General Information Technology I

Important : ✳ *Answer all questions on the Answer Sheet provided.*
✳ *Write your Index Number in the space provided on the answer sheet.*
✳ *Instructions are given on the back of the answer sheet. Follow them carefully.*
✳ *In each of the questions 1 to 40, pick one of the alternatives (1), (2), (3), (4) which is correct or most appropriate and mark your response on the answer sheet in accordance with the instructions given therein.*

1. Decimal equivalent to Binary 10101101 is
   (1) 170   (2) 173   (3) 177   (4) 191

2. The price of a pineapple is Rs. 160/- and the price of a mango is Rs. 40/-. The total price of a pineapple and a mango in Binary form is
   (1) 10001000   (2) 11001000   (3) 11011000   (4) 11011010

3. The output of NOT(NOT(A OR B)) is equivalent to
   (1) NOT(A OR B)   (2) A OR B   (3) A AND B   (4) NOT(A AND B)

4. Which of the following represents the correct order of evolution of the technology used in computer processors?
   (1) Transistor, Vacuum Tube, Integrated Circuit (IC), Very Large Scale Integration (VLSI)
   (2) Vacuum Tube, Transistor, Integrated Circuit (IC), Very Large Scale Integration (VLSI)
   (3) Vacuum Tube, Integrated Circuit (IC), Transistor, Very Large Scale Integration (VLSI)
   (4) Vacuum Tube, Integrated Circuit (IC), Very Large Scale Integration (VLSI), Transistor

5. Which of the following represents an input device, a storage device and an output device respectively?
   (1) Keyboard, Hard Disk, Microphone   (2) Mouse, Keyboard, Printer
   (3) Keyboard, Touch Pad, Mouse   (4) Scanner, Flash Memory, Speaker

6. The output of the logic circuit shown below is 1.

   What should be the inputs of A and B respectively?
   (1) 0, 0   (2) 0, 1   (3) 1, 0   (4) 1, 1

7. Which of the following types of information systems mainly deals with the operational level data in business transactions?
   (1) Management Information System (MIS)   (2) Transaction Processing System (TPS)
   (3) Decision Support System (DSS)   (4) Executive Information System (EIS)

8. Consider the following truth table:

A	B	A ▽ B
0	0	1
0	1	0
1	0	0
1	1	0

Which of the following is represented by the symbol ▽ ?
(1) OR
(2) AND
(3) NOT(OR)
(4) NOT(AND)

9. Amal has connected his mobile phone to a notebook computer without using physical cables to transfer some photographs from his mobile phone to the notebook computer. Which of the following types of communication media is/are used for this purpose?
   A - Guided media   B - Unguided media   C - Bounded media   D - Unbounded media
   (1) A and B only   (2) A and C only   (3) B and C only   (4) B and D only

10. School Net is a network that connects 1000 secondary schools, 100 computer resource centres and many other institutes relating to education across Sri Lanka. Which of the following network type is most appropriate for School Net?
    (1) Local Area Network
    (2) Metropolitan Area Network
    (3) Wide Area Network
    (4) Bluetooth Network

11. A network cable needs to be laid in an area where Electro Magnetic Interference (EMI) is present. Which of the following cable type is most suitable for this purpose?
    (1) Shielded Twisted Pair (STP)
    (2) Unshielded Twisted Pair (UTP)
    (3) Coaxial
    (4) Fiber Optic

12. Isath wants to send an email to Nasmi with a copy to Dhanu. However, Isath does not want Nasmi to find out that a copy of the email has been sent to Dhanu. In which of the following fields should Dhanu's email address be included?
    (1) To
    (2) CC
    (3) BCC
    (4) Subject

13. Which of the following characters should not be used in an email address?
    (1) @ sign
    (2) Comma (,)
    (3) Underscore (_)
    (4) Period (.)

14. Which of the following combinations represents the services of the Internet?
    (1) Email, World Wide Web, HTTP
    (2) Email, Web browsers, File sharing
    (3) Email, World Wide Web, File sharing
    (4) Email, HTTP, File sharing

15. Firefox, Chrome, Internet Explorer are examples for
    (1) web pages.
    (2) operating systems.
    (3) web browsers.
    (4) protocols.

