



INFORMATION AND COMMUNICATION TECHNOLOGY

2013 - SECOND TERM

Grade 11

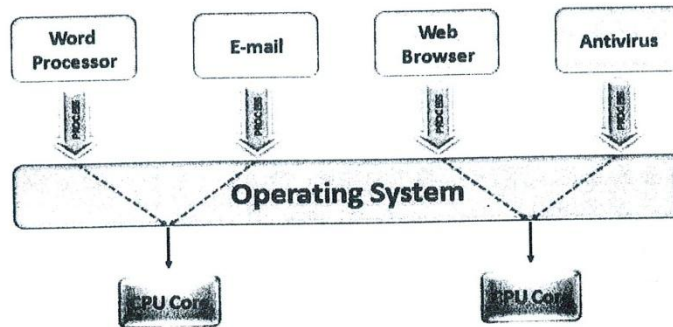
Time: 1 hour

Part I

Select most suitable answer

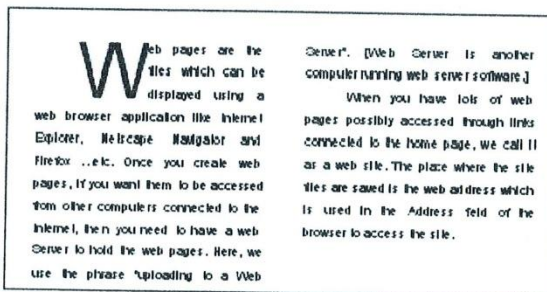
- The following shows some of the attributes of computers that changed with the evolution of the computer generations.
(a) Physical size (b) Power consumption
(c) Processor speed (d) Heat generation
Which of the above features gradually decreased with the generations?
(1) a, b and c (2) a, b and d (3) a, c and d (4) b, c and d
- The programs which are as permanent as hardware and stored in ROM is known as
(1) Hardware (2) Software
(3) Firmware (4) EOM ware
- Which technology is used in compact disk?
(1) Mechanical (2) Electrical
(3) Electro Magnetic (4) Laser
- Through which device the main components of the computer communicate each other?
(1) Keyboard (2) System Bus
(3) Monitor (4) Memory
- How was the generation of computer classified?
(1) by the device use in Memory & processor
(2) by the speed of computer
(3) by the model of the computer
(4) by the accuracy of computer
- In order to play and hear sound on a computer, one needs:
(1) A sound card and speakers (2) microphone
(3) All of them required (4) none of them required
- The octal equivalent of the binary number 111000101_2 is
(1) 705 (2) 604
(3) 323 (4) 515
- The binary equivalent of the Hexadecimal number $AF1_{16}$ is
(1) 111011110001 (2) 101011111001
(3) 101111110001 (4) 101011110001

9. A NAND gate has:
 (1) LOW inputs and a LOW output (2) HIGH inputs and a HIGH output
 (3) LOW inputs and a HIGH output (4) None of these
10. What input values will cause an AND logic gate to produce a HIGH output?
 (1) At least one input is HIGH (2) At least one input is LOW
 (3) All inputs are HIGH (4) All inputs are LOW
11. Which of the following rules states that if one input of a OR gate is always 1, the output is equal to 1 ?
 (1) $A + B + 1 = 1$ (2) $A + A = A$
 (3) $A \cdot A = A$ (4) $A \cdot 1 = A$
12. Select Command line interface operating system(s)
 (A) DOS (B) Windows XP (C) Unix (D) Android
 (1) A only (2) A.C. and D only
 (3) A and C only (4) A.B.C and D
13. Select the function(s) of operating system?
 (A) It recognizing inputs from the mouse or the keyboard.
 (B) It keeps track of where all the files are on the computer.
 (C) .It allocates resources to the various programs that are running.
 (D) It prevents unauthorized access to the computer.
 (1) A only (2) A, C. and D only
 (3) A and C only (4) A, B,C and D
14. This figure shows example of



