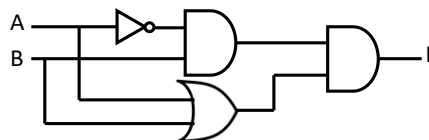
47. Most suitable simplified expression for the following karnaugh map representation is?



- (1)  $A' + AB' + C'D'$
- (2)  $A' + B' + AD'C'$
- (3)  $A' + B' + C'D'$
- (4)  $C'D' + A'C' + A'C' + B'$
- (5)  $B'C + B'C' + A'C + C'D'$

48. The true statement about the inputs A and B to get output as 1 in the given circuit diagram

- (1)  $A=1$  is sufficient
- (2)  $A=1$  and  $B=1$
- (3)  $A=0$  and  $B=1$
- (4)  $A=0$  and  $B=0$
- (5) Should be  $B=0$



49. What is the relevant logical expression for the following truth table?

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	0

- (1)  $A+B$
- (2)  $A.B$
- (3)  $(A+B)'$
- (4)  $A \oplus B$
- (5)  $(A \oplus B)'$

50. The true expression regarding utility software is

- (1) This software is installed to the computer with application software
- (2) This software is installed to the computer with operating system
- (3) Folders are permanently stored in hard disk by disk defragmentation
- (4) It is essential to create computer programs
- (5) Function of computer slow down by installing utility software