PROVINCIAL DEPARTMENT OF EDUCATION NORTH WESTERN PROVINCE

SECOND TERM TEST - 2018

Grade 10 **Information and Communication Technology - I** **Three hours**

Name / Index No. :

i. Answer all questions.
ii. In each of the question 1 to 40 pick one of the alternatives (1) (2) (3) and (4) which is correct of most appropriate.
iii. Mark a cross (X) on the number corresponding to your choice in the answer sheet provided.

01. Select the correct statement from the following statements.
    A - Data are the unprocessed facts.
    B - Information should always be updated.
    C - Data is generated by processing information.
    (1) A and C only   (2) A only   (3) A and B only   (4) All of A, B and C

02. An e - Government service provided for the businesses by the Government of Sri Lanka is,
    (1) Forms   (2) Payments of utility bills
    (3) Legal system   (4) Banking Information

03. What is the machine that used to record the activities of the brain?
    (1) Electrocardiogram Machine (ECG)
    (2) Computerized Axial Tomography Machine (CAT)
    (3) Electro-encephalography Machine (EEG)
    (4) Magnetic Resonance Imaging Machine (MRI)

04. What is the machine created by Charles Babbage by using the concepts of input, process, output and store?
    (1) Adding Machine   (2) Automatic Sequence Control Calculator
    (3) Mechanical Loom   (4) Analytical Engine

05. What is an example for the free and open source operating system?
    (1) Macintosh Operating System   (2) Fedora Operating System
    (3) MS Windows XP Operating System   (4) MS Windows Server Operating System

06. What is the correct statement about an operating system from the following statements?
    A - An operating system is required for Hardware and Software Management.
    B - Windows 7 is an example for multi-user multi-tasking operating system.
    C - Disk partitioning and Disk Formatting are the utility software in an operating system.
    (1) A and B   (2) A and C   (3) B and C   (4) All A, B and C

07. What is/are an/the information maintained by an operating system regarding a file?
    A - Type of a file
    B - Size of a file
    C - Saved date and time
    Which of the above statement/s is / are true?
    (1) A only   (2) B only   (3) A and B only   (4) All A, B and C.

08. The decimal equivalent of 1000101_{two} is,

    (1) 67   (2) 72   (3) 105   (4) 69

09. Which of the following does not included for the BCD coding system?

    (1) 1001 0100 1001   (2) 0110 0011 0101

    (3) 1100 0101 0110   (4) 0101 1001 0011

10. If the letter A is represented by 65 in ASCII coding system, what is the binary value that represents the letter C?

    (1) 100 0010   (2) 100 0001   (3) 100 0101   (4) 100 0011

11. If price of a book is Rs. 62 and price of a pen is 12, the total equals to,

    (1) 112_{eight} (2) 113_{eight} (3) $4B_{sixteen}$ (4) $3A_{sixteen}$

12. Which of the following gives the ascending order of the data access speed of the computer memory devices?

    (1) Compact Disk, Magnetic Tapes, USB Flash Drive, Memory Registers

    (2) Magnetic Tapes, Hard Disk, USB Flash Drive, Cache Memory

    (3) Compact Disk, Hard Disk, Magnetic Tapes, Memory Registers

    (4) Memory Registers, Compact Disk, USB Flash Drive, Cache Memory

13. Number of bits in a nibble is;

    (1) 8   (2) 4   (3) 16   (4) 32

14. What is the value of $1011_{two}+1001_{two}+1111_{two}$?

    (1) 001011_{two} (2) 101110_{two} (3) 100011_{two} (4) 1100011_{two}

15. What is the largest number of the following numbers?

    (1) 1010101_{two} (2) 170_{eight} (3) 75   (4) $27_{sixteen}$

16. A Giga Byte is equal to,

    (1) 2^{10} KB   (2) 2^{20} byte   (3) 2^{20} KB   (4) 2^{30} MB

Answer the questions on 17 to 19 using the logic circuit given below.
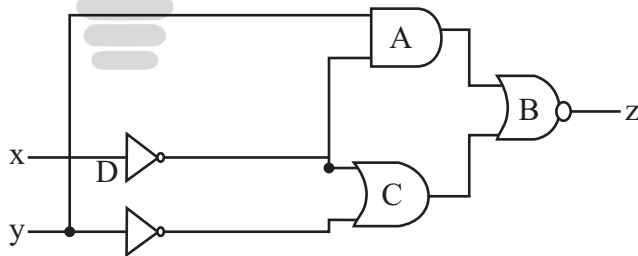
17. Which answer gives the correct names of logic gates A, B, C and D respectively?

