A/L ICT 2017 (Gr.13)

March – 2017 Examination

Field Work Center (FWC)

ICT

ICT – A/L 2017 (G.13) – March – 2017 FWC Examination – Marking Scheme

Part - I

(1)	5	**(11)**	1	**(21)**	4	**(31)**	3	**(41)**	3
(2)	2	**(12)**	4	**(22)**	5	**(32)**	5	**(42)**	1
(3)	5	**(13)**	1	**(23)**	5	**(33)**	5	**(43)**	2
(4)	5	**(14)**	5	**(24)**	3	**(34)**	5	**(44)**	5
(5)	4	**(15)**	3	**(25)**	5	**(35)**	1	**(45)**	2
(6)	3	**(16)**	1	**(26)**	5	**(36)**	1	**(46)**	3
(7)	2	**(17)**	5	**(27)**	1	**(37)**	4	**(47)**	2
(8)	1	**(18)**	1	**(28)**	5	**(38)**	5	**(48)**	3
(9)	1	**(19)**	5	**(29)**	2	**(39)**	5	**(49)**	5
(10)	4	**(20)**	3	**(30)**	4	**(40)**	5	**(50)**	4

Part – II A

Note:- ** Any other relevant answers.*

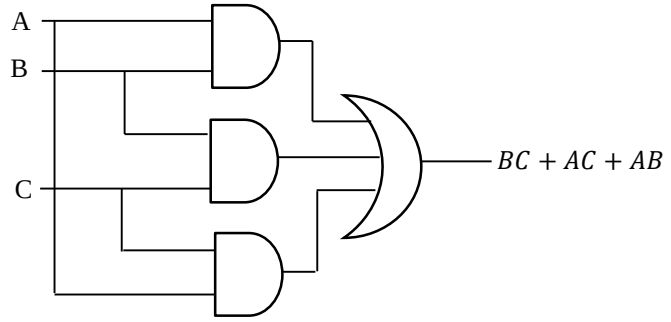
Question No.	Suggested Answers	
(1) (a)	• Magnetic storage medium : Hard disk, Floppy disk,Zip disk • Optical storage medium : CD, DVD, Blu Ray Disc • Solid-state storage medium: SSD, Memory cards, Flash drive	**3 marks [1 x 3]**
(1) (b)	$+8_{10}= 00001000_2$ $-6_{10} = 11111010_2$ 00000010_2 [discard 1]	**3 marks [1 for each line]**
(1) (c)	Width of an address bus = 32 bits No. of address spaces / No. of addresses = 2^{32} Max. usable size of memory = 2^{32} bytes = 4 GB	**4 marks (1 x 4 – 1 for each point)**
(2) (a)	• Physical layer – Communication media • Application layer – e-mail service • Transport layer – TCP, UDP • Network layer – Routing, IP	**4 marks [1 x 4]**

(2) (b)	• TCP - providing ***connection-oriented*** service. • UDP - providing ***connectionless*** service.	**2 marks [1 x 2]**
(2) (c)	<dl> **<dt>** Singapore **</dt>** **<dd>** The land of dreams **</dd>** **<dt>** Thailand **</dt>** **<dd>** The land of smiles **</dd>** </dl>	**4 marks [0.5 x 8]**
(3) (a)(i)	h1 { font-type:arial; } - Wrong h1 { font-family:arial; } - Correct	**2 marks [1 x 2]**
(3) (a)(ii)	p { text-color : red ; } - Correct	**1 marks**
(3) (b)	Output: 1 3 6 10 15	**3 marks [or 0]**
(3) (c)	s = 0 n =1 **while n<=10:** s = s+n n = n+1 **print (s)** * Alternative approach possible.	**4 marks (or 0)**
(4) (a)	Select stdid, address from Student	**2 marks (or 0)**
(4) (b)	Select Student.name, Subject.name, marks from Student, Subject, Marks where Student.stdid = Result.stdid and Subject.subid = Result.subid	**3 marks (or 0)**
(4) (c)	Insert into Student values ('S01', 'Perera', 'Galle') OR Insert into Student (stdid,name,address) values ('S01', 'Perera', 'Galle')	**2 marks (or 0)**

