

GENERAL CERTIFICATE OF EDUCATION (ORD. LEVEL) EXAMINATION, DECEMBER 2011  
Information and Communication Technology I  
Three hours

Note:

- (i) Answer all the questions.
- (ii) In each of the questions 1 to 40, pick one of the alternatives (1), (2), (3), (4) which you consider is correct or most appropriate.
- (iii) Mark a cross ( X ) 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. Which of the following can be classified as data in comparison with information?
  - (1) Average monthly temperature in the city of Anuradhapura.
  - (2) A pie chart showing percentage of male and female students in a school.
  - (3) Last four digits of a residential telephone number.
  - (4) Maximum mark obtained for Mathematics by Grade 10 students.
2. A student prepares a report and saves into a permanent storage device (*device 1*) inside the computer. He then copies the report to a portable storage device (*device 2*) to be given to a friend. Which of the following is most appropriate to represent *device 1* and *device 2* respectively?
  - (1) Main Memory and Flash Memory
  - (2) Hard Disk and Compact Disk (CD)
  - (3) Main Memory and Compact Disk (CD)
  - (4) Hard Disk and Main Memory
3. A person has taken a photograph using a digital camera. Subsequently he shows the photograph to one of his friends using the display of the camera. In this scenario, the camera serves as a/an
  - (1) Input device only.
  - (2) Output device only.
  - (3) Communication device only.
  - (4) Input/Output device.
4. Consider the following symbols:  
A- #  
B- @  
C- &  
Which of the above is a valid symbol / symbols in an email address?
  - (1) A only
  - (2) B only
  - (3) C only
  - (4) A and B only
5. What is the equivalent value of decimal value 125?
  - (1)  $01011101_2$
  - (2)  $01111101_2$
  - (3)  $174_8$
  - (4)  $7B_{16}$
6. What value does the symbol 'C' represents in the hexadecimal number system?
  - (1)  $1011_2$
  - (2)  $1101_2$
  - (3)  $14_8$
  - (4)  $13_{10}$
7. Two computers, *A* and *B* have memory capacities of 1 GB and 1024 MB respectively. What is the correct statement regarding their memory capacities?
  - (1) Computer *A* has a higher memory capacity than Computer *B*.
  - (2) Computer *B* has a higher memory capacity than Computer *A*.
  - (3) Both have equal memory capacities.
  - (4) Memory capacities of the two computers cannot be compared as different units of measurement are used.
8. Saman has an electronic presentation of size 10,256 bits. What is the minimum capacity of a portable flash drive that can be used for storing this file?
  - (1) 256 Bytes
  - (2) 1 KB
  - (3) 1MB
  - (4) 1 GB

9. Binary Coded Decimal (BCD) uses four bits to represent each digit in the decimal number system. Which of the following is a valid bit pattern in BCD?  
 (1) 0011 (2) 1011 (3) 1100 (4) 1101

10. If  $1000001_2$  represents A in ASCII, which of the following is represented by  $1000111_2$ ?  
 (1) D (2) E (3) F (4) G

11. A merchant sells a pack of three items for Rs 75. The pack contains a cup (A) and a saucer (B). The customer can select either a plate (C) or a dish (D) as the third item. Which of the following Boolean expression represents the above scenario?  
 (1) (A AND B) AND C AND D (2) A AND B OR C OR D  
 (3) A AND B AND (C OR D) (4) A OR B OR (C AND D)

12. If the final output of the given logic circuit, D is 1, which of the following represents the corresponding values for the inputs A, B and C respectively?  
 (1) A= 1, B= 1, C= 1 (2) A= 1, B= 0, C= 1  
 (3) A= 0, B= 1, C= 0 (4) A= 0, B= 1, C= 1

13. The Operating System.  
 A- fills gap between the hardware and the user by providing an interface.  
 B- provides Internet facilities to the user for communication and access to information.  
 C- manipulates files and folders.  
 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

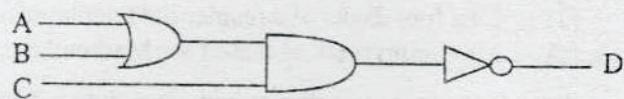
14. Part of a spreadsheet is shown in the given diagram: if formula  $\min(A1:A8)$  is written in cell A9 what value would be displayed in cell A9?  
 (1) 70 (2) 50 (3) 40 (4) 15

	A	B
1	20	
2	15	
3	30	
4	25	
5	40	
6	50	
7	60	
8	70	
9		
10		

15. Which of the following statements is correct regarding spreadsheet software?  
 (1) Intersection of a row and a column is known as an *absolute address*.  
 (2) Cell address is represented by the combination of column name and row number.  
 (3) Cell entries can only be left aligned in spreadsheets.  
 (4) Content of a cell cannot refer to another cell.

