Department of Examinations - Sri Lanka

National Evaluation and Testing Service

<u>I</u>

G.C.E (OL) Examination 2008 - Information & Communication Technology

<u>Responsibilities</u>

Please note that the task you are entrustedd with is of utmost importance affecting not just individual achievements at highly competitive examinations, but also the very future of our country. You must therefore make every effort to be unbiased in every aspect, free of prejudice and achieve the highest accuracy in marking scripts to ensure that they are free from errors. The prime objective of a marking scheme is to define evaluation criteria that can be applied uniformly, enabling the assessment of all students on an equal footing while preventing one from having an undue advantage over another.

<u>Introduction</u>

Information & Communication Technology has been introduced as a G.C.E (O/L) technical subject for the first time in Sri Lankan education system. The first examination was held in the year 2007 and this is the second time. This is credited for being the first examination which implements the new teaching methodology so called "competency based education".

The evaluation of the subject is made from two papers.

- Paper I - Consists of 40 multiple choice questions. (40 Marks, 1 hour)
- Paper II - Essay type questions, to select 5 out of 6 (60 Marks, 2 hours)
  Question 1 is compulsory and carries 20 marks.
  Other questions carry 10 marks each.

Ob'ectives

<u>Paper)</u>

The main objective of Paper 1 is to test a wide range of subjectt knowledge in a short period of 1 hour.

Paper 1 focuses on the subject knowledge, the ability to understand and apply what has been learnt at a basic level rather than at an in-depth level. It does not test the ability of the students to develop and organize ideas and present them in a coherent argument. This kind of assessment is not affected by the students' ability to write. The answers can also be marked reliably as all answers are predetermined.

<u>Paper II</u>

The main objective of Paper 2 is to assess the deep subject knowledge which cannot be assessed by Paper 1. In Paper II, each question consists of several parts and the initial parts test the basic subject knowledge while other parts gradually evaluate the logical and analytical knowledge of handling problems in a sensible and practical way. The examiners expect the students to be thorough with the concepts, basic principles and practical applications of ICT. Both Part I and II test whether the students have achieved the necessary level of competency.

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Instructions to Mark Question Paper I

1. Get the template prepared for marking certified by the chief examiner.

2. Check the answer script first, and cross out all options of the question of which either more than one option is marked or not marked.

3. Mark either correct or incorrect-on the question number itself.

4. DO NOT indicate correct or incorrect (~, x) marks on the candidate's answer.

5. Cut a window over the question numbers' column on the template, and mark correct / incorrect on the same column.

6. Be careful about the alignment of the template and the answer script during marking.

7. Count down the correct answers along each column and indicate under the same and then get the grand total of the correct answers (xx/40) and write it in the cage given in right.

8. Be careful when adding up marks and writing it down in the second question paper.

9. Accept when the candidate has marked the answers by underlining the options or marked in the question paper itself without using the answer script.

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<u>**Instructions to Mark Question Paper** 11</u>

Paper I - Marking Scheme

Question	Answer	Question	Answer'	Question	Answer	Question	Answer
1.	4	11.	3	21.	2	31.	1
2.	3	12.	4	22.	2	32.	3
3.	4	13.	1	23.	4	33.	3
4.	3	14.,-	4	24	4	34.	3
5.	4	15.	1	25.	1	35.	2
6.	1	16	3"	26	` 1	36.	2
7.	1	17.	3	27.	1	37.	2
8.	3	18.	4	`28.	1	38.	4
9.	3	19.	4	29.	4	39.	3
10.		20.		30.		40.	

Give 1 Mark for each correct answer. Total 40 marks (1x40)

1. Obtain a comprehensive understanding about the skills to be assessed before marking is started.

2. It is necessary to identify the level of competency that the candidate should exhibit regarding each skill during the discussion and impression marking. What needs to be exhibited is the level of achievement the candidate should reach at the end of year 11.

