වයඹ පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
Provincial Department of Education - NWP

| 80 | E | I |

පළමු වාර පරීක්ෂණය - 10 ශ්‍රේණිය - 2018
First Term Test - Grade 10 - 2018

| Index No .... | Information & Communication Technology - I | Time : One Hour |

Note:
- answer all question
- In each of the question 1 to 40 pick one of the alternatives (1). (2). (3), (4) which is correct of most appropriate.
- Mark a cross (X) on the number corresponding to your choice in the answer sheet provided.

1. Select the statement that describes information and communication technology best.
   1. A popular subject owing to the development of information communication.
   2. A subject that describe the method of data processing and storage.
   3. A subject that describes the technical know-how of creating information, data storage and data communication.
   4. A subject that gives a deep knowledge about information and communication.

2. Consider the following statements including the services provider by -E- Government
   A. Details about investment opportunities
   B. Renewal of vehicle licenses
   C. Support in tourism industry
   D. Services provided for paying bills
   What are the expressions which only show the connection of the government with citizens.
   1. A and B   2. B and C   3. B and D   4. A and C

3. An occasion in which one cannot use information and communication technology as a pupil
   1. Involvement of educational activities using electronic slide show.
   2. Use of videos with experiment s.
   3. Learning through CD ROM media.
   4. Studying the methods used in teaching.

4. What is meant by the abbreviation WBL
   1. Web Based Learning   2. Web Based Teaching
   3. another name for WWW   4. keep away from using we sites

5. Consider the following statement with regard to online distance learning
   A. ability to connect with study units being at any place
   B. ability to study with the help of an online tutor
   C. ability to study learning units with the aid of CDs sent by post
   What is the answer with true statement from among the statement
   1. A and B   2. only B   3. A and C   4. A, B and C

6. Which is not a service of telemedicine
   1. Remote clinical care   2. e-channeling
   3. Home health medicine   3. Medical Teletraining

7. Consider the statement given below with regard to data and information
   A. Meaning full information is the output when raw data are processed
   B. A piece of information when correct is of high accuracy
   C. Information is more frequently used in decision marking than data
   What is the answer with correct statements from those given above
   1. A and B   2. A and C   3. B and C   4. A, B and C

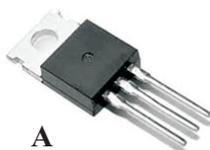8. Here are the steps of connecting to the internet by scanning the QR code

| A | Opening the website | | B | Scanning the QR code |

| C | Decoding and connecting to website |

What is the answer when they are arrange in the order of input process and out put.
1. ABC   2. BCA   3. CBA   4. BAC

9. What is **not** an advantage of using online shopping.
   1. Open round the clock of 24 hours   2. Payments possible via debit cards
   3. Ability to buy the item from the shop it self   4. Ability to observe items before buying

10. What is the answer having only the special characteristics of the computer
    1. accuracy, confidentiality, intelligence ,speed
    2. speed, accuracy, non-inteligence, versatility
    3. versatility, intelligence, accuracy, not versatile
    4. speed ,accuracy, intelligence, versatility

11. What is the correct answer when the statements in column **A** are matched with the computer types in column **B**

Column A	Column B
Produced for personal use and is portable	A Mainframe Computer
A powerful computer type used in nuclear events, space exploration etc.	B Tablet Computer
A computer having a number of terminals	C Super computer
A type of multi-tasking computer very popular at present	D Laptop Computer

1. DCAB   2. DCBA   3. DABC   4. DBAC

12. What is the first computer in which punch cards were used in the evolution of computer
    1. Pascaline   2. Analytical Engine   3. Mark 1   4. ENIAC

13. What is the **irrelevant** statement regarding the first generation computers
    1. computer are large in size   2. High heat generation
    3. Birth of operating systems   4. Low data processing speed

14. Given below are the data processing units used in the evolution of the computer. What is the answer when they are arranged according the generations
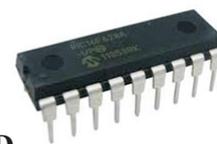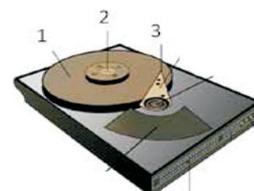

