

ICT – 2015 (G.13) – June - FWC Examination - Scheme

Part - I

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

Part – II A Structured Essay – All questions

Note:- * Amendments to be included.

Question No.	Suggested Answers	Marks
(1) (a)	<pre> erDiagram SUPPLIER --o{ PARTS : Distribute SUPPLIER { string suppliernumber PK string city string suppliername } PARTS { string partnumber PK string partname string colour } PARTS { string quantity } </pre>	3 [1-entities 1-attributes 1-relationship & primary keys]
(1) (b)	Many-to-many One supplier may distribute more than one parts, and a part may be distributed by more than one supplier	2 [for reasons]
(1) (c)	Supplier (<u>suppliernumber</u> , suppliername, city) Distribute (<u>suppliernumber</u> , <u>partnumber</u> , quantity) Parts (<u>partnumber</u> , partname, colour)	3 [1 for each]
(1) (d)	Select suppliername from supplier, distribute where supplier.suppliername = distribute.suppliername and quantity > 1000	2 or 0
10 marks		
(2) (a)	1 – html	4 [8 x 0.5]

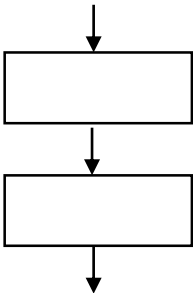
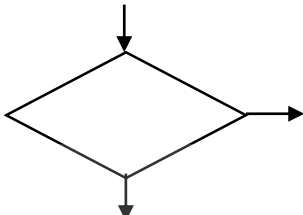
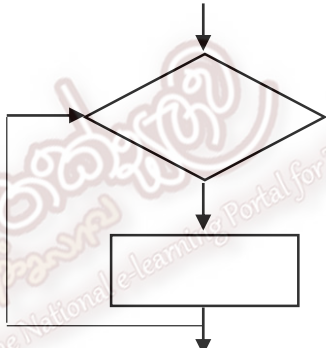
	2- RoboEddy Homepage 3- font-style 4- /style 5- toptitle 6- paratext 7- ul 8- /ul	
(2) (b)	Memory addresses : Lowest – 0 Highest – $2^{20} - 1$	3 [2 x 1.5]
(2) (c)	Window, Icon, Menu, Pointer	3 [all correct – 3, 3 or 2 correct – 2, 1 correct - 1]
(3) (a)	$16_{10} = 000100000_2$ $-7_{10} = 11111000_2$	2 [1 + 1]
(3) (b)	$16_{10} = 000100000_2$ $-7_{10} = 11111000_2$ 00001000 1 (add carry bit 1 at LSB) 00001001 ₂ 	2
(3) (c)	e-mail service – application layer Routing – network layer UDP – transport layer Hub – physical layer TCP – transport layer FTP – application layer	3 [6 x 0.5]
(3) (d)	Class - C, netid – 192.172.1, hosted - 5 Class - A, netid – 112, hosted – 7.8.9 Class - B, netid – 156.7, hosted – 6.1	3 [1 for each]
(4) (a)	<pre> graph TD Start([Start]) --> Input[/Input a number X/] Input --> Decision{X > 0?} Decision -- Yes --> Positive[/Positive number/] Decision -- No --> Negative[/Negative number/] Positive --> Stop([Stop]) Negative --> Stop </pre>	2 or 0

(4) (b)	<pre> x = int (input ("Enter a number:")) if x > 0: print ("Positive number") else: print ("Negative number") </pre>	2 or 0
(4) (c)	A – Requirements Definition. B – System Design. C – Coding/Implementation. D – System Testing. E – Operation and Maintenance.	2 [all correct -2, 1, 2, 3 or 4 correct - 1] Alternative terminologies accepted.
(4) (d)	(i) - Client (ii) - Itemised Bill / Bill (iii) - Payment (iv) - (First) Reminder (v) - (Final) Reminder (vi) - Invoice Details (vii) - Reminder Details (viii) - Invoice	4 [8 x 0.5] Related words accepted.