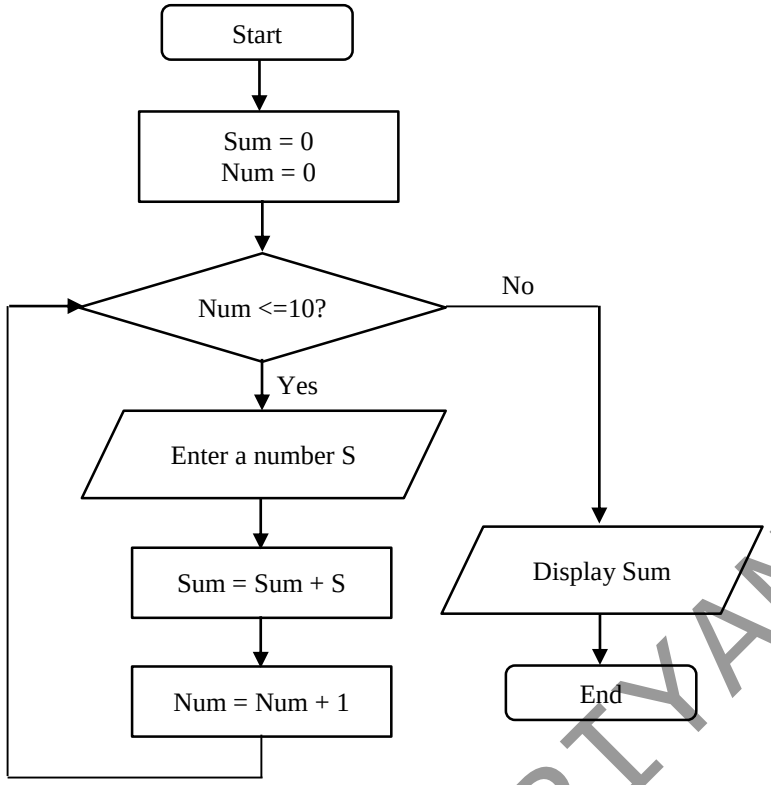
(4) (d)	Create table Student (stdid varchar(10), name varchar(25), address varchar(50), primary key(stdid)) **OR** Create table Student (stdid varchar(10) primary key, name varchar(25), address varchar(50))	**3 marks (or 0)**

Part –II B

Question No.		
(1) (a)(i)	$\overline{A+B} = \bar{A} + \bar{B}$ $\overline{A.B} = \bar{A} + \bar{B}$	**6 marks** [no order for rows – reduct 1 mark, no labels – reduct 1 marks]
(1) (a)(ii)	$A + (B + C) = (A + B) + C$ $A.(B.C) = (A.B).C$	
(1) (b)(i)	<table><tr><th>A</th><th>B</th><th>C</th><th>Output (W)</th></tr><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	**3 marks**
(1) (b)(ii)	$\bar{A}BC + A\bar{B}C + AB\bar{C} + ABC$	**3 marks** [no rules given – reduct 1 marks]
(1)(b)(iii)	$\bar{A}BC + A\bar{B}C + AB\bar{C} + ABC$ $\bar{A}BC + A\bar{B}C + AB(\bar{C} + C)$ Distributive Law $\bar{A}BC + A\bar{B}C + AB.1$ Inverse Law $\bar{A}BC + A\bar{B}C + AB$ Identity Law $\bar{A}BC + A(\bar{B}C + B)$ $\bar{A}BC + A(C + B)$ $\bar{B}C + B = C + B$ $\bar{A}BC + AC + AB$ $C(\bar{A}B + A) + AB$ $C(B + A) + AB$ $BC + AC + AB$	**3 marks**

(1)(b)(iv)		
(2) (a)	• Flow control. • Connection-oriented communication. • Reliability service. • Congestion avoidance. Or any other accepted answers.	**3 marks [1 x 3]**
(2) (b)	30 hosts [2^5-2 = 30]	**2 marks**
(2) (c)(i)	DHCP server ***resolves IP addresses dynamically*** / automatically to the machines.	**2 marks (or 0)**
(2) (c)(ii)	Proxy server ***shares the Internet connection*** among computers/users. OR Proxy server is a server that acts as an ***intermediary for requests*** from clients ***seeking resources*** from other servers.	**2 marks (or 0)**
(2) (d)	An *agent* is a computer system/software that is ***situated in an environment***, and that is capable of ***autonomous action*** in this environment on behalf of its user in order to ***meet its design*** objectives. • e-Commerce / bidding agents. • Buyer agents / Shopping agents. • Auction agents. • User / personal agents. • Data mining agents. • Monitoring and surveillance agents. • Learning agents. Or any other accepted answers.	**6 marks [3+1.5 x 2]**
(3) (a)	• Object-oriented programming. • Structured programming (Functional / procedural programming). • Unstructured programming.	**2 marks**

(3) (b)