    (1) AND, NOT, OR, NOT   (2) NOT, OR, NOR, AND

    (3) OR, NOT, AND, NOR   (4) NAND, OR, NOT, AND

18. What is the Boolean logic expression of the output (Z) of the logic circuit?

    (1) [(x'+y')+(x'.y)]'   (2) [(x'.y')+(x'+y)]'

    (3) x'+y+x'.y'   (4) (x'+y')+(x'.y)'

19. The relationship of the input and the output of the logic circuit correctly represented in ?

(1)

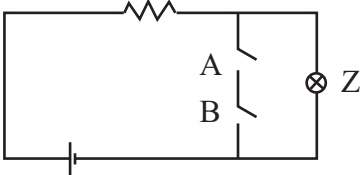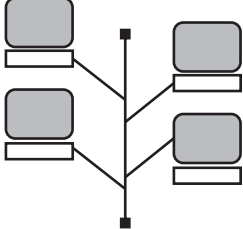| X	Y	Z
0	0	0
0	1	1
1	0	1
1	1	1

(2)

X	Y	Z
0	0	1
0	1	1
1	0	1
1	1	0

(3)

X	Y	Z
0	0	1
0	1	0
1	0	0
1	1	1

(4)

X	Y	Z
0	0	0
0	1	0
1	0	0
1	1	1

20. What is the logic gate that is represented by electric circuit given below? (A, B, = input, z = output)
    (1) NOT
    (2) NOR
    (3) NAND
    (4) AND

21. What is the answer that contains only the types of computers classified according to the technology?
    (1) Analog Computers, Hybrid Computers, Super Computers
    (2) Digital Computers, Analog Computers, Hybrid Computers
    (3) Super Computers, Mini Computers, Digital Computers
    (4) Mini Computers, Mainframe Computers, Super Computers

22. Which device outputs the softcopies?
    (1) Multimedia Projector   (2) Plotter
    (3) Head Phones   (4) Optical Character Recognition

23. What is the correct answer which contains the correct descending order according to the capacity of the following secondary storages devices?
    A - Compact Disk
    B - Floppy Disk
    C - USB Flash Drive
    D - Blue Ray Disk
    (1) D C B A   (2) D C A B   (3) A D B C   (4) B A C D

24. Select the correct statement.
    A. Walki-Talki
    B. Fax Machine
    C. Video Conferencing
    (1) Data communication modes of A, B and C are Simplex, Half Duplex and Full Duplex respectively.
    (2) While A, B are Full Duplex and C is Half Duplex data communication mode.
    (3) While A, B are Half Duplex and C is Simplex data communication mode.
    (4) While A, B are Half Duplex and C is Full Duplex data communication mode.

25. What is an occasion where the infrared radiation is used for data communication?
    (1) Remote controller of the television   (2) Computer networking
    (3) Satellite communication   (4) Router

26. What is the correct answer that shows the computer network topology of the diagram given above?
    (1) Tree Topology
    (2) Bus Topology
    (3) Star Topology
    (4) Mesh Topology

27. Select the correct statement about the computer network?
    (1) The resource can be shared whereas centralized software control is not possible.
    (2) There is more room to spread computer viruses whereas need large space for storing data.
    (3) Data and information can be stored safely whereas there is less protection for data.
    (4) Computer errors are minimal whereas no need of special training.

28. What is the most suitable input device for marking multiple Choice Questions answer sheet?

    (1)   Optical Mark Recognition   (2)   Optical Character Recognition

    (3)   Magnetic Ink Character Reader   (4)   Flat Bed Scanner

29. Some word processing software is below. What is the example for the Free and Open Source Software from them?

    (1)   Word Perfect   (2)   Microsoft Office Word

    (3)   Libre Office Writer   (4)   Frame Maker

30. What is the place where the number of pages, words and the language used; zooming can be viewed in a document created using word processing software ?

    (1)   Status Bar   (2)   Scroll Bar

    (3)   Title Bar   (4)   Quick Access Tool Bar

31. Some steps of selecting items in word processing software are given below.

    A -   Double clicking the mouse on a word that word can be selected.

    B -   Mouse should be clicked three times on the paragraph to select a paragraph in a document

    C -   Whole document can be selected by pressing Ctrl + A on the keyboard.

