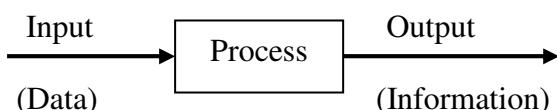


General Certificate of Education (Ord.Level) Examination 2007
Information & Communication Technology II

Two hours

Answer five questions only as instructed. Any extra questions answered, if not struck off by the candidate himself, will be crossed out by the examiner, without being marked.

01. The following figure shows the basic Input-Process-Output model used in Information Technology. Accordingly a system receives data its input and performs a meaningful process to deliver Information as the output.



An information system has been developed to input income and expenses of a person under different categories of needs such as food, house rent, health etc. of a person. The system is to provide information on monthly total for each category of his expenses, the total expenditure of the month and saving of the month.

- (i) In addition to inputs given above, suggest another five inputs that can be entered into the system?
- (ii) What calculations should be performed by the system in order to produce the above information?
- (iii) Briefly explain, why the above system can be considered as an example of a batch processing system.

02. Suppose you are the chief organizer of the annual Educational Trip of the school. If you have the freedom to use the computer available in the computer room, suggest what software package you would use to perform each of the tasks listed below. Give reasons for your selection.

- (i) Prepare letters for the parents of the students to inform about the event.
- (ii) Prepare the budget of the trip.
- (iii) Prepare a presentation on the places to be visited.
- (iv) Keep records of each student in a database who are going on the trip, along with their parents details.
- (v) Find out more information from the Internet about the places to be visited.

03. (i) Write down the output generated by the following flowchart. (Figure 1)

(ii) The following is a part of a pseudocode which is used to evaluate the final grade achieved by a student in an examination, based on the average marks obtained for two subjects.

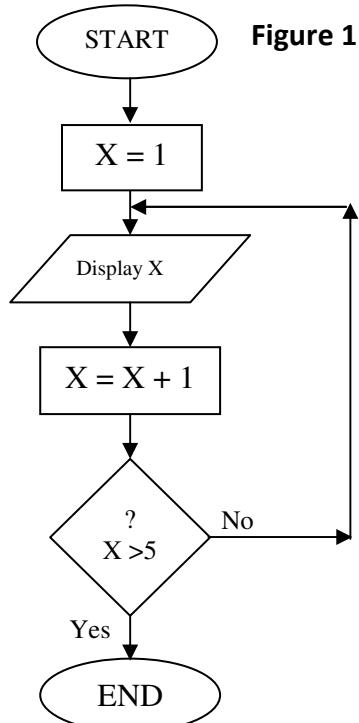
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Set Average to 0
Get Name
Get marks for Subject1
Get marks for Subject2

Average = (Subject + Subject2)/2
if (Average) >= 50 display Name, "Pass"
else display Name, "Fail"
Ends if
  
```

The name and the marks for the subject are as follows.

Name	Subject1	Subject2
Arthur	40	80
Berty	60	70
Charlie	40	60
David	30	50



Write the output of the above pseudocode for each of the student.

04. Following is a part of a Microsoft Excel spreadsheet that a school teacher used to work out the cost for expanding the school's Computer Laboratory to facilitate more students.

	A	B	C	D	E	F
1	Item Description	Unit Cost	Quantity	Total Cost	Discount	Final Cost
2	Computer	Rs. 55,000.00	5	Rs. 275,000.00	10%	Rs. 247,500.00
3	Laser Printer	Rs. 35,000.00	2	Rs. 70,000.00	5%	Rs. 66,500.00
4	External MODEM	Rs. 3,500.00	4	Rs. 14,000.00	2%	Rs. 13,720.00
5	Scanner	Rs. 7,600.00	3	Rs. 228,00.00	4%	Rs. 21,888.00
6	Flat bed Plotter	Rs. 9,000.00	2	Rs. 18,000.00	5%	Rs. 17,100.00
7					Grand Total	Rs. 366,708.00

(i) State the formulae which would be contained in the following cells.
(a) D2
(b) F2
(c) F7

(ii) List three advantages of using a spreadsheet package for such a calculation rather than using a calculator and a paper.

05.

(i) What is data?
(ii) List three difficulties of handling large volumes of data.
(iii) What is a database? Briefly explain how you would overcome the difficulties mentioned in (ii) above by using a database.
(iv) What is the general name used to describe a set of software which creates, maintains and utilizes database?
List two popular examples of such software packages.
(v) Assume that you are asked to create a simple database containing the data of teachers of your school. List five fields that can be used to construct a table in the database. Give two sample records that you would enter in the table.

06. The librarian of a certain school has decided to create a Web site for its library.

(i) Assume that you have been appointed to develop the Web site. List three methods you will use to gather the required information.
(ii) List five items of information that should be included in the Web site.
(iii) List three advantages gained by students from such a Web site.
(iv) Give three ways in which the Web site makes the librarian's tasks easy.

07. Write short notes on three of the following.

(v) Advantages of using a personal Computer for studies.
(vi) Advantages of e-mail over the traditional mail.
(vii) Disadvantages of the Internet.
(viii) Improving the efficiency of Sri Lankan workforce using ICT.