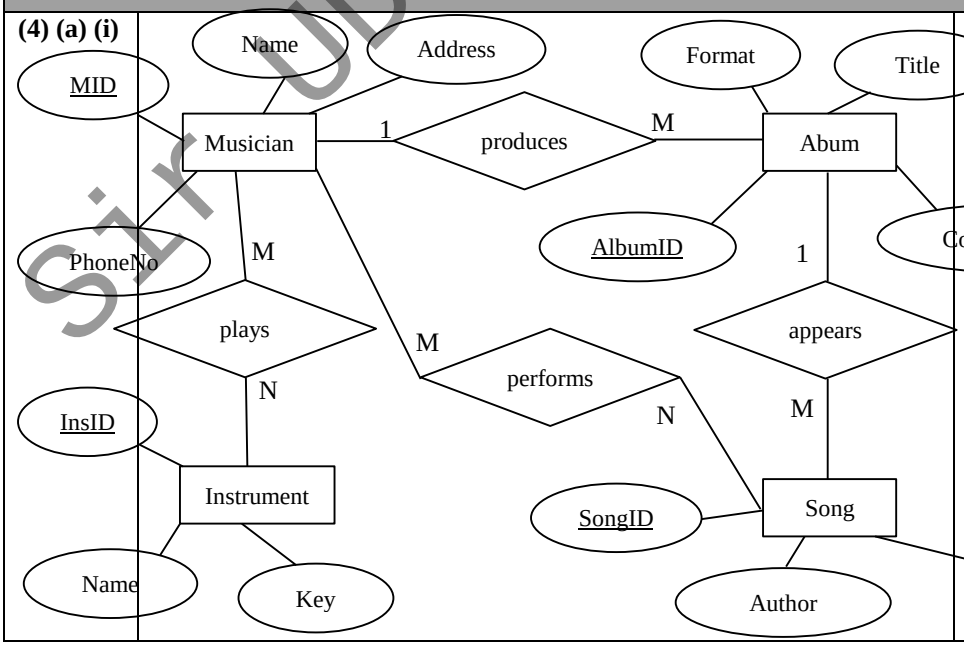
6 marks [partial marks could be given] Alternative approach possible.

(3) (c)

```
Sum= 0
Num= 1
while Num<=10:
    S= int(input('Enter a number:'))
    Sum= Sum+S
    Num= Num+1
print('Total = ', Sum)
```

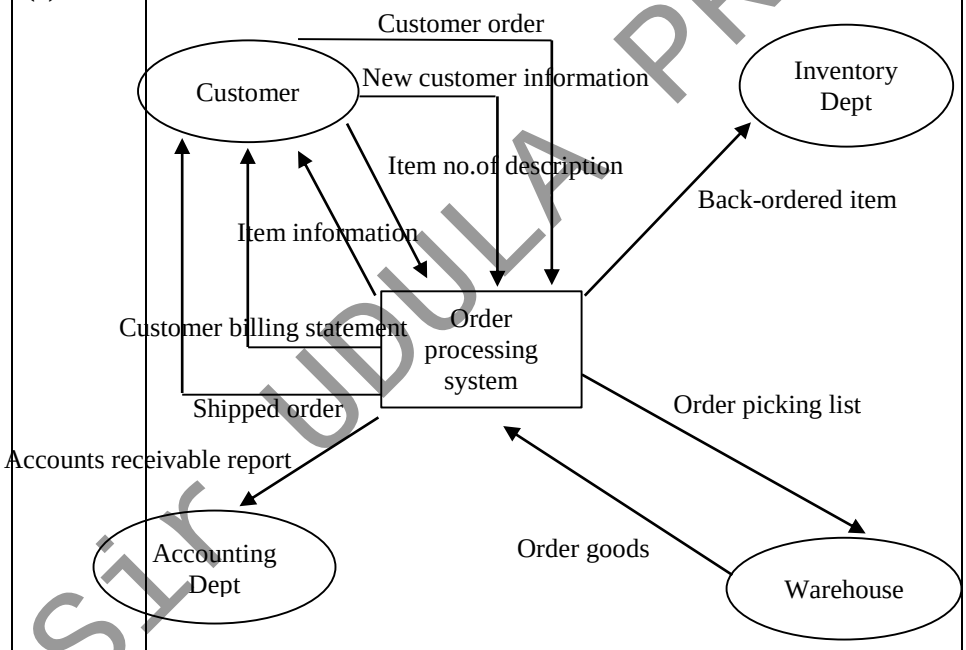
7 marks [partial marks could be given] Or other approaches possible.
Variables declaration – 2 marks
Condition – 1 marks
Input – 1 marks
Two statements – 2 marks
Print – 1 marks

(4) (a) (i)



15 marks

[4 marks for 4 entities.
5 marks for attributes of each entity.
2 marks for primary keys.
4 marks for all relationships].

(5) (a)	** ** - tag defines a **paragraph**. Adds some white space **before and after** a paragraph. **<img>** - Images are defined with the **<img>** tag.	**3 marks [1.5 x 2]**
(5) (b)	<html> <head> <title> Bird Park - Hambantota </title> </head> <body> Bird Park - Hambantota <img src="bird.jpg" alt="bird" width="400" height="240"> The position of Sri Lanka in the Indian Ocean at the southernmost tip of the Indian subcontinent is of great importance for long distance migrant shorebirds. Birds Research Centre & Resort, Asia's largest Birds Research Centre exhibits over 200 birds species. For more information: Bird Park </body> </html>	**12 marks [partial marks given]** h1 – 2 marks p – 1 marks img – 3 marks br – 2 marks for all a – 2 marks html structure – 2 marks
(6)		**15 marks** [1 x 15 – entity, system, and data flows each get 1 mark]

Note: - *Teachers are expected to follow this marking scheme strictly in order to guide students for final examination.* (In the answers given, key words with **Bold / Italic** must be in the answer scripts).

Part – I 2 x 50 =100 marks **Part – II A** 10 x 4 = 40 marks **Part – II B** 15 x 4 = 60 marks

200 / 2 = 100 marks

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