    Which of the above statement/s is/ are true?

    (1)   A and B Only   (2)   A and C Only

    (3)   B and C Only   (4)   All A, B and C

32. Which answer gives the labels of correct order of column B with appropriate short cut keys in Column A in the table given below?

	A	B
(1) ACBD	Ctrl+N	A - Cut letters/objects in a document
(2) BCAD	Ctrl+H	B - Save the document
(3) CDAB	Ctrl+X	C - Get a new document
(4) DCAB	Ctrl+S	D - Replace words

33. What is the short cut key for checking spelling and grammer?

    (1)   F1   (2) F5   (3) F7   (4) F10

34. What is the symbol use for the tool 'Drop Cap' from the symbols given below?

    (1) Aa▾   (2) AA   (3) A   (4) A≡

35. Consider the Components of electronic spreadsheet software given in the following tables.

Component	Description
1. Formulae Bar	A. Displays the cell in which data is entered.
2. Inset Function	B. Shows active cell address
3. Name Box	C. Opens dialog box to create the formulae
4. Active Cell	D. Displays the contents of a cell to view the formullae

    Which answer gives appropriate description of the second column relevant to the components in the first column respectively ?

    (1) DCBA   (2) CDBA   (3) DCAB   (4) CDAB

36. What is the key combination that can be used to move the bottom right cell of the work sheet in electronic spreadsheet software.

    (1) Ctrl + Home   (2) Ctrl + Page Up

    (3) Ctrl + Down   (4) Ctrl + End

37. What will be the value shown in the cell after using the formulae = 2^3/(4-2)*3^2 in a cell of an electronic spread sheet software?

    (1) 0   (2) 36   (3) 0.44   (4) -16

38. If the function = COUNT (A1: A9) has been entered in a cell A10 of the spread sheet as given in the figure, what is the answer that can be seen in the A10 cell?

    (1) 9

    (2) 8

    (3) 7

    (4) 5

	A	B
1	25	
2	saman	
3	69	
4	10-A	
5	85	
6		
7	B7	
8	78	
9	52	
10		

39. What is the tool that can be used to get the word "Total Marks" in a D1 cell as two rows in a single cell as shown in the part of spread sheet given below?

    (1) Wrap Text

    (2) Merge Cells

    (3) Shrink to fit

    (4) Orientation

	A	B	C	D	E
1	Name	Mark 1	Marks 2	Total Marks	
2	Wasana	78	85	163	
3	Janidu	69	74	143	
4	Dineth	72	76	148	
5					

40. What is the Robot which acquired the world first citizenship?

    (1) Asimo   (2) Petman   (3) Nao   (4) Sophia

PROVINCIAL DEPARTMENT OF EDUCATION NORTH WESTERN PROVINCE

SECOND TERM TEST - 2018

Grade 10   **Information and Communication Technology - II**   **Three hours**

Note:
- Answer five questions only including the first question and four others.
- First question carries 20 marks and each of the other questions carries 10 marks.

01. Give short and **exact** answers.

    (i)   Select only the information from the following and write the lables of them.

        (A)   Annual rainfall values of the previous fifty years in Sri Lanka.

        (B)   Annual rainfall of Sri Lanka in the year 2018

        (C)   It rains to Sri Lanka.

        (D)   Monthly sales values of a shop for previous 12 months.

        (E)   Assessment result report of a student.

    (ii) Give three specific advantages for a customer of online shopping.

    (iii) Name the generation of the computer in the computer evolution which uses the Key Board and the Mouse.

    (iv) Consider the table given below containing the devices that gives computer hard copies and match appropriately from the items in the first column with the items in the second column and write only the pairs of labels in your answer sheet.

Devices that gives computer hard copies	Specific characteristic of it
a) Dot Matrix Printer	e) Dry ink powder is used
b) Laser Printer	f) Liquid ink is used
c) Bubble Jet Printer	g) Having Noise
d) Thermal Printer	h) Used in the Automatic Teller Machines

    (v)   Name the most appropriate guided media for the following occasions.

        (a)   Connecting computers of a local area network inside a room.

        (b)   CCTV Cables

        (c)   Modern telecommunication cables

        (d)   Short distance data transmission across an area with electromagnetic interference.

    (vi) If the sky blue colour is made by mixing Red, Green and Blue colours 50, 153 and 204 respectively (#RGB) represent the sky blue colour using hexadecimal digits.

