நவ நிர்தேஶயப்புதிய பாடத்திட்டம்/New Syllabus

NEW

ශ්‍රී ලංකා විභාග දෙපාර්තමේන්තුව இலங்கைப் பரீட்சைத் திணைக்களம் Department of Examinations, Sri Lanka

80 | E | I, II

අධ්‍යයන පොදු සහතික පත්‍ර (සාමාන්‍ය පෙළ) විභාගය, 2016 දෙසැම්බර්
கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர)ப் பரீட்சை, 2016 டிசெம்பர்
General Certificate of Education (Ord. Level) Examination, December 2016

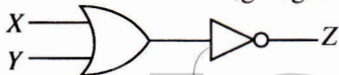| තොරතුරු හා සන්නිවේදන තාක්ෂණය | I, II |
| தகவல் தொடர்பாடல் தொழினுட்பவியல் | I, II |
| **Information & Communication Technology** | **I, II** |

පැය තුනයි
மூன்று மணித்தியாலம்
Three hours

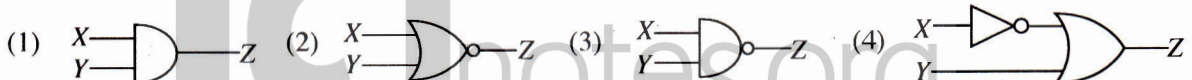## Information & Communication Technology I

Note :

(i) *Answer all questions.*

(ii) *In each of the questions 1 to 40, pick one of the alternatives (1), (2), (3), (4) which you consider as correct or most appropriate.*

(iii) *Mark a cross (✗) on the number corresponding to your choice in the answer sheet provided.*

(iv) *Further instructions are given on the back of the answer sheet. Follow them carefully.*

1. What was the effect when vacuum tubes were replaced by transistors and later transistors were replaced by integrated circuits in the CPU?
   (1) Both processing power and electricity consumption increased
   (2) Processing power increased while electricity consumption decreased
   (3) Processing power decreased while electricity consumption increased
   (4) Both processing power and electricity consumption decreased

2. Consider the following devices:
   A - Mouse
   B - Touch screen
   C - External DVD writable drive
   Which of the above can be used as both input and output devices?
   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

3. Which of the following is a direct function carried out as part of memory management in an operating system?
   (1) Releasing memory when a task is completed
   (2) Accessing the hard disk
   (3) Organizing files in a folder
   (4) Managing devices

4. Which of the following is approximately equivalent to one Terabyte (TB)?
   (1) 1×10^6 MB   (2) 1×10^6 GB   (3) 1×10^6 KB   (4) 1×10^9 bytes

5. What is the decimal equivalent to octal 64?
   (1) 48   (2) 52   (3) 62   (4) 68

6. Consider the following logic circuit diagram:

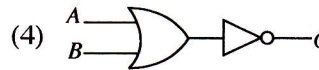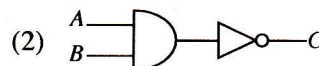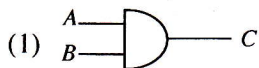   Which of the following is equivalent to the above logic circuit?

7. Which of the following logic circuits represents the given truth table?

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

(1)

(2)

(3)

(4)

8. Which of the following is correct relating to the Internet and World Wide Web (WWW)?
   (1) The Internet is a service of the WWW.
   (2) The Internet and WWW are the same.
   (3) The WWW is a service of the Internet.
   (4) There is no relationship between the Internet and the WWW.

9. Consider the following statements related to a table created using Word Processing Software.
   A – It is possible to format the text in a table.
   B – Words in a column of a table can be arranged in alphabetical order.
   C – Numbers in a column of a table can be added together.
   Which of the above are correct?
   (1) A and B only   (2) A and C only   (3) B and C only   (4) All A, B and C

10. Which of the followings is **not** a common feature in both word processing and electronic presentation software?
    (1) Find and replace   (2) Mail merge
    (3) Changing line space   (4) Spelling checker

11. Which of the following is a feature **not** provided by a database management application?
    (1) Sorting Data   (2) Updating Data
    (3) Generating Reports   (4) Generating Charts

• Questions **12** to **14** are based on the following database tables.

Taxi Table

Taxi_No	Rate_Type	Driver_Name	Driver_City
FX0675	Car	Perera	Colombo
FY1256	3W	Raju	Colombo
FI6782	Van	Dias	Matara
FZ1276	3W	Perera	Kandy

Rate Table

Rate_Type	Rate
Car	44
3W	38
Van	40

12. Which of the following is the most suitable field to be selected as the primary key for the Taxi Table?
    (1) Taxi_No   (2) Rate_Type   (3) Driver_Name   (4) Driver_City

13. Which of the following fields is an example for a foreign key in the database?
    (1) Taxi_No in Taxi Table
    (2) Rate_Type in Taxi Table
    (3) Rate_Type in Rate Table
    (4) Driver_City in Taxi Table

14. How many fields and records are available in the Rate Table, respectively?
    (1) 2 and 2   (2) 2 and 3   (3) 3 and 2   (4) 3 and 3

15. Nimal is writing a computer programme to create a graph to show the number of Dengue cases for the last five years. Input, process and output related to the programme are given in the steps A to D below but **not** in the correct order.