A   B   C   D
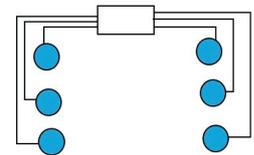
1. DCAB   2. BACD   3. BADC   4. CDAB

15. Consider the following statements regarding the computer architecture
    A. Data and instruction fed to the computer are sorted in the primary memory for processing
    B. The Control Units in the processor issues control signals to all the components attached to the computer system
    C. Data and instructions are sent to the Arithmetic & Logical Unit from the main memory for calculation
    What is the answer with correct statements from those given above?
    1. A and B   2. A and C   3. B and C   4. A, B and C

16. What is the answer that shows the technological equipment used in computer generations for processing data according to the **descending order of processing speed**
    1. vacuum tube, transistor, integrated circuit, LSIC , VLSIC
    2. LSIC, VLSIC, vacuum tube , transistor, integrated circuit
    3. vacuum tube , transistor, LSIC, VLSIC, integrated circuit
    4. VLSIC, LSIC, integrated circuit ,transistor , vacuum tube

17. What is the correct statement from those given below regarding input devices
    1. devices used to input data to computer
    2. devices used to input instructions to the computer
    3. Devices used to input both data and instruction to th computer
    4. Devices used to output processed data

18. Select the pair of output devices used in the computer system
    1. keyboard and mouse   2. printer and monitor
    3. monitor and web-cam   4. speaker and microphone

19. The scientists who processed the adding machine and the analytical engine respectively
    1. Blaise pascal and John Napier   2. Charles Babbage and Bill Gates
    3. Blaise pascal and Charles Babbage   3. Charles Babbage and Blaise pascal

20. What is the correct answer that shows the correct functions of the OCR And MICR
    1. To recognize optical characters and to examine multiple choice questions
    2. To examine multiple choice questions and to check the number in checks
    3. To check the number in checks and character recognition
    4. Character recognition and to check the number in checks

21. Consider the following expression.
    Tharindu chats with a friend abroad using the web cam and microphone in the computer. The two devices used respectively by Tharindu belong to.
    1. an input device and an output device   2. two output devices
    3. two input devices   4. output devices and input devices

22. Some factors that you should consider when using a printer are given below
    A. higher quality
    B. Less cost for printout
    C. Much time taken to get printouts
    1. A and B   2. A and B   3. B and C   4. A, B and C

23. What answer shows the technology used in hard disk , DVD and magnetic tape respectively
    1. magnetic , optical, optical   2. optical, magnetic, optical
    3. magnetic , optical ,magnetic   4. magnetic ,optical, solid state

24. Given below is the diagram of the interior of hard disk what is the correct answer showing the components numbered 1, 2, and 3
    1. platter, spindle, head   2. spindle, head, platter
    3. head, platter, spindle   4. platter, spindle, actuator

25. Consider the following statements
    A. Television is an example for full duplex transmission
    B. Telephone is an example for half - duplex data transmission
    C. Radio is an example for simplex data transmission
    1. A and B   2. A and C   3. Only C   4. A, B and C

26. What is the fastest data transmission mode having light signals to transmit data that does not influence magnetic waves
    1. coaxial cable   2. fiber optic   3. twisted pair cable   4. micro waves

27. What is the network topology shown by the diagram given below
    1. start topology   2. bus topology
    3. ring topology   4. mesh topology

28. Amila with an aim to expedite the work of his institute suggested to network
    all the computers in it. What is **not** an advantage Amila can get by networking the computers
    1. ability to share the resources in one computer with the others
    2. ability to control all the computers centrally
    3. less electricity consumption
    4. ability to share data and information between computers

29. The pupils of the ICT society of Dewapura vidiyalaya networked all ten computers of clerical staff with a
    switch at the office as a project
    What is the answer showing the network topology used by them together with the network type according
    to geography distribution of computers in the network
    1. bus topology and local area network   2. star topology and wide area network
    3. Ring topology and local area network   4. Start topology and local area network

30. What is the answer having only valid BCD codes?
    1. 1100, 1010, 1000, 1001   2. 1001, 0010, 0111, 1000
    3. 1010, 1011, 1001, 0101   4. 1001, 1110, 1010, 1100

