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Department of Examinations, Sri Lanka D **இலங்கைப் பரீட்சைத் திணைக்களம்** of Ex
இலங்கைப் பரீட்சைத் திணைக்களம் இலங்கை **Department of Examinations, Sri Lanka**

80 | E | I, II

අධ්‍යයන පොදු සහතික පත්‍ර (සාමාන්‍ය පෙළ) විභාගය, 2020
கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை, 2020
General Certificate of Education (Ord. Level) Examination, 2020

තොරතුරු හා සන්නිවේදන තාක්ෂණය	I, II
தகவல், தொடர்பாடல் தொழினுட்பவியல்	I, II
Information & Communication Technology	I, II

පැය තුනයි	අමතර කියවීම් කාලය	-	මිනිත්තු 10 යි
மூன்று மணித்தியாலம்	மேலதிக வாசிப்பு நேரம்	-	10 நிமிடங்கள்
Three hours	**Additional Reading Time**	-	**10 minutes**

Use additional reading time to go through the question paper, select the questions you will answer and decide which of them you will prioritise.

Information & Communication Technology I

Note :

* *Answer **all** questions.*
* *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 (✗) on the number corresponding to your choice in the answer sheet provided.*
* *Further instructions are given on the back of the answer sheet. Follow them carefully.*

1. Which of the following contains only input devices?
   (1) Multimedia projector, Printer, Keyboard, Mouse
   (2) Printer, Keyboard, Touch screen, Joystick
   (3) Monitor, Light pen, Multimedia projector, Keyboard
   (4) Mouse, Keyboard, Light pen, Joystick

2. The three main functions of an information system are
   (1) input, process and output.
   (2) code, compile and execute.
   (3) design, develop and test.
   (4) select, copy and paste.

3. Which of the following represents the units of measurements of data in computer systems in the **ascending** order of their size?
   (1) Bit, Byte, Kilobyte, Terabyte   (2) Byte, Bit, Kilobyte, Terabyte
   (3) Megabyte, Kilobyte, Bit, Byte   (4) Terabyte, Gigabyte, Megabyte, Kilobyte

4. Which of the following shows the storage devices of a desktop computer in **descending** order of storage capacity?
   (1) Register, Cache memory, Hard disk   (2) Hard disk, RAM, Register
   (3) RAM, Register, Cache memory   (4) RAM, Cache memory, Hard disk

5. Which of the following are true about the secondary memory of a computer system?
   A - Data is not erased even if the computer is switched off
   B - Solid state devices can be used as secondary memory
   C - Secondary memory is a part of the CPU memory
   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C
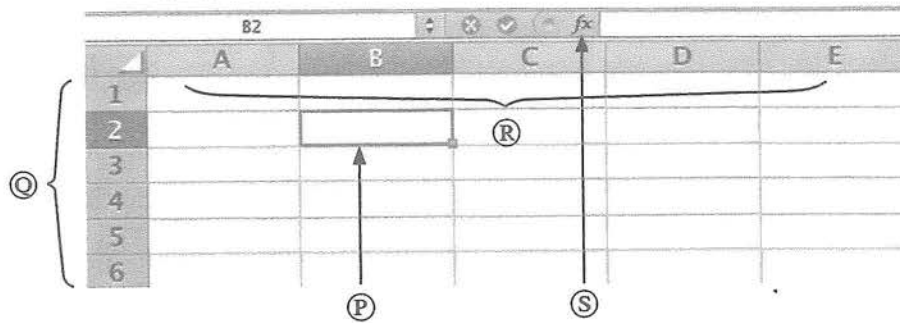
[see page two

6. Which of the following statements are correct regarding the generations of computers?

    A - Transistors were introduced in the first generation computers.
    B - High-level programming languages were used in the second and third generation computers.
    C - Operating systems with graphical user interfaces (GUI) have been used in fourth generation computers.

    (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

7. Kamalasiri accessed the official web portal of government of Sri Lanka (http://www.gov.lk) to get details about the government web directory. Which of the following service was obtained by Kamalasiri from the Sri Lanka government web portal?

    (1) G2B   (2) G2C   (3) G2E   (4) G2G

8. Which of the following contains only the examples of operating systems?

    (1) Android, Ubuntu, Windows 10
    (2) Ubuntu, Windows 10, Windows Explorer
    (3) Android, Windows 10, Windows Explorer
    (4) Android, Ubuntu, Windows Explorer

9. Which of the following statement(s) is/are correct?

    A - A Graphical User Interface (GUI) provides the facility to use the mouse to execute the commands
    B - WIMP stands for Windows, Icons, Menus and Pointer
    C - A Command Line Interface (CLI) is more user-friendly compared to Graphical User Interface (GUI)

    (1) A only   (2) B only   (3) A and B only   (4) All A, B and C

10. Assume that you are the leader of a team assigned to develop a new information system for your school. Which of the following techniques can be used to identify requirements for this system?

