



**G.C.E. (A/L) Examination – March 2020**  
**Conducted by Field Work Center (FWC), Thondaimanaru**  
**In Collaboration with the Northern Provincial Education Department**  
**General Information Technology (GIT)**

பொதுத் தகவல் தொழினுட்பவியல் I  
 General Information Technology I

Three hours

01

E

I

Gr. 12 (2021)

**Instructions:**

- ❖ Answer all questions
- ❖ Write down your index number on the space provided.
- ❖ In each of the questions 1 to 40, pick one of the alternatives (1),(2),(3),(4) which is correct or most appropriate.  
Mark a cross (X) on the number corresponding to your choice in the answer sheet provided.
- ❖ No use of calculators.

1. Binary equivalent of  $13_{10}$  is.

(1)  $10101_2$

(2)  $01110_2$

(3)  $11100_2$

(4)  $01101_2$

2. “Difference engine was designed by .....”.

Which of the following is most appropriate to fill the blank in?

(1) Charles Babbage

(2) Ada Augusta Lovelace

(3) Blaise Pascal

(4) John Von Neumann

3. Which of the following is the major technology used in third generation computers?

(1) Vacuum tube

(2) Integrated circuit

(3) Microprocessor

(4) Transistor

4. Which of the following is an operating system?

(1) Unix

(2) Ms-Word

(3) Internet Explorer

(4) Acrobat reader

5. 2 MB =

(1)  $2^{21}$  bytes

(2)  $2^{18}$  bytes

(3)  $2^{16}$  bytes

(4)  $2^{28}$  bytes

6. In computer system, ROM stands for.

(1) Read Off memory

(2) Random Only Memory

(3) Random Only Mechanism

(4) Read Only Memory

7. Which of the following is a magnetic storage medium?

(1) Floppy disk

(2) Memory card

(3) Flash drive

(4) DVD

8. Capacity of a flash drive is 2 GB. If the capacity of an image is 1 MB, how many images could be stored maximum in this drive?

- (1) 512                                      (2) 2048                                      (3) 256                                      (4) 750

9. What is the following I/O port?



- (1) PS/2  
(2) MIDI  
(3) USB  
(4) COM

10. The price of a pine apple is Rs. 160 and the price of a mango is Rs. 40. Total price of a pineapple and a mango is in binary form.

- (1) 10001000                                      (2) 11001000                                      (3) 11011000                                      (4) 11011010

11. When user inserts title of a book in a library information system, its availability is displayed after searching for database. Which of the following gives input, process and output of this system in correct order?

- (1) Title of book, availability of book, searching for database  
(2) Title of book, searching for database, availability of book  
(3) Searching for database, title of book, availability of book  
(4) Searching for database, availability of book, title of book

12. What is the effect of vacuum tubes were replaced by transistors and then transistors were replaced by integrated circuits in central processing unit?

- (1) Both the processing power and power consumption increased  
(2) Processing power increased and power consumption decreased  
(3) Processing power decreased and power consumption increased  
(4) Both the processing power and power consumption decreased

13. Which of the following is suitable to store data permanently in computer?

- (1) Main memory  
(2) Hard disk  
(3) Cache memory  
(4) Register

14. Which of the following is shown data accessing speed of memories in ascending order from left to right?

- (1) Register → Cache memory → Main memory  
(2) Cache memory → Main memory → Register  
(3) Register → Main memory → Cache memory  
(4) Main memory → Cache memory → Register

Consider the following data table to answer questions from 15 to 18.

StudentNo	Name	House	Class
S_01	R.Vinothan	Blue	12A
S_02	A.M.K.Haneefa	Red	13B
S_03	J.N.Perera	Orange	12B
S_04	J.D.Robert	Green	13C

15. Number of fields and records of this table are respectively.

- (1) 5, 4                      (2) 4, 20                      (3) 4, 5                      (4) 4, 4

16. Which of the following is suitable for primary key of this table?

- (1) StudentNo  
(2) Name  
(3) House  
(4) Class

17. Which of the following data type is suitable for the field 'House' in this table?

- (1) Number  
(2) Currency  
(3) Date  
(4) Text

18. Which of the following is correct about primary key used in a relational database table?

- (1) It should be unique  
(2) It should be always first column of the table  
(3) A table can have many primary keys  
(4) Its data type should be always a numeric value

19. Which of the following is a typical function of an operating system?

- (1) Providing type setting facilities for users  
(2) Protecting computer from viruses  
(3) Doing memory management in computer  
(4) Providing software facility to listen to songs for users

20. In a word processing software, which of the following icon can be used to copy a text in a document?

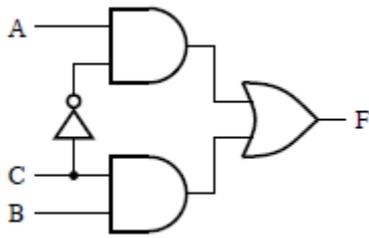
- (1)                       (2)                       (3)                       (4) 

The marks obtained by some students for the subjects are given below in a spreadsheet. Use the following information to answer questions from 21 to 23.