16. "Different web pages in a website are connected together by using ...."
    Which of the following phrases best fit to fill in the given blank of the above statement?
    (1) web browsers
    (2) hyperlinks
    (3) File Transfer Protocol
    (4) electronic mail

17. Vimal typed a document using the keyboard of a computer and printed it. The basic tasks performed by the operating system of the computer in this instance can be best described as:
    (1) File and folder management
    (2) Process management
    (3) Controlling input/output
    (4) Storage management

18. Consider the following statements A and B:
    A - An operating system allows users to interact with and control a computer.
    B - Graphical User Interface of an operating system makes it convenient for users to interact with and control a computer.
    Which of the following is correct in relation to statements A and B given above?
    (1) Both A and B are true.
    (2) A is false but B is true.
    (3) A is true but B is false.
    (4) Both A and B are false.

19. It is a good habit to create duplicates of your files/folders in an external hard disk in order to protect them from accidental deletion. This task is known as
    (1) defragmentation.
    (2) backing up.
    (3) disk cleaning up.
    (4) disk formatting.

20. Computers allow different users to customize the desktop theme according to their preferences. Which of the following functions of an operating system controls this activity?
    (1) Folder management (2) Process management (3) File management (4) User account management

21. What is the shortcut key combination that can be used to. insert a new slide into an electronic presentation?
    (1) Ctrl + X   (2) Ctrl + M   (3) Ctrl + S   (4) Ctrl + N

22. "The drawing tool bar can be used to .... in editing a document using word processing software."
    Which of the following phrases best fits to fill in the given blank of the above statement?
    (1) align the text   (2) create auto .shapes, lines, circles etc.
    (3) create a list of items   (4) add print enhancements

23. Consider the following two statements A and B:
    A - Compared to word processors, simple text editors such as Notepad, Emacs have limited editing features.
    B - Files created with the simple text editors cannot be opened with word processors.
    Which of the following is correct with respect to statements A and B?
    (1) Both A and B are true.   (2) A is true but B is false.
    (3) A is false but B is true.   (4) Both A and B are false.

24. The two icons ┊⋲▤ ⋲▤┊ in a word processing software are used to

    (1) decrease or increase the font size of a paragraph.
    (2) decrease or increase the indent level of a paragraph.
    (3) decrease or increase the line spacing of a paragraph.
    (4) convert the selected text to a numbered list or a bulleted list.

25. Which of the following are examples for spreadsheet packages?
    A - Microsoft Excel   B - OpenOffice.org Calc   C - Fedora
    (1) A and B only   (2) B and C only   (3) A and C only   (4) All A, B and C

26. Which of the following formulae will generate the correct result in Cell D5?
    (1) =Add(D2:D4)
    (2) =Total(D2:D4)
    (3) =Sum(D2:D4)
    (4) =Count(D2:D4)

	A	B	C	D
		Unit price (Rs.)	Number of units sold	Total Price (Rs.)
1	Item			
2	Pens	10	2	20
3	Exercise books	30	6	180
4	Pencils	6	3	18
5	Total			218

27. What is the function available in spreadsheet software to find the average of the numbers in a selected range?
    (1) avg( )   (2) count( )   (3) average( )   (4) mean( )

28. What is the correct statement regarding Database Management Systems?
    (1) Queries are used to locate specific records within tables.
    (2) Form is an object that can be used to hold data.
    (3) Reports can be created using data from one table only.
    (4) A database can have only one table.

29. The following are some examples of registration numbers of members in a particular library:
    2010/001, 2010/002, 2011/001, 2011/002
    What is the most suitable data type to record the registration numbers in a database to hold member information?
    (1) Text   (2) Number   (3) Currency   (4) Yes / No

30. "A .... is any field or combination of fields in a database table that uniquely identifies each record."
    Which of the following word(s) best fits to fill in the given blank of the above statement?
    (1) Cell   (2) Primary key   (3) Logical key   (4) Query

31. Which of the following aspects is least important in purchasing a home computer?
    (1) Hardware specifications of the machine   (2) After sales support
    (3) Warranty period   (4) Appearance of the chassis (casing)

Consider the following flow chart for questions 32 to 35.