    A - Observation
    B - Interviews
    C - Prototyping

    (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

11. Which of the following is the correct order of activities in the Software Development Life Cycle (SDLC)?

    A - Implementation
    B - Requirement identification
    C - Design
    D - Deployment
    E - Testing
    F - Maintenance

    (1) D, B, C, A, E and F   (2) B, D, C, A, F and E
    (3) B, C, A, E, D and F   (4) B, C, D, A, E and F

12. In the given spreadsheet segment, cells A1 and B1 display values of 40 and 50 respectively. After entering the formula =A$1+B$1 to the cell C1, it displays the value 90 in C1. If the formula in cell C1 is copied to the cells C2 and D1, what will be the values displayed in cells C2 and D1 respectively?

C1			fx	=A$1+B$1	
	A	B	C	D	E
1	40	50	90		
2					
3					

    (1) 90 and 90   (2) 90 and 140   (3) 90 and 50   (4) 50 and 90

13. Consider the following spreadsheet segment with four components labelled as Ⓟ, Ⓠ, Ⓡ and Ⓢ.

Which of the following represents the Ⓟ, Ⓠ, Ⓡ and Ⓢ labels in the correct order?
   (1) Active cell, Row headings, Insert function, Column headings
   (2) Active cell, Row headings, Column headings, Insert function
   (3) Insert function, Column headings, Active cell, Row headings
   (4) Active cell, Column headings, Row headings, Insert function

14. Which of the following statement(s) is/are correct for a cell range given as C2:E5 in a spreadsheet?

   A - Total number of rows in this range is three
   B - Geometrical shape of this cell range is a rectangle
   C - Total number of cells in this range is 12

   (1) A only   (2) C only   (3) A and B only   (4) B and C only

15. Which of the following statements are correct regarding the different types of projectors?

   A - Transparent sheets used in overhead projectors always have to be pre-prepared
   B - Images can be included in the slides used in a slide projector
   C - Electronic presentations made using a computer can be displayed through multimedia projectors

   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

16. Saman has a collection of properly formatted documents prepared using Microsoft Word and Libre Office Writer. He needs to save those documents without any formatting in order to proof read. What would be the most suitable file extension type for this purpose?
   (1) .odt   (2) .txt   (3) .docx   (4) .pdf

17. Which of the following statements are correct regarding the presentation software?

   A - The animation effects can be applied only to a single object on a given slide
   B - Audio recordings can be included in a presentation slide
   C - It is recommended to use less than ten text lines in a single slide

   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

18. Which of the following are considered as advantages of electronic databases?

   A - Smaller physical space is required to store data
   B - Easy to obtain copies
   C - More efficient in retrieving information

   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

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● Questions **19** to **21** are based on the following database tables that are used to store data about authors, books, and the books written by authors.

Table: Author

AuthorID	FirstName	LastName
1001	Anil	Ratnayake
1002	Vijay	Sekaram
1003	Indika	Serasinghe
1004	Sharaf	Khan
1005	Lalith	Wijenayake

Table: Book

BookID	Name	Price
B01	Mathematics with Fun	500
B02	English for Beginners	400
B03	Science for Everyone	450
B04	Western Music	800
B05	Painting Basics	550

Table: Author_Book

AuthorID	BookID	Royalty_Share
1004	B02	15%
1001	B03	20%
1005	B01	10%
1004	B04	15%
1003	B03	10%

19. What would be the primary key of **Author_Book** table?
    (1) AuthorID
    (2) BookID
    (3) AuthorID + BookID
    (4) AuthorID + Royalty_Share

20. Consider the following statements:

    A - AuthorID in the Author table is a foreign key
    B - AuthorID in the Author_Book table is a foreign key
    C - BookID in the Book table is a primary key

    Which of the above statements are correct?

    (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

21. Who is the author of the book titled "Mathematics with Fun"?
    (1) Anil Ratnayake
    (2) Indika Serasinghe
    (3) Sharaf Khan
    (4) Lalith Wijenayake

22. Which of the following statements is **false** about HTML?
    (1) HTML stands for Hypertext Markup Language
    (2) Web pages can be created using HTML
    (3) HTML tags determine how the web pages are displayed in a web browser
    (4) HTML documents are created by using a web browser

23. Which of the following HTML tag pair can be used to make a numbered list?
    (1) ul, li   (2) dl, dd   (3) nl, li   (4) ol, li

24. Which of the following statements are correct?

    A - Search engines are used to find information on the World Wide Web (WWW) when the relevant URL is unknown
    B - SMTP is used to transfer messages between mail servers
    C - Web server translates domain names into IP addresses

    (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

25. Which of the following statements is **false**?
    (1) The Internet is a network of computer networks.
    (2) An HTML document which is accessible through the internet is called a web page.
    (3) A web page can contain multimedia contents.
    (4) The Internet and the WWW are the same.