(vii) Draw the truth table to show all possible outputs 'D' of the inputs A, B and C in the integrated circuit given below.
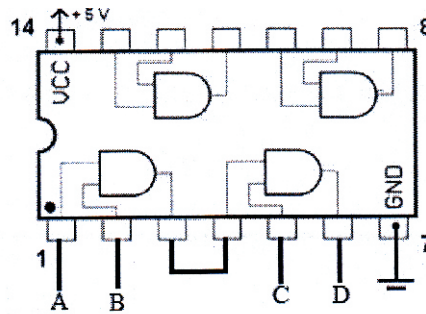

(viii) Some operating system requires disk defragmentation and some are not required. Do you agree to this statement? Give reasons for your answers.

(ix) Write the steps of using thesaurus in a word processing software.

(x) Given below is a part of a spreadsheet which has been used to analyze the marks of students. (Analyze marks of one student has been taken using a formula and it has been copied using fill handle) Write the formula using a function which can be used to get the average of Suraj as given in the spreadsheet.

	A	B	C	D	E	F
1	Name	Subject and Marks				
2		Maths	Science	ICT	Average marks	
3	Nanawathi	89	78	56	74.33	
4	Indiraj	85	88	61	78.00	
5	Ipsal	ABSENT	ABSENT	95	31.67	
6	Suraj	45	56	ABSENT	33.67	
7						

02. A sketch of an automated water system of a green house is given below. Answer the questions about it.

A and B are a moisture sensor and a temperature sensor respectively and C is a manual switch. Signals are given to the water supply system from the Logic circuit according to the input signals from the A, B and C sensors to open the water supply outlet to the field. (If the output signal from the logic circuit = 1, it opens the water outlet and if it is zero it does not open the water supply. (Moist soil = 1, high temperature=1, Manual switch open (on)=1)
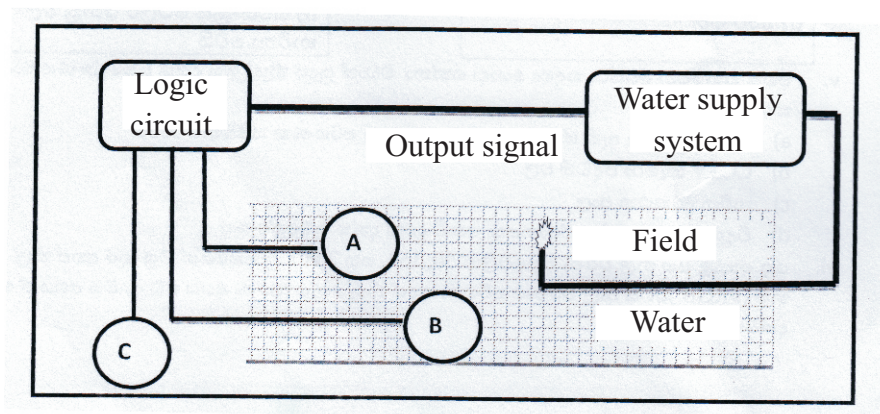
Water supply should be activated only if the soil is less moist (dry) and high temperature or manual switch is opened (on)

(i) Complete the table given below to show the relationship between all possible inputs and outputs of the above logic circuit in the water system.

A	B	C	Output

(ii) Draw a logic circuit to get the output of above part (i)

(iii) State the Boolean logic expression of the output for the above logic circuit in terms of inputs.

03. A word processing document is given below. Answer the given questions considering the document.

(i) Write four tools which have been used to format the title shown in the label A.

(ii) What are the tools used to format or create the things displayed in B, C, D and E?

(iii) If the above document has been created using the concept of cloud computing, write two advantages of it.

(iv) Write two word processing software, which are used to create word processing documents by using the cloud computing concept.

04. (i) Name three types of primary memory and state the basic function of each part.

(ii) A diagram of computer ports is given below. Name the ports labeled as A, B, C, D, E and F and mention one device for each of the ports that can connected.
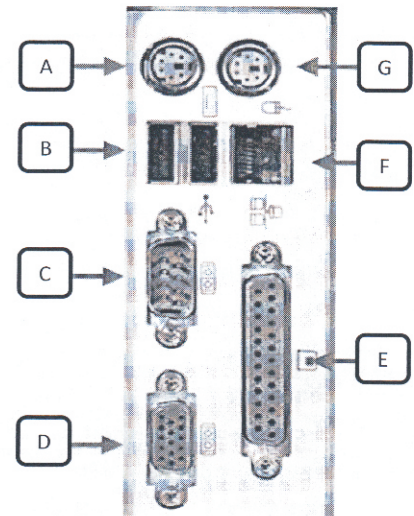
(iii) What is the type of computer network, created by connecting all divisional secretariat offices in Sri Lanka?