32. What are the control structures that represent the decisions "Is X <= 10?" and "Is X an even number" respectively?
(1) Sequence, Iteration   (2) Iteration, Selection
(3) Iteration, Sequence   (4) Selection, Iteration

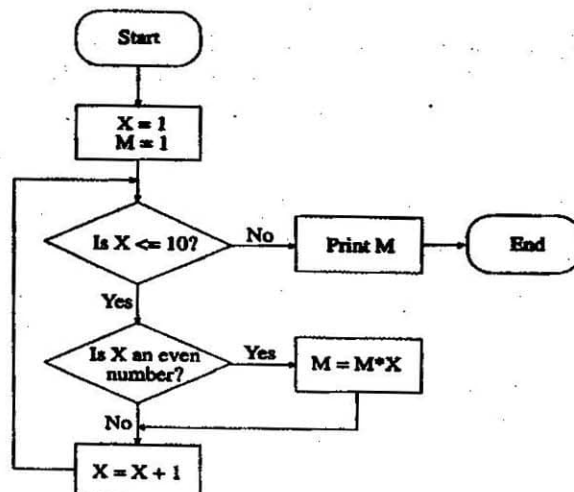33. Choose the most correct decision that terminates the iteration.
(1) X > 10   (2) X < 10
(3) X < = 10   (4) X > = 10

34. What is the output of the flow chart?
(1) 384   (2) 640
(3) 945   (4) 3840

35. If the process X=X+1 is changed to X=X+2, how many times will the process M=M*X be executed?
(1) 0   (2) 5
(3) 10   (4) 11

Start
X = 1
M = 1
Is X <= 10? — No → Print M → End
Yes
Is X an even number? — Yes → M = M*X
No
X = X + 1

36. Consider the following statements regarding ethical issues in computing:
   A - Buying a CD which contains an unlicensed copy of a software.
   B - Gaining unauthorized access to a computer.
   C - Creating and distributing viruses.
   D - Using a computer with licensed software.
   Which of the above relates to unethical behaviour of an individual?
   (1) A and C only.   (2) A and D only.   (3) C and D only.   (4) A, B and C only.

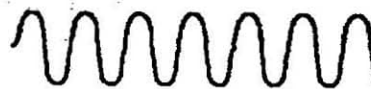37. Consider the signal types shown below.

Figure 1   Figure. 2

Which of the following examples represent the signal types shown in figure 1 and figure 2 respectively?
   (1) Blowing of wind, playing a song using a computer
   (2) Playing a song using a computer, blowing of wind
   (3) Playing a song using a computer, waves of the sea
   (4) Blowing of wind, waves of the sea

38. Consider the following statements:
   A - Digital Divide is the division of population according to the accessibility to the ICT resources.
   B - Digital Divide is a result of socio-economic differences.
   C - Digital Divide is the division of web servers in the Internet based on the geographic location of countries.
   Which of the above is/are true regarding Digital Divide?
   (1) A only   (2) B only   (3) A and B only   (4) B and C only

39. A teacher needs to download two educational software packages from the Internet, with sizes 24MB and 1200 MB respectively. He intends to store both software in a 2 GB flash memory stick. Assume that 50% of the flash memory capacity is already used. Which of the following statements is true with respect to the availability of space in the flash stick for storing the software?
   (1) Both software can be stored.
   (2) Only the software with the size of 24MB can be stored.
   (3) Any one of the software can be stored.
   (4) None of the software can be stored.

40. Consider the following statements:
   A - Internet is the worldwide network of computers and its content is always accessible only within the country where the server is located.
   B - Content on the Internet may be legal in one country while it is illegal in another country.
   C - Laws regarding the content on the Internet are same in all countries.
   Which of the above is/are true regarding the Internet and its content?
   (1) A only   (2) B only   (3) A and B only   (4) B and C only