    A – Show the graph for the total number of Dengue cases for the last five years

    B – Number of Dengue cases for each year

    C – Current year

    D – Calculate the total number of Dengue cases for the last five years

Which of the following correctly shows the input, process and output?

    (1) Inputs : A and B   process   : C   output : D

    (2) Inputs : B and C   process   : D   output : A

    (3) Input : B   processes : C and D output : A

    (4) Inputs : B and D   process   : A   output : C

16. Testing phase of the systems development life cycle includes the following activities.

    A – Acceptance Testing

    B – Integration Testing

    C – System Testing

    D – Unit Testing

What is the correct testing order of the above activities?

    (1) A, B, C, D   (2) B, C, D, A   (3) C, D, A, B   (4) D, B, C, A

17. There is a suggestion to introduce a new online system to replace the current manual system to apply for re-scrutiny of results of the G.C.E.(O.L.) Examination.

Consider the following statements related to this suggestion.

    A – The proposed system will improve the efficiency of the re-scrutiny process.

    B – The proposed system will improve the accuracy of the outcome of the re-scrutiny process.

    C – The proposed system will have a negative impact on the candidates who do not have access to the Internet.

Which of the above statements are valid?

    (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 followings shows the file format of image files only?

    (1) DOCX, MP3, PNG   (2) PNG, RAW, MP3

    (3) RAW, JPEG, BMP   (4) PPTX, BMP, PNG

19. Consider the following HTML code segment:

```
<html>
<body>
<dl>
    <dt>Government Schools in Sri Lanka </dt>
    <dd>National Schools - 350 </dd>
    <dd>Provincial Schools - 9662 </dd>
</dl>
</body>
</html>
```

The output of the above HTML code would be:

    (1) Government Schools in Sri Lanka   (2) Government Schools in Sri Lanka

        National Schools - 350   i. National Schools - 350

        Provincial Schools - 9662   ii. Provincial Schools - 9662

    (3) Government Schools in Sri Lanka   (4) Government Schools in Sri Lanka

        ● National Schools - 350   1. National Schools - 350

        ● Provincial Schools - 9662   2. Provincial Schools - 9662

20. Consider the following software

    A – Simple text editor

    B – Word-processing software

    C – Web authoring software

Which of the above software/softwares can be used to create an HTML document?

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

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21. According to a survey conducted by the Department of Census and Statistics in 2015, the computer literacy rate of Sri Lanka is 26.8%. It is assumed that the digital divide is one reason for the low computer literacy rate.

Consider the following suggestions:

    A – Arrange loan facilities at low interest rates for the households of low income category to buy computers.

    B – Improve computing and internet facilities in rural areas where such facilities are inadequate.

    C – Provide more scholarships for the children who succeed in the Grade 5 scholarship examination.
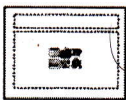
The relevant suggestion/suggestions which will contribute to reduce the digital divide is/are,

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

22. Which of the following is **not** essential to host a web site?

(1) Web browser   (2) Web server   (3) IP address   (4) Website content

23. What is the domain name of the URL, http://www.bbc.com/sport/cricket?

(1) bbc.com/sport   (2) bbc.com/sport/cricket

(3) http://www.bbc.com   (4) bbc.com

24. While typing an email to one of his friends, Rajan accidentally closed the email application. In which folder of his email account will he find the unfinished email?

(1) Draft   (2) Inbox   (3) Sent   (4) Trash

● Questions **25** and **26** are based on the given spreadsheet segment.

	A	B	C
1	1	2	3
2	4	5	6
3	5		

25. Which of the following will appear in cell C3 if the formula =count(A1:B3) is entered to cell C3?

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

26. The cell A3 contains the formula =sum($A1:A2). Which of the following will appear in cell B3 if the formula is copied to cell B3?

(1) 5   (2) 7   (3) 11   (4) 12

27. What tool in electronic presentation software can be used to change the style of a slide from Style 1 to Style 2?

Style 1   Style 2

(1) Slide design
(2) Slide sorter
(3) Slide layout
(4) Slide view

28. What tool in electronic presentation software is used to manage how text and images appear when making a presentation using Slides show?

(1) Slide design   (2) Slide transition   (3) Slide layout   (4) Animation

29. Which of the following show data transfer speeds of secondary storage devices arranged in an ascending order?

(1) Solid state hard drive, Magnetic hard drive, floppy disk drive, DVD drive

(2) floppy disk drive, Magnetic hard drive, DVD drive, Solid state hard drive

(3) floppy disk drive, DVD drive, Magnetic hard drive, Solid state hard drive

(4) Solid state hard drive, Magnetic hard drive, DVD drive, floppy disk drive

30. Consider the following statements:

    A - Optical Fiber cables provide faster data transfer rates than that of copper cables.

    B - Copper cables provide faster data transfer rates than that of Optical Fiber cables.

    C - Copper cables are more expensive than Optical Fiber cables.

Which of the above is/are correct?