	A	B	C	D	E	F
1	Name of student	Mathematics	Physics	Information & Communication technology	Total marks	Average marks
2	Amala	98	87	76		
3	Kajen	67	76	92		
4	Riswan	78	56	86		
5	Rukmali	91	88	72		
6	Max.marks					
7	Min.marks					

21. What is the formula that can be used to obtain total marks got by Amala in cell E2?  
 (1) = SUM (B2-D2)      (2) = SUM (B2:D2)      (3) = (B2+D2)      (4) SUM = (B2:D2)
22. What is the formula that can be used to obtain average marks got by Amala in cell F2?  
 (1) = AVERAGE (B2:D2)      (2) = AVERAGE (B2-D2)  
 (3) = AVERAGE (B2/D2)      (4) = AVERAGE (B2,D2)
23. What is the formula that can be used to obtain maximum marks by student in Mathematics in cell B6?  
 (1) = MIN (B2:B5)      (2) = SUM (B2\*B5)      (3) = (B2+B5)      (4) = MAX (B2:B5)
24. Consider the followings.  
 A – Cache memory  
 B – Register  
 C – Read only memory  
 Which of the above is/are volatile memory /memories?  
 (1) A only      (2) B only      (3) A,B only      (4) A,B,C all
25. Which of the following is functioned as a pointing device?  
 (1) Light pen      (2) Printer      (3) Keyboard      (4) Speaker
26. If ASCII value of character 'A' is 65, what is the ASCII value of 'D' in binary form?  
 (1) 1111100<sub>2</sub>  
 (2) 1100000<sub>2</sub>  
 (3) 1101100<sub>2</sub>  
 (4) 1000100<sub>2</sub>
27. Which of the following is used to measure the clock rate of microprocessor?  
 (1) bps      (2) GHz      (3) KB      (4) bits

28. Which of the following Boolean expression is equivalent to the output F of the following logic circuit?



- (1)  $A + BC$                       (2)  $A . B . C$                       (3)  $\bar{A}BC$                       (4)  $BC + AC$

29. Consider the following truth table.

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

Which of the following logic gate represents the truth table given above?

- (1) AND                      (2) NOT                      (3) NOR                      (4) OR

30. Consider the followings about table created in a word processing software.

- A – It cannot be inserted in a document
- B – Its rows can be removed alone
- C – A column can be added into the table

Which of the above is/are correct?

- (1) A only                      (2) C only                      (3) B,C only                      (4) A,B,C all

31. In a word processing software, the icon  represents.

- (1) Decreasing or increasing font size of a paragraph
- (2) Decreasing or increasing indent of a paragraph
- (3) Decreasing or increasing line spacing of a paragraph
- (4) Deleting paragraph

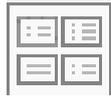
32. Which of the following group contains only the sound files?

- (1) WAV, MID, MP3                      (2) PNG, GIF, WAV                      (3) JPG, TIFF, MP4                      (4) TIFF, PNG, MP3

33. The physical component of computer system is called.

- (1) Hardware                      (2) Software                      (3) Firmware                      (4) Liveware

34. In an electronic presentation software, the following icon represents.



- (1) Slide master      (2) Notes master      (3) Slide sorter      (4) Handout master

35. Which of the following is a database software?

- (1) Ms-Excel      (2) Ms-Access      (3) Ms-Powerpoint      (4) Ms-Word

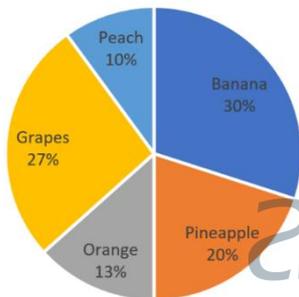
36. In an electronic presentation software, while key N is pressed in a slideshow mode.