31. Select the least significant digit (LSD) of the decimal number 30.54210.
    1. 0   2. 1   3. 2   4. 3

32. What is the decimal equivalent to the binary number 101101
    1. 22   2. 40   3. 44   4. 45

33. what is the binary equivalent to the decimal number 63
    1. 111110_2 2. 111111_2 3. 100010_2 4. 101010_2

34. A pupil has scored 65 for Mathematic and 72 for English what answer shows the total of those two marks as
    a binary number
    1. 100010111_2 2. 10001001_2 3. 1001000_2 4. 10010011_2

35. what is the binary equivalent to the octal number 674?
    1. 110101100_2 2. 111011100_2 3. 110111100_2 4. 110111101_2

36. Select the answer that includes the assenting order of the number 76_8, 52_{10}, $A3_{16}$ and 564_8
    1. 52_{10}, 76_8, $A3_{16}$, 564_8 2. 46_8, 52_{10}, $A3_{16}$, 564_8
    3. 564_8, 52_{10}, 76_8, $A3_{16}$ 4. $A3_{16}$, 76_8, 52_{10}, 564_8

37. What is/are the number system /s that 1321_x belongs to
    1. Octal   2. octal and decimal
    3. binary, octal and decimal   4. binary , octal, decimal and hexa decimal

38. What is the difference in hexadecimal, of the two decimal numbers 297 and 379 ?
    1. A216   2. 7816   3. B216   4. 5216

39. Which of the following is equivalent to 2MB
    1. $2^{20}Bx2$ 2. $2^{30}KBx2$ 3. $2^{21}KB$ 4. $2x2x2^{20}B$

40. Consider the statement given below
    A. Introduction of ICT as a bucket subject in grade 10
    B. Introduction of General Information Technology as a compulsory subject at the A/L
    C. Exchanging the ICT knowledge of rural children by establishing institutes like Nenasala and Computer
       Resource Centers
    What are statements that go a long way in developing the ICT literacy in Sri Lanka
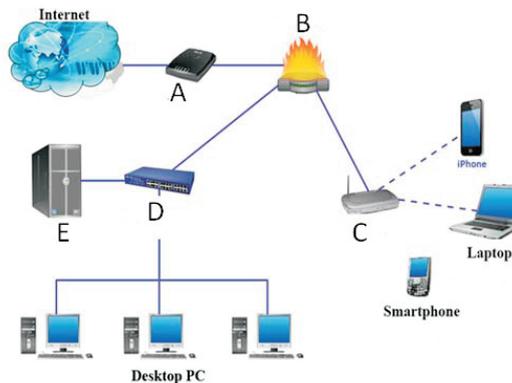   1. only A and B   2. Only A and C   3. Only B and C   4. All A, B and C

80 | E | II

පළමු වාර පරීක්ෂණය - 10 ශ්‍රේණිය - 2018
First Term Test - Grade 10 - 2018

| Index No .... | **Information & Communication Technology - II** | Time : Two Hours |

Note: ● answer five questions including the first question.

01. write appropriate answer
   1. Name two coding symbols printed on the label of a product to get more detail about that particular product
   2. Information obtained by processing data is used in decision making. Such information should be of good quali. So name four characteristics of the quality information
   3. There are many high tech machines in the health sector which help people in the diagnosis and treatment of diseases. Name four such machne s used in the health sector
   4. Name two advantages of USB flash memory over a DVD RW
   5. fill in the blanks named A, B, C and D of the following table according to the classification of computer based on computer generations.

Computer Genaration	Main Technical Equipment
First Generation	A ....
Second Generation	B ....
Third Generation	C ....
Forth Generation	D ....