3. There should be a consistency among examiners when giving marks. Drastic variations of the marks given to the same answer by several examiners should be avoided. It is recommended to follow the following with regard to that.

   (i)   Strictly follow the marking scheme given.

   (ii)   Understand and follow the instructions of chief examiner.

   (iii)   Use the guidelines given in the handbook issued by the department of examination.

Q1. **[20 marks]**

(i) The basic facts, figures or measurements are considered as raw data and a meaningful process on these items results information.

[2 marks]

(ii) There can be many digital devices. Therefore be careful when giving marks.
For example, abacus, calculator, digital camera (/ web cam) etc.
Need two examples. **[1 + 1=2 marks]**

(iii) Space has no symbol. **[2 marks]**

(iv) There can be several examples for guided media. **[1 + 1=2 marks]**
Examples: Twisted pair (UTP/STP), Fibre optic cable

(v) Dot matrix printers make noise during printing. There can be several answers. Give marks for a valid answer.**[2 marks]** (vi) Video clips contain more information than audio clips. In general video

clips contain audio information in addition to imaging information. **[2 marks]**

(vii) RAM **[2 marks]**

(viii) **[1 + 1=2 marks]**

Normal   Flip Horizontal   Flip vertical

(ix) Telephone conversation (also mobile phone), Video conferencing

[2 marks]

(x) 999 MOD 1000 = 999 and 1000 MOD 999= 1 **[1 + 1=2 marks]**

Summary of Marks Allocation

Q1.

(i)	2 marks	
(ii)	2 marks	1+1
(iii)	2 marks	
(iv) !	2 marks	1+1
(v)	2 marks	
(vi)		
iii) ~	2 marks	
viii)	2 marks	1+1
	2 marks	1+1
~ (x)	2 marks	1+1

[Total 20 marks]

[Total 10 marks]

[Total 10 marks]

Q2.

(i) ı marks
3 marks
(iii) ᵢ 2 marks

Q3.

(i)	2 marks
(ii)	2 marks
(iii)	2 marks
(iv)	2 marks
(v)	2 marks

[Total 10 marks]

Q4.

(i)	3 marks
(ii)	4 marks
(iii)	3 marks

[Total 10 marks]

Q5.

(i)	2 marks
CI 0	4 marks
(iii)	
(iv) 1	2 marks 1

Q6.

( )	3 marks	Answer 3 parts out of 4. Give
(ii)	3 marks	1 mark for good writing and
(iii)	3 marks	presentation skills.
	3 marks	(3+3+3+1=10)

[Total 10 marks]

Q20 [40 marks]

(i) Data required by the Customer Services Manager

[3 marks}

- Name / NIC number of the patient
- Address
- Patient's age
- Patient's sex
- Name / NIC number of the guardian
- Contact telephone number

Information required by the Customer Services Manager

}2 marks}

- Brief description about current condition of the patient
- Directions to visit the patient
- Special information such as allergies, chronic diseases etc.

(ii) Additional data required by the CSM to prepare the invoice

- Registration number
- Registration fee
- Doctor's fees
- Nurses' fees
- Distance travelled
- Cost of medicine if given in the ambulance
- Service charges and tax

[3 marks]

(iii) Benefits, if a computer based information is used   [2 marks}

- Fast, easy & accurate to deal with customer data and information
- On line registration schemes can be implemented
- On line payment schemes can be provided
- History of patients can e tracked easily
- Preparing of invoices will be easy

Q3. [10 marks]

(i) = D13⁻D12   **[2 marks]**

(ii) = SUM(B3:B6)   OR =B3+B4+B5+B6   **[2 marks]**

(iii)= SUM(D3:D9)   OR =D3+D4+D5+D6+D7+D8+D9   **[2 Marks]**

(iv)   . Bit - B12   **[2 Marks]**

(v) = ROUND(B13/B11*100,1)   **[2 marks]**

Q6. [10 marks] Each part - 3 marks (3x3 = 9) and allocate the remaining **1 mark** to good writing and presentation skills.