- (1) Multiuser (2) CLI
 (3) GUI (4) Multitasking
15. Thesaurus tool in MS Word is used for
 (1) Spelling suggestions (2) Grammar options
 (3) Synonyms and Antonyms words (4) All of above

16. What is the language used by most of the DBMS for helping their users to access data ?
 (1) High level language (2) Query Language
 (3) 4GL (4) Basic
17. Which of the following hardware component is the most important to the operation of database management system?
 (1) High resolution video display (2) Printer
 (2) high speed, large capacity disk (4) Plotter
18. If you wanted to sort an employee file so that they would be listed alphabetically by last name and first name within individual zip codes (smallest to largest), which of the following would be the correct order of the sort?
 (1) zip codes (ascending), then last name (ascending), then first name (ascending)
 (2) last name (ascending), then first name(ascending), then last name (ascending)
 (3) last name (descending), then first name (descending), then last name (descending)
 (4) zip codes (descending), then last name(ascending), then first name(ascending)
19. What do you call a faint image that you add to the background of a report?
 (1) Watermark (2) Back style (3) Back picture (4) Gutter
20. A quick way to return to a specific area of a worksheet is to type in the _____
 (1) Zoom Box (2) Name box
 (3) Formula Box (4) None of the above
21. Consider the following figure



- What formatting techniques is/are used in the document shown on the figure above?
 (A) Indentation (B) Drop Cap (C) Justify (D) Columns (E) Change case
- (1) A,,C and D (2) A,B, C and D
 (3) C,D and E (4) B, C, and D
22. Which bar is usually located below the title bar that provides categorized options?
 (1) Menu Bar (2) Tool Bar
 (3) Status Bar (4) Scroll Bar

23. Right-Clicking something in Power Point is a
- (1) Delete the object
 - (2) Opens a shortcut menu listing everything you can do the object
 - (3) Select the object
 - (4) Nothing the right mouse button is there for left handed people
24. Under In a Presentation you want to display your school name in all Slides. What is the tool you can use for the above matter.
- (1) Master Slide
 - (2) Slide Header/Footer
 - (3) Duplicate Slide
 - (4) all of the above
25. Which of the following is/are a set of logically related tasks performed to achieve a defined outcome?
- (1) Input
 - (2) Control
 - (3) output
 - (4) Process
26. An advantage of a manual system is
- (1) Diligence
 - (2) Flexibility
 - (3) Reliability
 - (4) Speed
27. Which is true
- (1) A system is a collection of interrelated components.
 - (2) System components work together to perform a specific task
 - (3) System has a boundary
 - (4) All above are true
28. An information system is needed to be developed for an organization but a fixed amount of money is available to be spent on the project. Which of the following phases decides limitation of the cost?
- (1) Feasibility Study
 - (2) System Development
 - (3) System Design
 - (4) Testing
29. Identify the three successive phases of the System Development Life Cycle (SDLC) that appear in the correct order
- (1) Analysis, Design, Testing
 - (2) Design, Software Development, Testing
 - (3) Design, Maintenance, Testing
 - (4) Maintenance, Design, Analysis
30. Which of the following does **not** produce computer executable machine code as its output?
- (1) Compiler
 - (2) Debugger
 - (3) Interpreter
 - (4) Assembler
31. Consider the classification of computers given below
- | | |
|--------------------------------|-------------------------------------|
| (a) Super/mainframe/mini/micro | (b) Digital/analog/hybrid |
| (c) Personal/laptop/palmtop | (d) General purpose/special purpose |
- Which of the above classification is **not** appropriate in classifying all the computers?
- (1) a
 - (2) b
 - (3) c
 - (4) d



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Part II

Answer first question and, four other questions only.