   6. Secondary storage devices can be classified under three main categories according to technology. Name two of them and write one example for each.
   7. There are two types of data transmission media called guide and unguided .write two example for each medium.
   8. Convert the following binary number 11001110 into its equivalent hexadecimal number
   9. What the octal number equivalent to the number of bytes in 1 KB
   10. Information and Communication Technology helps us to perform our day today activities efficiently and at the same time it can bring forth undesirable effects to you. Name two such undescribable effects it brings to the entire society.   (mark 2x10=20)

02. A. name a devices used in a system to fulfill the requirements of each situation given below
   1. Withdrawing money using a debit card
   2. Obtaining further information about advertisements in a news paper by scanning the QR code
   3. Recording the attendance of workers of an organization
   4. Getting information from the bar code of a packaging of a product bought from a super marker
                                                                          (marks 1/2x4=2)
   B. 1. Write two service offered by e-government to businessmen   (mark =1)
   2. Write two features of distance education   (mark =2)
   3. Write three ways of applying ICT which can be used by a farmer to develop his agricultural activities   (mark=3)
   4. Write two occasions were ICT is used in the field of transport   (mark=2)

03. The evolution of the computer with the invention of the abacus, has paved the way to the modern computers
   A. select the correct answer for the following statement with regard to the evolution of computer from those given below
   1. The world's first ever mechanical adding machine was invented by ....
   2. A machine called Analytical Engine was invented by Charles Babbage using the ....

4. .... who wrote programs for the first computer is considered to be the worlds first computer programmer.
5. Punch card system which was invented by .... can be introduced as a concept of sorting data in computer
(Ada augusta Lovelace, Joseph jacquard, punched card, Blaise pascal, storage, mouchly & Eckert)

(marks 1x5 = 5)

B. Many significant changes have occurred during the evolution of the computer form the first generation to the fifth generation
1. Write down three technological changes that came in to being during the evolution of the computer

(mark=1x3)

2. The computer which evolved with the three basic concepts of input, process and output has now developed to a level of doing complex tasks like v,oice recognition character recognition and etc. Write down two advantages in the fifth generation computers when compared with early computer generation

(mark=1x2)

04. The teacher in charge of ICT in Idoregama Maha Vidyalaya wants to connect all the ten computers in the computer lab in order t build a network.

A. 1. Name three types of computer networks among them and name the most suitable type of network for the computer lab of Idoragama Maha Vidyalaya

(mark=1)

2. The teacher further says that a network switch is more suitable than a hub to develop a network. Write down a reason for her statement..

(mark=2)

3. Name four network topologies and Draw two of them.

(mark=2)

B. write answer with the help of the following diagram

1. Name the components named A, B, C and E in the above diagram

(mark=2)

2. Describe the function of A in the above network

(mark=1)

3. Write down two advantages and two disadvantages of computer network

(mark=2)

05. A. The base value of a number system is determined by the number of digits used in it. fill in the following table, according to that.

	Base value of the number system	The maximum number of digit used in the number system
1	2	....
2	....	7
3	10	....
4	16	....

B. Ravindu got.Rs.500 from his mother to buy a book. The price of the book is Rs.606_{eight} .from the balance he bough two pens that cost $F_{sixteen}$ each.
1. write the price of the book as adecimal number (mark=2)

2. Write the total amount of money he spent for the book and the two pens as a decimal number. (mark=2)
3. Write the balance he got after purchasing them as a binary number. (mark=1)
4. Write the most significant digits (MSD) and the least significant digits (LSD) of the numbers given below.

Numbers	MSD	LSD
31	....	....
12.500	....	....
0.0032	....	....

06. A. Mention whether the following statement are true / false.
   a. If the base value of a certain number system isn the highest digit it can represent is (n+ 1).
   b. Any digit in the octal number system can be represented by three binary digits
   c. There are only two digits common to all the four number system binary,octal ,decimal and hexadecimal.
   d. The number of characters represented by ASCII coding system is greater than those represented by EBCDIC coding system.
   e. The characters in the languages Sinhala and Tamil can be represented by Unicode. (mark=1x5)

B. The number of characters are determined according to the number of bits used in different according systems. Complete the following table accordingly.

	Coding System	Number of bits used	Number of charecters represented
A	BCD	....	....
B	ASCII	....	....
C	EBCDIC	....	....
D	Unicode	....	....