- (1) Slide gets white colour  
(2) Slide gets black colour  
(3) Slide moves to previous slide  
(4) Slide moves to next slide

37. In a word processing software, which of the following shortcut key can be used to center a text?

- (1) Ctrl + C      (2) Ctrl + E      (3) Ctrl + X      (4) Ctrl + Z

38. What is the type of chart that is used in a spreadsheet software?



- (1) Pie chart  
(2) Bar chart  
(3) Column chart  
(4) Area chart

39. A computer hardware component used in a desktop computer is given below. What is the name of that hardware?



- (1) CPU  
(2) Power supply  
(3) Motherboard  
(4) RAM

40. Consider the following statements.

A – Installing an anti-virus software

B – Backing up files

C – Removing application software from computer

Which of the above can be the ways to secure computer from malware?

- (1) A only      (2) B only      (3) A, B only      (4) A, B, C all

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பொதுத் தகவல் தொழினுட்பவியல் II  
General Information Technology II

Three hours

01

E

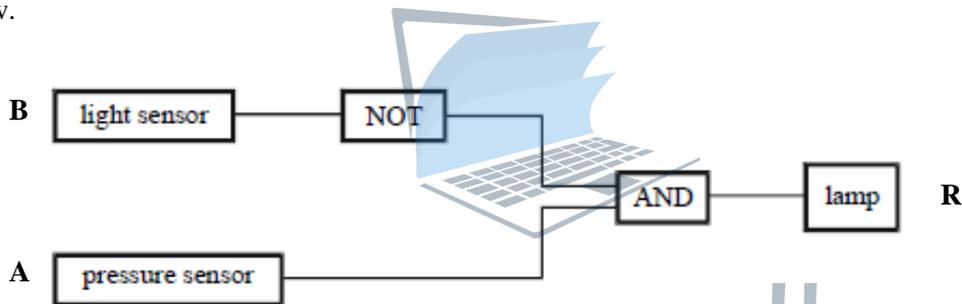
II

Gr. 12 (2021)

Answer any four questions only

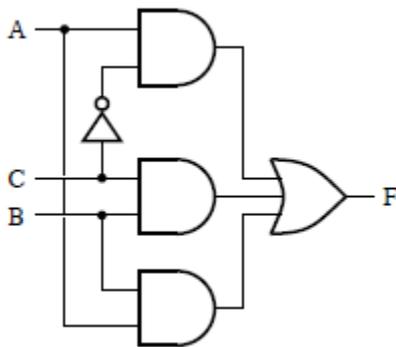
1.

- (a) A lamp outside a front door comes on automatically when it is dark and someone on the doormat outside the front door. A pressure sensor is in ON (1) state when someone stands on the doormat. The light sensor is ON (1) when it is light. The diagram for this system of light is in ON/OFF states is given below.



As shown in the diagram, A and B are inputs and R is output.

- (i) Write down Boolean expression for output of light on state or off state.  
(ii) Construct truth table for this system.
- (b) Write down the output F in the following logic circuit.



(c) Classify the following computer memories whether it is volatile memory or non-volatile memory.

- (i) Cache memory
- (ii) Random Access Memory (RAM)
- (iii) Read Only Memory (ROM)
- (iv) Register

[**Note:** No marks given for additional answers]

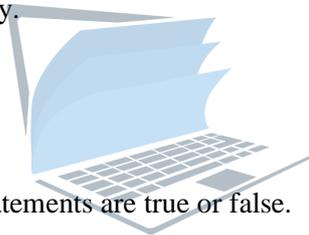
(d) Computers can be classified as four according to their size. What are they?

(e) Consider the particulars in the table given below.

	Column A		Column B
(i)	Video File Format	(a)	.GIF
(ii)	Image File Format	(b)	.AU
(iii)	Audio File Format	(c)	.WMV

Match column A and column B suitably.

2.



(a) Write down whether the following statements are true or false.

- (i) Read only memory (ROM) is a non-volatile memory
- (ii) Hard disk may be used to store data permanently in computer
- (iii) Random access memory (RAM) is built-in inside the central processing unit (CPU)
- (iv) Magnetic field technology is used to write and read data in flash drive
- (v) HDMI port helps to connect computer monitor with computer

(b) Match columns X and Y suitably in the following table.