- (1)
- Write two advantages of Mobile computing.
 - Prove the following De Morgan's laws using a truth table.
(a) $(A \cdot B)' = A' + B'$ (b) $(A + B)' = A' \cdot B'$
 - Assume that you are given the task of developing an information system for an OPD services in hospital, using the System Development Life Cycle (SDLC) Briefly describe the first two phases of the SDLC used in this task.
 - What is the difference between Compiler and Interpreter?
 - List two purposes of having a UPS for a computer.
 - What are the values of $100 \text{ MOD } 89$ and $89 \text{ MOD } 100$ respectively?
 - Write two examples of full duplex communication.
 - Write a security feature available in word processing packages to protect document files.
 - List two applications using ICT in educational activities.
 - Explain the difference between CC & BCC in an e-mail by providing an example.
- (2) A company sells their sales items through a number of sales representatives. These sales representatives take the items from house to house of their potential customers. An invoice is prepared in triplicate with details of sales items where one copy is given to the customer. At the end of the day, the office copy of the invoice is submitted to the head office and the invoice information is entered in to a Microsoft access database which contains records of each invoice, sales items and sales representative. The following table structure is maintained in the Microsoft Access database.

tblSalesRep (SalesRepId, SalesRepName, CommissionRate)

tblItem (ItemNumber, ItemName, UnitPrice)

tblInvoice (InvoiceNumber, InvoiceDate, InvoiceAmount, SalesRepId)

tblInvoiceLine (InvoiceNumber, ItemNumber, SoldPrice, Quantity)

- Give primary key field for each table.
- What is relationship exist between tblSalesRep and tblInvoice
- Write suitable data types for fields of tblInvoice
- Give two advantages of using a form to enter data for the above tables
- How can we find out total sales amount of 15/07/2013?

(3) Following is a part of worksheet created by a class teacher to hold information on the examination results of students in the grade nine. Depending on this total marks she select students for technical subjects.

	A	B	C	D	E	F	G
1	Selection of technical subject						
2	First Name	Last Name	Full Name	Maths	Sinhala	Total	Technical Subject
3	Gayan	Perera	Gayan Perera	55	44	99	Tec 3
4	Chamal	Aluthge	Chamal Aluthge	52	64	116	Tec 2
5	Sadun	Perera	Sadun Perera	78	90	168	Tec 1
6	Janitha	Dias	Janitha Dias	45	43	88	Tec 3
7	Vipula	Maldeniya	Vipula Maldeniya	46	54	100	Tec 2
8	Upul	Silva	Upul Silva	72	78	150	Tec 1

- i. What is the formatting used for the cells containing Title "Selection of technical subject"?
- ii. Write the formula that should be entered in cell C3
- iii. What are the possible formulae for the cell F3 ?
- iv. The selection criteria is as follows:

Total	v. Subject
>=150	Tec1
>=100 and <150	Tec2
<100	Tec3

What is the formula in cell G3 according to the above Selection criteria?

- V. If the teacher wants to view the names of the students who obtained each subject separately (i.e. students with Tec1 etc.), which of the facilities in excel can be used?

(4) A system used three switches P,Q, and R. A combination of switches determines whether an alarm, X sounds. If switch P or switch Q are in the "ON" position and switch R is in the "OFF" position then a signal to sound an alarm, X is produced.

- (i) Construct the truth table of situation.
- (ii) Write Boolean expression of output
- (iii) Simplify the Boolean expression
- (iv) Design logic circuit

(5.) The principal has decided to computerize preparing of relief time table. He hopes to keep finger print machines at every gate of school. When late arrivals and early departures of teachers, the relief time table should be updated.

- I. Describe **two** possible disadvantages to the principal of using this system to help him work rather than using a pen and paper.
- II. Write inputs, process and outputs of the system
- III. Give **two** activities that would take place during the analysis stage of the system life cycle.
- IV. Give **three** different types of testing that should be used during the testing stage of the system life cycle.
- V. Write down the stage that includes user training. Write two things that would be take place user training.

- (6) i. Write two advantages of developing algorithms
- ii. Write pseudo code to accept ten numbers and print the total count of positive and negative numbers entered.
 - iii. Draw flowchart to above problem.

Examveda