05. Sayuri is a residential student and she notes down the details of her receipt and payment in a spreadsheet. The spreadsheet of her receipts and payments of this term is given below.

	A	B	C	D	E	F
1	Receipts and Payments Report (Sayuri - Second Term)					
2						
3	Month	Cash Receipts	Accomadation Expenses	Travelling Expenses	Other Expenses	Total Expenses
4	May	Rs. 7,800.00	Rs. 5,750.00	Rs. 750.00	Rs. 325.00	Rs. 6,825.00
5	June	Rs. 7,600.00	Rs. 6,000.00	Rs. 1,100.00	Rs. 475.00	Rs. 7,575.00
6	July	Rs. 7,750.00	Rs. 6,250.00	Rs. 1,325.00	Rs. 400.00	Rs. 7,975.00
7	Total expenses in the term					Rs. 22,375.00
8	Maximum total expenses done in a month					Rs. 7,975.00
9	Total cash receipt in a term					Rs. 23,150.00
10	Cash in hand at the end of the term					Rs. 775.00
11	Percentage of the cash in hand from the total amount of cash recipt					3.3

(i) State the formula that should be in F4 cell to calculate her total expenses of May, using the cell references only.

(ii) What is the function that should be in F8 cell to calculate the maximum total expenses in the second term?

(iii) Write the formula that should be in F9 cell to find the total cash receipts of this term by using the functions.

(iv) What is the formula that should be in F10 cell to calculate the cash in hand at the end of the term?

(v) What is the formula that should be in F11 cell to find the percentage of the cach in hand from the total cash receipts?

(Percentage of cash in hand = (cash in hand/ Total cash receipts*100)

kalvi.lk

06. (i) State the 8GB capacity in bits. (Give the answers in the power of two)

(ii) Convert 45_{eight} into hexadecimal equivalent. Stops should be stated.

(iii) State the BCD equivalent for the number 954.

(iv) Price of a bag is Rs. 425 and price of a basket is Rs. 250.

    (a) State the price of the bag in binary number system.

    (b) State the price of the basket in hexadecimal number system.

    (c) State the total cost of purchasing the bag and a basket in the octal number system.

07. (i) Robots made from modern technology are used in factories today. Write three advantages of using robots instead of using human labor force..

    (a) Business communities are able to do their business activities very conveniently with the help of video conferencing technology. Write two advantages of the Business communities from video conferencing.

(ii) Fill in the blanks.

- .... is the word's first mathematical machine invented by Blaise pascal.

- .... is considered as the world's first programmer.

- Graphical User Interface Operating Systems were used in .... of computers.

- Operating system is an example for the .... software.

(Application, Ada Augusta Lovelace, Mark I, Adding Machine, Fourth Generation, Third Generation, System, Marie Curie, Alan Turing)

(iii) Write a difference between a Command Line Interface Operating System and a Graphical User Interface Operating System.

(iv) State the software relevant for the file types that belongs to the file extensions given below.

    a. odt

    b. xlsx

    c. pptx

    d. txt

Answer Sheet - Paper I

01. (3)   02. (4)   03. (3)   04. (4)   05. (2)   06. (2)   07. (4)   08. (4)   09. (3)   10. (4)

11. (1)   12. (2)   13. (2)   14. (3)   15. (2)   16. (3)   17. (1)   18. (1)   19. (4)   20. (3)

21. (2)   22. (1)   23. (2)   24. (4)   25. (1)   26. (2)   27. (3)   28. (1)   29. (3)   30. (1)

31. (4)   32. (4)   33. (3)   34. (4)   35. (1)   36. (4)   37. (2)   38. (4)   39. (1)   40. (4)

Paper - II

(01) (i)   B, E   (2 marks)

(ii)
- Shopping can be done all over the world
- More selection opportunities
- Able to see things and order at one's convenient place
- Moe shopping opportunities in less time period/ less time consuming
- Ability to do online payments (Two marks for three correct answers and one mark for answers less than two)

(iii)   Third generation (02 marks)

(iv)   A - g   B - e   C - f   D - h   (02 marks)

(v)   A - Twisted Pair /(UTP)/STP   B - Coaxial Cable

C - Optical fibres   D - Coaxial cable or Shielded Twisted pair

(0.5 marks for each correct answer and total of Two marks)

(vi)   R = 32, G = 99, B = CC or #3299CC (Two marks for three correct answers and one mark for answers less than two)

(vii)

A	B	C	D
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

(viii)   Yes ,agreed to the statement Linux operating system makes sure that ample space is left between the saved files for further extensions. (Two marks)

(ix)   Select the relevant word

Select Review

Select Thesaurus

Select the suitable word   (02m.)

