GENERAL CERTIFICATE OF EDUCATION (ORD. LEVEL) EXAMINATION, DECEMBER 2009

Information and Communication Technology II

* *Answer **five** questions only, including **first** question and, **four** other questions.*
* *First question carries **20** marks and each of the other questions carries **10** marks.*

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1. Write short and exact answers.

   (i)   List **two** developments in Information and Communication Technology which make it easier for students to carry out their educational activities from home.

   (ii) Write a security feature available in word processing packages to protect document files.

   (iii) Write **two** disadvantages of using faxes in communication.

   (iv) What is the minimum number of keys required to represent the English alphabet (A to Z, a to z), digits (0 to 9) and the ten special characters ! @ # $ % ^ &* ( ) in a computer keyboard?

   (v)   Why it is **not** advisable to place speakers very close to a CRT monitor?

   (vi) State **two** advantages of a flash memory over a DVD-RW (Rewritable).

   (vii) What is the purpose of having a fan in the power supply unit of a desktop computer?

   (viii) What operation is indicated by the icon in graphics applications software?

   (ix) What is the purpose of using remarks in a computer program?

   (x)   Environmentalists plan to test a lake for water pollution. State **two** advantages of using a computer to do this rather than doing it manually.

2. With the development of ICT the traditional work pattern of the Sri Lankan society has changed noticeably. Mrs. Salgadu is the secretary to the chief executive officer of an office that makes use of the benefits of the technology immensely. Following is a part of her daily schedule at work.

8.30 a.m.	Start work.
until 9.30 a.m.	Read the diary. Refer to faxes and postal letters that we received on the previous day and distribute them to officers concerned.
until 10.30 a.m.	Power up the computer and get connected to the office Intranet to check e-mails and send replies. Make a list of the priorities of the day with the consent of the chief executive officer and take actions to implement them.
until 10.45 a.m.	Tea break. Make arrangements to pick up her daughter from school by sending a SMS to her husband.
until 12.30 p.m.	Prepare reports of the meetings held on the previous day and save it in the computer. Send hard copies of those reports to the relevant officers.
until 1.30 p.m.	Lunch break. Certain days she goes to the ATM machine in front of the office and draws money for her casual expenses by using her ATM card.

   (i)   State **three** occasions on which Mrs. Salgadu uses ICT to carry out her work.

   (ii) Name **three** applications software that she can use to make her work easy. Justify your selection.

   (iii) Write **two** advantages of having an Intranet in such an office.

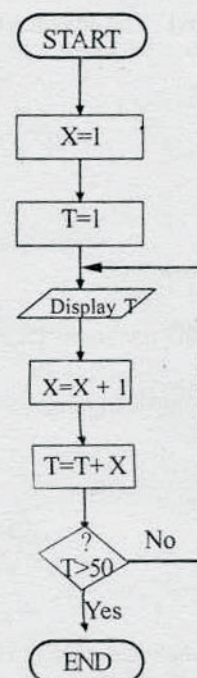   (iv) Suggest **two** methods by which she can protect the valuable data stored in the hard disk.

3. "Do Little" is a small business organization. Since there are a few employees they use a simple electronic worksheet to prepare their monthly payroll. A part of the worksheet used for this purpose is shown below.

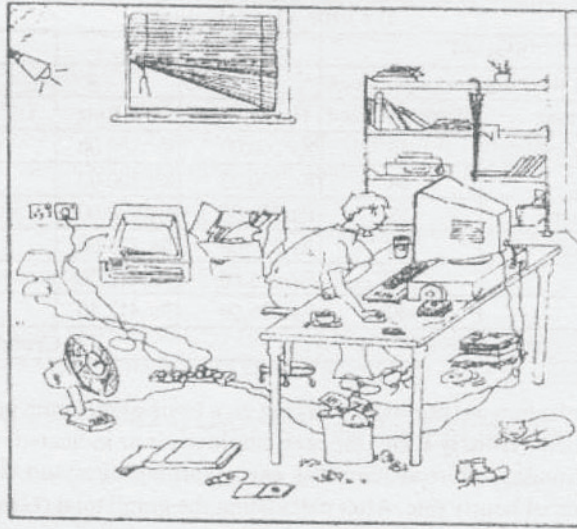|	A	B	C	D	E	F	G
1	Do little Organization						
2	Payments	May-09					
3	Normal working hours per week			40			
4	Emp.Code	Name	Hours Worked	Hourly Rate	OT Rate	OT Hrs.	Total Pay
5	C1007	Pravin	46	Rs.200.00	Rs.300.00	6	Rs. 9,800.0
6	C1009	Nalaka	54	Rs.200.00	Rs.300.00	14	Rs.12,200.00
7	C1011	Sivapalan	55	Rs.200.00	Rs.300.00	15	Rs.12,500.00
8	M2003	Ahamed	50	Rs.250.00	Rs.375.00	10	Rs.13,750.00
9	E3002	John	42	Rs.275.00	Rs.412.50	2	Rs.11,825.00
10	S3008	Mary	40	Rs.275.00	Rs.412.50	0	Rs.11,000.00
11						Grand Total	Rs.71,075.00

The employees of this organization are normally working on a basis of 40 hours per week (see D3 cell). The normal hourly rates of payment (**Hourly Rate**) for each employee is as indicated in the range D5:D10 of the worksheet. Saturdays and Sundays are considered as extra working days and the overtime (**OT Rate**) is calculated at 1 1/2 of the normal hourly rate. After calculating the grand total (**Grand Total**), the accountant draws out that amount in cash from the bank.

(i) State the formula that should be written to cell E5 in order to calculate the rate of over time (**OT Rate**). (Your formula should produce the values indicated in column E when it is copied to E6:E10 cell range.)

(ii) Using cell references only, state the formula that should be written to cell F5 in order to calculate the hours of overtime (**OT Hrs.**). (Your formula should produce the values indicated in column F when it is copied to F6:F10 cell range.)

(iii) Using cell references only, state the formula that should be written to cell G5 in order to calculate the total payments (**Total Pay**). (Your formula should produce the values indicated in column G when it is copied to G6:G10 cell range.)

(iv) Using cell references only, state the formula that should be written to cell G11 in order to calculate the total money drawn from the bank for the payments (**Grand Total**).

(i) The given flowchart models the generation of some numbers in a certain range. Write the first **three** and the last **three** numbers that it generates.

(ii) Write a pseudo-code that corresponds to the logic indicated by the flowchart.

(iii) State how to modify the given flowchart to display the number sequence
1, 4, 9, 16, 25, 36, 49.

5. The given diagram shows and unorganized working environment of a computer user. Refer the diagram to **answer** the given questions.

(i) List **three** factors that may badly affect the health of the user.

(ii) List **three** factors that may lead to safety risks of the user.

(iii) Indicate separately, the ways by which the health and safety risks you have identified could be eliminated.

6. Write brief accounts on any **three** of the following titles.

(i) The inclusion of Information and Communication Technology (ICT) as a subject in the advanced level curriculum.

(ii) Problems and challenges faced by students while learning ICT in school.

(iii) Exploiting ICT to develop tourism in Sri Lanka.

(iv) The advantages of computerizing the process of issuing vehicle licences.

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