	X		Y
(i)	Mouse	(a)	Memory
(ii)	Speaker	(b)	Optical medium
(iii)	DVD	(c)	Computer monitor
(iv)	RAM	(d)	Pointing device
(v)	LCD	(e)	Output device

3. Consider the following paragraph formatted using word processing software.

**The Nobel Prize Winner**

**M**artin Luther King, Jr., (January 15, 1929-April 4, 1968) was born Michael Luther King, Jr., but later had his name changed to Martin. His grandfather began the family's long tenure as pastors of the Ebenezer Baptist Church in Atlanta, serving from 1914 to 1931; his father has served from then until the present, and from 1960 until his death Martin Luther acted as co-pastor. Martin Luther attended segregated public schools in Georgia, *graduating from high school at the age of fifteen*; he received the B. A. degree in 1948 from Morehouse College.

After three years of theological study at Crozer Theological Seminary in Pennsylvania where he was elected president of a predominantly white senior class, he was awarded the B.D. in 1951. With a fellowship won at Crozer, he enrolled in graduate studies at Boston University, completing his residence for the doctorate in 1953 and receiving the degree in 1955. In Boston he met and married Coretta Scott, a young woman of uncommon intellectual and artistic attainments. Two sons and two daughters were born into the family.



Write down how the tasks given below are completed by using the following tools in the toolbar.

- (i) Format the text as shown by label ①
- (ii) Increase line spaces among lines in the paragraph as shown by label ④
- (iii) Change the font as shown by label ⑤
- (iv) Align paragraph as show by label ⑥
- (v) Inserting an image as shown by label ③
- (vi) Creating a hyperlink
- (vii) Which feature do you use to format the character as shown by label ② in word processing software?

[Note: Assume that the font size given in the paragraph is 11 and no marks will be awarded if more than the required number of labels are written]

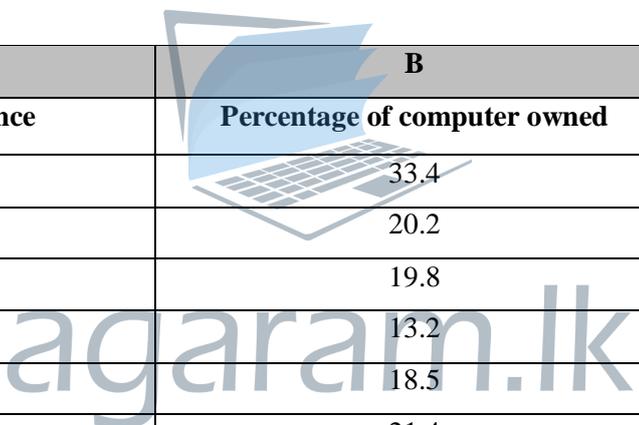
4.

(a) Write down whether the following statements are true, if it is correct, or false, if it is incorrect relating to an electronic presentation software.

- (i) A new slide can be used by pressing shortcut key Ctrl+M
- (ii) A slideshow view may be viewed by pressing shortcut key F5 in a presentation
- (iii) In a slideshow mode, screen may be obtained in white colour by pressing shortcut key B
- (iv) In an electronic presentation file, maximum of 50 slides can only be created.

(b) Consider the following worksheet segment created using spreadsheet software.

It consists of information relating to Percentage of computer owned households by province in each province of Sri Lanka (Data source: [www.statistics.gov.lk](http://www.statistics.gov.lk) year of 2018).



	A	B
1	Province	Percentage of computer owned
2	Western	33.4
3	Central	20.2
4	Southern	19.8
5	Eastern	13.2
6	Northern	18.5
7	North-western	21.4
8	North-central	14.8
9	Uva	14.0
10	Sabaragamuwa	18.1
11	AVERAGE	
12	MAXIMUM	
13	MINIMUM	

- (i) Write down a formula using an appropriate function to find out the average percentage of computer owned households in cell B11.
- (ii) Write down a formula using an appropriate function to find out maximum percentage of computer owned households in cell B12.
- (iii) Write down a formula using an appropriate function to find out minimum percentage of computer owned households in cell B13.
- (iv) Write down any two types of chart that can be used to display the percentage of computer owned households provincially.

5. Consider the following three data tables.

Student

StudentID	Name	Address
S1	A.Jameela	Galle
S2	V.Sutha	Jaffna
S3	A.D.Perera	Kandy

Subject

SubjectID	Name
SU1	ICT
SU2	Physics
SU3	Maths

Result

StudentID	SubjectID	Marks
S1	SU1	88
S1	SU3	91
S2	SU1	76
S3	SU2	70
S2	SU3	80

- (a) What is primary key?
- (b) Write down primary keys with corresponding tables given above.
- (c) Write down foreign keys with corresponding tables given above.
- (d) Write down data types suitable for the following fields.
  - (i) StudentID
  - (ii) Address
  - (iii) SubjectID
  - (iv) Marks

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