(i) First three numbers   :1,3,5   **13 marks**

NOTE: Please read the students answers carefully since there can be different answers. The last two numbers :97,99 following few points are given as a guidance only.

(ii) Begin

(i)   X=1;   **14 marks**

         While X <=100
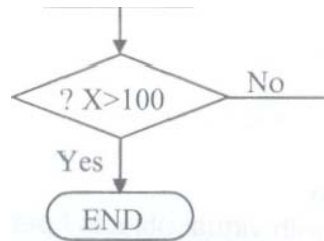
            Display X;

            X = X + 2;

         End While

       End

START

1

$X = 2$

(3 marks

/ Display X / X=X+2

? X>100   No

Yes

END

Q5. [10 marks]

(i) (a) e-mart becomes a "24-hour open" business so that the customers can find product Information before they purchase. (The ability to provide convenient service for the customers and hence get more customers attracted)

     (b) On-line ordering and purchasing facilities can be implemented. (e-shopping)

                                           12 marks

(ii) (a) Road map and company information (profile, address, telephone, e-mail etc.)

     (b) Product information (old, new and up coming)

     (c) Information on sales promotions   **14 marks**

     (d) Opening hours, holidays etc.

    (iii) (a) Designing an eye-catching home page by incorporating suitable graphics and animations. (should be simple so that it won't effect the loading speed of the web site)

     (b) Providing an efficient means of searching and providing up to date information.

                                           12 marks

(iv) (a) Advertising through traditional media such as radio, TV, news papers, handouts, posters etc.

     (b) Making awareness through e-mail campaigns and the Internet.   **12 marks**

Impact of ICT on Sri Lankan youth *[3 marks] - 1 mark for each valid and independent point.*

- The interest and the awareness of ICT(literacy rate) is improving rapidly.
- Getting used to explore and use information resources on the WWW for studies, self development and research.
- E-communication methods such as e-mail, chat, blogs etc. are popping up.
- Entering to the global job market
- E-governance
- E-commerce
- Some of the youth abuse the ICT.
- Digital divide.
- Emergence of a new culture; "SMS" (text messaging).
- Addiction to Internet games, pornography etc.
- Increase of social delinquencies

(ii) Disadvantages of computer games **[3 *marks*]**- *1 mark for each valid and independent point.*

Few points are as follows

- Addiction
- Playing with virtual objects / people, is different from playing with real world objects/ people. E.g. In a game you can shoot and kill a person
- Can cause physical health problems in the long run.
- Since most of the games are violent in nature there is more tendency that the players to lose control and become violent in the long run.
- Can lead to mental disorders.

(iii) Heath issues that may be caused by mobile phones. - *[3 marks] - 1 mark for each valid and independent point.*

- Some researches reveal that it can cause fertility problems.
- Microwave radiation in the frequency ranges 900 MHz and 2.4 GHz can damage sensitive brain cells may cause brain tumours. Belt clip cases let cell phones to deliver radiation to the liver or kidney areas when a wired or handsfree earpiece is used.
- Risk of causing memory loss and mental confusion.
- Wastes such as batteries can cause severe health problems due to releasing of toxic chemicals to the environment.

(iv) Use of ICT to develop the agricultural sector of Sri Lanka *[3 marks] - 7 mark for each valid and independent point.*

- Research can be carried out easily and effectively to find the key factors effecting the agriculture such as appropriateness of soil, weather patterns, climate, rain fall, suitability of seeds, pest control etc.
- Agricultural information can be made available to the farmers through web sites.
- Most of the functions such as watering, in large farms can be automated.
- Educating farmers about new methods in agriculture can be easily done.
- ICT can help finding a global market place for the agricultural products.
- Use of ICT makes administrative work easy.

End of Marking Scheme -

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