C. If in ASCII coding system 'D' is represented by '1000100' ,write the ASCII code used to represent 'F '
(mark=1)

07. 1. Write two uses a person can achieve by studying information communication technology in the present society.
   2. Write two advantages of computerizing the daily activities in a certain institute.
   3. Write two factors to be considered when buying a computer.
   4. Write two advantages of surfing internet as apupil
   5. Name two world –popular computer manufacturing companies. (mark=2x5)

* * *

First Term Test - 2018
Information & Communication Technology - Grade 10
Answer Sheet
Part I

Question no.	Answer	Question no.	Answer	Question no.	Answer	Question no.	Answer
1	3	11	1	21	3	31	2
2	3	12	2	22	1	32	4
3	4	13	3	23	3	33	2
4	1	14	3	24	1	34	2
5	1	15	4	25	3	35	3
6	2	16	4	26	2	36	1
7	4	17	3	27	1	37	2
8	2	18	2	28	3	38	4
9	3	19	3	29	4	39	1
10	2	20	4	30	2	40	4

Part II

01) 1. Bar Code, QR code
    2. Answers like, Accuracy, Applicable, Timely, Cost Reduction, Completeness
    3. CAT / MRI / ECG / EEG / CT / …........
    4. Answers like Speed, Increase of capacity, Luggage convenience, No need of a driver
    5. A - Vacuum tube
        B - Transistors
        C - Integrated Circuits
        D - Large scale integrated circuits
    6. • Magnetic Technology - Magnetic tapes, Magnetic discs, (Hard discs) Flexible Plates
        • Optical Technology - CD/DVD/Blue Ray
        • Solid state Technology - Pen Drive, Memory Chip
    7. Guided - Coaxial cable, Moving Pairs (UTP, STP), Fiber Optic
        Unguided - Radio Transmission, Infrared transmission, Micro waves Transmission
    8. CE_{16} (Steps should be shown)
    9. 2000_8
    10. Addiction, Viral Infection, Misuse of social network websites, Different Health Issues, Crimes

02) A) i. ATM Machines
        ii. QR code reader (Give marks for Mobile Software also)
        iii. Devices like Finger Print reader
        iv. Bar code Reader
    B) i. • Factors like ,Investment Details, Loan Facilities, Bank information
        ii. • Can be connected to learning units from any location '
             • Do not have a specific time table
             • Receiving a e-library link in registration
             • Online assignments and questionnaires

01

iii. • Weather measuring machines   • Automatic insect controller machines
      • Automatic plating and harvesting machines
iv. • Auto lighting boards / Identification ode for expressway / Google maps

03) A) i. Blaise Pascal   ii. Punch card concept
       iii. Mauchly & Eckert   iv. Ada Augusta Lovelace   v. Joseph Marie Jacquard
    B) i. Reduced by size / Increase of speed / Decreasing electricity consumption
       ii. Easy to move around / Production of computers connected with artificial intelligence Authentication of voice and letters

04) A) i. LAN, MAN, WAN
          LAN
       ii. Speed of data transmission Transmission of data is completely dual /   Computers can be uniquely identified in the network
       iii. Ring / Bus / Star / Mesh / Tree (diagrams should be shown)
    B) i. Modem / Firewall / Router / Server
       ii. Converting Analog signals to Digital signals and Digital signals to Analog signals.
       iii. Advantages   -   Sources can be use commonly / Data transfer / Central control
            Disadvantages -   High Cost / Maintenance problem / Security issues

05) A)

The base value of the number system	The maximum number used in the number system/ Number
2	1
8	7
10	9
16	F

    B) i. 390_{10} (Steps should be shown)   ii. 420_{10} (Steps should be shown)
       iii. 1010000_2 (Steps should be shown)
       iv.

	MSD	LSD
31	3	1
12.500	1	5
0.0032	3	2

6) A) a. False   b. True   c. False   d. False   e. True
   B)

	Coding Method	No.of bits used	No.of Sub-imagery that can be Represented
A.	BCD	4	16
B.	ASCII	7	128
C.	EBCDIC	8	256
D.	Unicode	16	65536

   C) 1000110

7) i. • Use Of IT inputs to Facilitate their work / Becoming an essential person in the society
      • Being able to work in a high paid job
   ii. Effectiveness / Accuracy / Saving space
   iii. Cost / Warranty period / Speed / Capacity
   iv. Can download learning resources / Web based learning / Learning Management Systems
   v HP/ Dell/ Asus/ Acer/ Toshiba