[see page five

26. Which of the following HTML tags and parameters can be used to create the given table?

   (1) Table, tr, th, and td with rowspan=2
   (2) Table, tr, th, and td with colspan=2
   (3) Table, th, td, and tr with rowspan=2
   (4) Table, td, tr, and th with colspan=2

Name	Tel. Number
Premachandra	019-2220001
	075 - 2233441
Sivaraj	018-6722117
	076-4123789

27. Which of the following is the correct format of an Email address?
   (1) nuwan.senevi.gmail.com
   (2) nuwan2.senevi@gmail.com
   (3) nuwansenevi@gmail_com
   (4) nuwan@senevi@gmail.com

28. Which of the following statements are true?
   A - Digital divide separates hardware into two categories, analog and digital
   B - Software piracy is copying of computer programs illegally
   C - Digital literacy can reduce the digital divide
   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

29. Which of the following statement(s) is/are correct regarding the Malicious software?
   A - Trojan horse is a form of spyware
   B - Computer worms can spread by themselves
   C - Phishing is a technique of displaying unnecessary messages on the computer screen
   (1) A only   (2) B only   (3) A and B only   (4) B and C only

30. In which of the following network topology, each computer is **exactly** connected with two other computers?
   (1) Bus   (2) Ring   (3) Mesh   (4) Star

31. What is the resolution of an image which is 250 pixels wide and 100 pixels high?
   (1) $250 \div 100$ (2) $250 + 100$ (3) 250×100 (4) $250 \times 100 \times 8$

32. Which of the following statements are correct regarding pixels?
   A - Pixels are used to measure the physical dimension of a digital image
   B - Number of bits per pixel determine the number of colours in a digital image
   C - Pixels of a digital image are arranged in a three-dimensional array
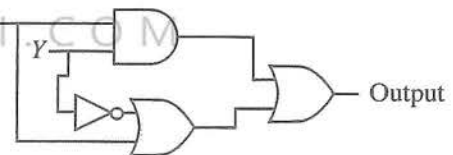   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

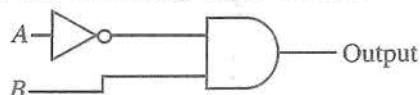33. Which of the following represents the given four numbers in **ascending** order?
   (1) $64_{16}, 226_8, 200_{10}, 101011_2$
   (2) $101011_2, 64_{16}, 226_8, 200_{10}$
   (3) $101011_2, 64_{16}, 200_{10}, 226_8$
   (4) $200_{10}, 226_8, 101011_2, 64_{16}$

34. Which of the following Boolean expressions is equivalent to the output of the given logic circuit?
   (1) $(x.y) + (\overline{y} + x)$
   (2) $(x + y).(\overline{y}.x)$
   (3) $(x + y).(x.\overline{y})$
   (4) $(x.y) + (y + \overline{x})$

35. Consider the following logic circuit:

   Which of the following logic circuits has a truth table equivalent to the above logic circuit?

(1)

(2)

(3)

(4)

36. Which of the following statements are correct regarding programming languages?

    A - Pascal and C are examples of high-level programming languages
    B - A program written in machine language can be executed directly on the computer
    C - Execution speed of the programs written in assembly language is comparatively higher than the execution speed of the programs written in machine language.

(1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

37. What would be the output of the following Pseudo-code?

```
BEGIN
      sum = 0
      count = 5
      REPEAT
            sum = sum + count*count
            count = count – 1
      UNTIL count > 0
      DISPLAY sum
END
```

(1) 25   (2) 41   (3) 50   (4) 55

38. Consider the following array M in PASCAL language:

M =	10	20	30	40	50	60	70	80

    A - array M has a length of 8
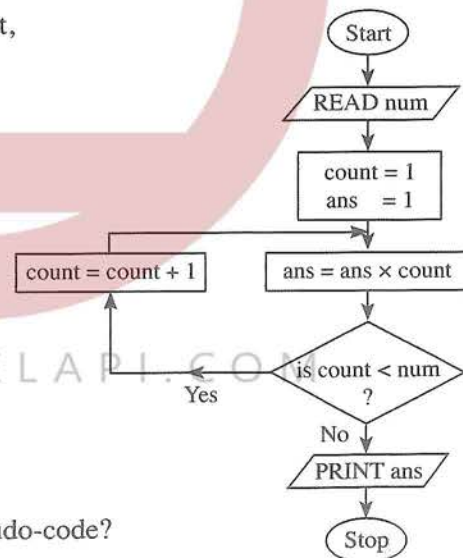   B - M[5] has the value 50
    C - value of M[1] + M[3] is 60

Which of the above statements are correct?

(1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

39. What would be the output of the given flowchart, if 5 is given as the input for num?

(1) 120
(2) 60
(3) 24
(4) 5

40. What would be the output of the following Pseudo-code?

```
BEGIN
      number = 12
      WHILE number > 5
            IF (number >= 10)
                  number = number / 2
            ELSE
                  number = number + 4
      ENDWHILE
      DISPLAY number
END
```

(1) 5   (2) 6   (3) 10   (4) 16

** **

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