(x)   =SUM(B3:D3) /3   =SUM(B3,C3,D3)/3   =(SUM(B3,C3)+D3)/3   =(SUM(C3,D3)+B3)/3

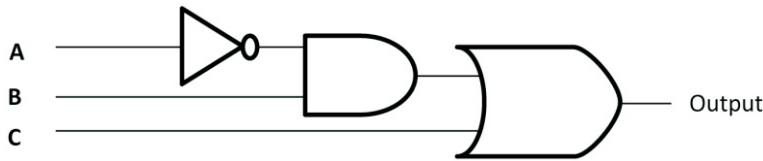=(SUM(B3,D3)+C3)/3   = (SUM(B3)+C3+D3)/3   like answer (Two marks)

Answer Sheet

(02) (i)

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

For Correct truth table(Three marks)

(ii) For correct circuit (Four marks)

(iii) $\overline{A} . B . C$ (Three marks)

(03) (i) Underline Italic Bold Font size Centre (Two marks for four facts)

(ii) B - Drop Capital   C - Insert Picture / size / colour / text wrap
D - Bullet List   E- shape/boarder (One mark for each correct answer and total of four marks)

(iii)
- Less expenses for software
- No maintenance problems
- Updated software can be used
- Efficiency is higher
- Less use of hard disk space   (Two marks for two points)

(iv) Google docs/Office 365   (Like any of the correct two software– two marks)

(04) (i) Cache memory – Temporary hold the data frequently used by the CPU
Read only memory – Storing a BIOS program which is required for booting up the computer
Random Access memory – Temporary hold the data required for CPU functions

     (For three answers three marks)

(ii) A – Keyboard or PS/2   B – USB port   C – Serial port   D – VGA Port   E – Parallel port
     (Five marks for five answers)

(iii) WAN (Wide area Network) (One mark)

(05) (i) =C4+D4+E4 =SUM(C4,D4,E4) or =SUM(C4:E4)   (Two marks)
(ii) =max (f4 : f6) . =MAX(F4,F5,F6)   (Two marks)
(iii) = SUM(F4,F5,F6) or = SUM(.F4:F6)   (Two marks)
(iv) =F9-F7   (Two marks)
(v) =F10/F9*100 or =F10*100/F9 or =F10/F9%   (Two marks)

(06) (i) $2_{10} \times 2_{10} \times 2_{10} \times 2_3 \times 2_3 = 2_{36}$ (Two marks)

(ii) $1 \times 5 = 5$

$4 \times 8 = 32$ (Two marks)

$5 + 32 = 37$

(iii) $954_{10} = 1001\ 0101\ 0100_{BCD}$. (Two marks)

(iv) a) $425_{10} = 1\ 1010\ 1001_2$ (Two marks)

b) $FA_{sixteen}$ (Two marks)

c) 1243_{eight} (Two marks)

(07) (i) Ability to work continuously for 24 hours

Not tired

High Efficiency

High Accuracy

Cleanliness (Two marks for three correct answers)

(ii) Making business conferences among people in difference locations.

No special places required for conferences

Saving time for transportation (Two marks for two correct answers)

(iii) 1 Adding machine   2. Ada Augusta Lovelace

3. Fourth generation   4. System (0.5 marks for each correct answer and total of two marks)

(iv)

Command Line Interface	Graphical User Interface
Commands should be always given	Commands can be selected
Lots of commands should be in mined	Commands no need to be in mind
Mouse cannot be used	Mouse can be used
Cannot use WIMP	WIMP can be used

(Two marks for one correct answer)

(v) .odt – Liber Office writer

.xlsx – Microsoft Office Excel

.pptx – Microsoft Office Power point

txt - Text editor / Not pad

(0.5 marks for each correct answer and total of two marks)