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

31. Consider the following statements:

A – A student obtains medical advice from a doctor by contacting him over the telephone.

B – An automated system, based on the humidity and temperature releases water to plants in a greenhouse.

C – A teacher purchases a book which is not available in Sri Lanka, from an online book shop.

Which of the above use the Information and Communication Technology (ICT) effectively?

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

32. Consider the following statements:

A - It is suitable to dispose electronic waste (e-waste) such as unusable mobile phones and CRT monitors with household garbage such as food leftovers.

B - It is not illegal for multiple users to use a software in a desktop computer which has a single user licence.

C - When a firewall is installed in a computer network, users do not require to use passwords to protect their files with confidential data.

Which of the above statements are correct?

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

33. In the ASCII code, Character 'Q' is represented as 1010001_2. What is the option that represents the word 'PUT' in binary form?

(1) 1010000_2 1010101_2 1010100_2 (2) 1010001_2 1010101_2 1010100_2

(3) 1010000_2 1010011_2 1010111_2 (4) 1010101_2 1010100_2 1010011_2

34. Consider the following four numbers presented in different number systems:

11110011_2, $F3_{16}$, 363_8, 243_{10}

Which of the following statements is true regarding the above four numbers?

(1) $F3_{16}$ is larger than other three numbers.   (2) 363_8 is smaller than other three numbers.

(3) Four numbers are equal to each other.   (4) Four numbers are not equal to each other.

35. Consider the following statements relating to digital images:

A – Digital images are created with pixels.

B - Image file size increases when resolution of an image increases.

C - Resolution of an image can be measured with pixels per inch (ppi).

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

36. Consider the following pascal programme:

```
program repetition (input, output);
var X : integer;
begin
  X := 1;
  repeat
    write (X);
    X := X + 1;
  until X = 3;
end.
```

What is the correct output when the above programme is executed?

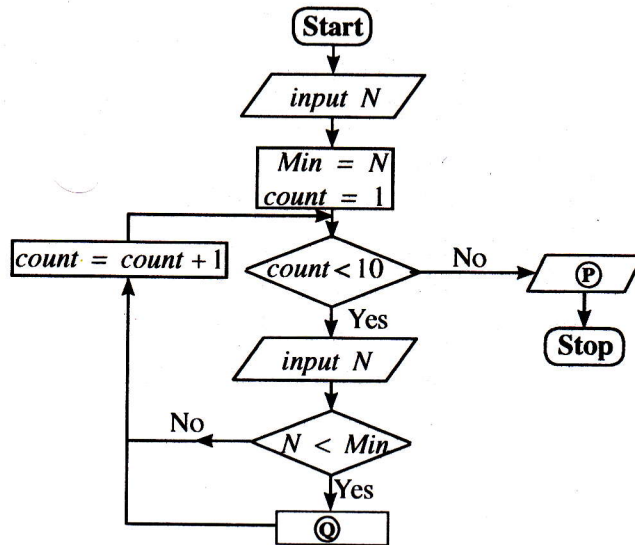(1) 1   (2) 1 2   (3) 1   (4) 1 2 3
    2   2
                                 3

37. Consider the following pseudocode with label ⊗ to calculate the sum of numbers from 1 to 100.

```
sum = 0
num = 0
repeat
  num = num + 1
  sum = sum + num
until ⊗
```

For the above mentioned pseudocode, what is the correct condition that matches with the label ⊗ ?

(1) *num* < 100   (2) *num* <= 100   (3) *num* > 100   (4) *num* >= 100

● Questions **38** to **39** are based on the following flowchart designed to find the smallest number from any ten numbers.

```
                    ( Start )
                       |
                  / input N /
                       |
                +-------------+
                |  Min = N    |
                |  count = 1  |
                +-------------+
                       |
+------------------+   |
| count = count + 1|   v
+------------------+  < count < 10 > --No--> / Ⓟ /
         ^             |                        |
         |            Yes                    ( Stop )
         |             |
         |        / input N /
         |             |
         |      < N < Min > --No-->
         |            Yes
         |             |
         +---------- | Ⓠ |
```

38. Which of the following correctly represents the labels Ⓟ and Ⓠ in the flow chart respectively?

   (1) output Min, Min = N   (2) output N, count = count − 1
   (3) output count, Min = N   (4) output Min, count = count − 1

39. Which of the following statements is correct related to the control structures given in the flowchart?
   (1) SELECTION occurs within REPETITION
   (2) REPETITION occurs within SELECTION
   (3) REPETITION occurs within REPETITION
   (4) SELECTION occurs within SELECTION

40. Consider the following pseudocode segment:
```
    count = 0
    repeat
      display ("HELLO")
      count = count + 1
    until count > 4
    while count > 4
      display ("HELLO")
      count = count - 1
    end while
```

How many times will the word HELLO be displayed when the above pseudocode is executed?
(1) 4   (2) 5   (3) 6   (4) 7

✳ ✳

ICT විෂයට අදාළ සියලුම ඉගෙනුම් උපකාරක එකම තැනකින්

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පාඩම්වල වලට අදාළ සටහන්

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