16. A word processing software is used to create a file named *Text 1.rtf*. After editing the document, user wants to save this file as *Backup 1.txt*. Which of the following word processing command / commands can be used for this purpose?  
 (1) File → Save (2) File → Save As  
 (3) Ctrl+S (4) Ctrl + B

17. Which of the following statements is correct regarding *tables* used in word processing software?  
 (1) Two or more cells can be merged.  
 (2) It is not possible to delete a column or a row.  
 (3) Column width can be adjusted while row height cannot be adjusted.  
 (4) A cell cannot be split.



	A	B
1	20	
2	15	
3	30	
4	25	
5	40	
6	50	
7	60	
8	70	
9		
10		

18. What feature of electronic presentation software can be used to move an image on a slide smoothly from left to right?  
 (1) Slide layout (2) Slide transition (3) Animation (4) Slide design

19. Which of the following is correct regarding the primary key in a relational database table?  
 (1) It must be unique (2) It must be of numeric data type.  
 (3) It can be empty. (4) It must be of text data type.

● Use the following table containing information about books to answer questions 20 and 21.

ISBN Number	Title	Author	Edition	Publisher	Price
0-19-431535-5	Oxford Dictionary	A.S Hornby	6	Oxford University Press	2000.00
0-540-05667-7	Philips Atlas	B.M Willett	4	Heinemann-Philip	2000.00
0-19-431635-5	Oxford Dictionary	A.S Horney	5	Oxford University Press	1800.00
0-07-118077-x	Zoology	L. Roberts	6	McGraw-Hill	4000.00

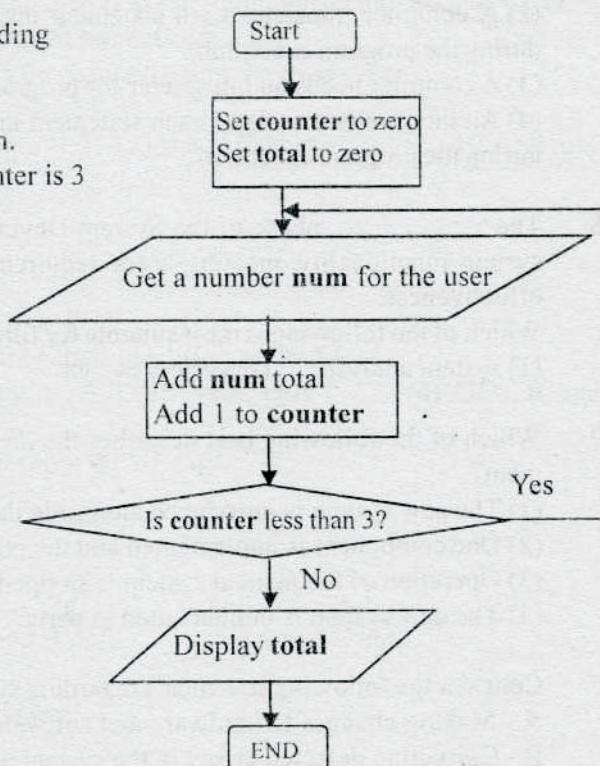
20. Select the correct pair of values that represent the number of records and number of fields respectively of the above table.  
 (1) 4, 6 (2) 5, 6 (3) 6, 4 (4) 6, 5

21. Which of the following is most suitable as the primary key of the above table?  
 (1) Title (2) Price (3) ISBN Number (4) Author

● Consider the given flowchart to answer questions 22 and 23

22. Which of the following is correct regarding the flowchart?  
 (1) It repeats more than three times.  
 (2) It stops when 3 is entered for num.  
 (3) It displays the total when the counter is 3  
 (4) It gets 4 numbers from a user.

23. Which of the following can be used to replace "Add num to total" in the flowchart?  
 (1) num= num + total  
 (2) total= num \* total  
 (3) total= total + num  
 (4) total= total / num



24. Which of the following statements is correct regarding control structures used in algorithms?

- Statement / Statements within an *If- Then* construct is executed when the condition is false.
- For-Next* loop can be used when the number of repetitions is known in advance.
- If-Then* construct cannot be used within a *For-Next* loop.
- If-Then* construct cannot be nested.

25. Consider the following statements regarding operators in a programming language:

A-An operator performs an operation on one or more variables.  
 B-An expression may have more than one operator.  
 C-Comparison operators compare two expressoins.

Which of the above statements are correct?

- A and B only
- A and C only
- B and C only
- All A,B and C

26. Consider the following types of computer programming languages:

A-Machine languages  
 B:Assembly languages  
 C-High level languages

Which of the following shows the order of generations of the above programming languages in ascending order?

- A, B, C
- B, C, A
- C, B, A
- C, A, B

27. Which of the following statements is correct regarding a compiler and an interpreter?

- An interpreter translates all statements into machine language instructions before program execution.
- A compiler translates each statement into machine language instructions one at a time during the program execution.
- A compiler needs an interpreter for program execution.
- An interpreter translates each statement into machine language instructions one at a time during the program execution.

28. The ..... phase of the System Development Life Cycle (SDLC) is concerned with system functionality, meeting users' requirements, effective use of resources, and the cost effectiveness.

Which of the following is most suitable for filling the above blank?

- system analysis
- system design
- implementation
- feasibility study

29. Which of the following best describes the *direct implementation* as used in system development?

- The new system is introduced alongside the existing system.
- One component is implemented and the others are implemented if it is successful.
- Operation of the manual system is stopped and the new system is introduced.
- The new system is implemented in parts.

30. Consider the following statements regarding system development activities:

A - Making changes to hardware and software  
 B - Correcting detected errors in the system after deployment.  
 C - Introducing new user requirements into the system.

Which of the above activities are involved in the maintenance phase of a system development life cycle?

- A and B only
- A and C only
- B and C only
- All A, B and C

31. A student needs to send a digital copy of a printed photograph to a friend living abroad. Consider the following procedures:  
 A - Taking a copy using a digital camera, saving it as an image file then sending via email.  
 B - Sending the photo using normal post.  
 C - Scanning the photograph, saving it as an image file then sending via email.  
 Which of the above procedures is/ are suitable for sending the photograph?  
 (1) A only    (2) B only    (3) A and C only    (4) B and C only

32. Consider the following statements relating to the internet:  
 A - Each machine requires a unique address called an IP to connect to the internet.  
 B - WWW comprises of a collection of electronic documents.  
 C - An HTML document which is accessible through the Internet is called a webpage.  
 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

33. Two students access the same website using two machines in their school computer laboratory. The two computers must have different:  
 (1) Web browsers.    (2) IP addresses.  
 (3) Internet Service Providers. (4) Operating Systems.

34. What is the domain name of the URL <http://www.srilanka.lk/web/guest/welcome>?  
 (1) www.srilanka.lk    (2) srilanka.lk    (3) /web/guest/welcome    (4) .lk

35. Consider the following statements regarding multimedia editing:  
 A - *Layers* can be used to draw and edit objects layer without affecting another layer.  
 B - *Key frame* can be used to create or edit animations.  
 C - Speed of a graphics animation can be changed using the *frame rate*.  
 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

36. Consider the following special effects:  
 A - Adding echo  
 B - Changing speed  
 C - Changing volume  
 Which of the above special effects can be used in editing sound files?  
 (1) A and B only    (2) A and C only    (3) B and C only    (4) All A, B, and C

37. Consider the following statements regarding HTML tags.  
 A - <hr> defines a horizontal rule.  
 B - <li> creates an ordered list  
 C - <p> creates a page break.  
 Which of the above is/are correct?  
 (1) A only    (2) C only    (3) A and B only    (4) A and C only

38. Consider the following HTML statements.

```

<dl>
  <dt> Rice </dt>
  <dd> White Rice </dd>
  <dt> Tea </dt>
  <dd> Milk Tea </dd>
</dl>
  
```

The output of the above HTML code segment would be:

(1) Rice	(2) Rice	(3) <input checked="" type="radio"/> Rice	(4) Rice
White Rice	White Rice	<input checked="" type="radio"/> White Rice	White Rice
Tea	Tea	<input checked="" type="radio"/> Tea	Tea
Milk Tea	Milk Tea	<input checked="" type="radio"/> Milk Tea	Milk Tea

39. Consider the following three statements:

A.....is a unique name that identifies a website  
 B.....is a unique address of a file that is accessible on the Internet.  
 C.....is a unique number that identifies a machine on the Internet.

Which of the following correctly replace A, B and C respectively?

(1) Uniform Resource Locator (URL), IP Address, Domain Name  
(2) Uniform Resource Locator (URL), Domain Name, IP Address  
(3) Domain Name, Uniform Resource Locator (URL), IP Address  
(4) Domain Name, IP Address, Uniform Resource Locator ( URL)

40. Consider the following statements:

A - Firewalls are only available as hardware and does not exist in the form of software.  
B - A computer worm is a self-replicating malware computer program which spreads through a computer network.  
C - Spam is the use of electronic messaging systems to send large volumes of unwanted emails indiscriminately.

Which of the above is / are correct?

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