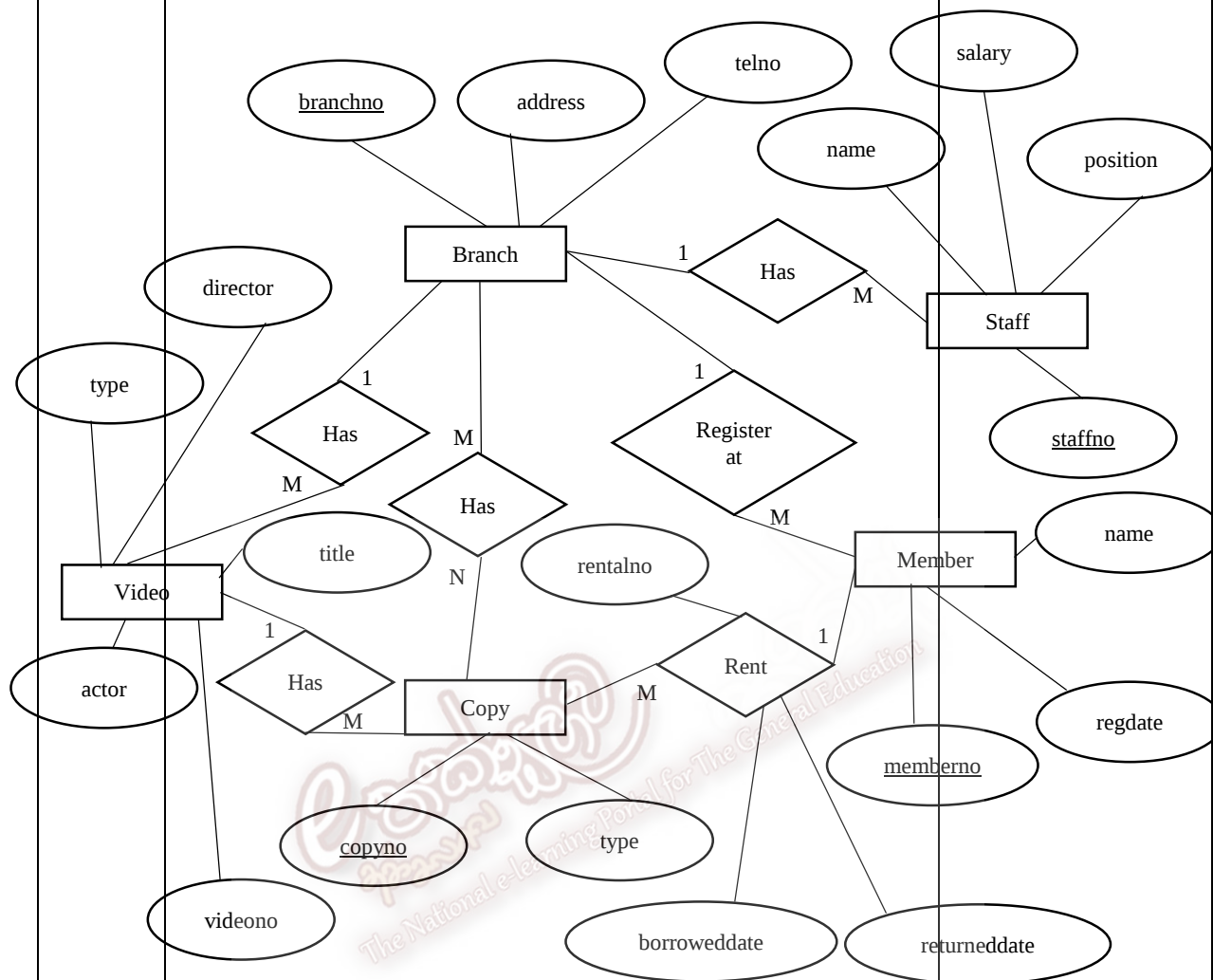
Part –II B Essay – Four questions only

Question No.	Suggested Answers	Marks
(1) (a)	$\bar{A} + \bar{B}.C + A.\bar{B}$	3 or 0
(1) (b)		4 or 0

(1) (c)	<table><tr><th>A</th><th>B</th><th>C</th><th>$\bar{A}$</th><th>$\bar{B}$</th><th>$A.\bar{B}$</th><th>$\bar{B}.C$</th><th>$\bar{A} + \bar{B}.C + A.\bar{B}$</th></tr><tr><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	A	B	C	$\bar{A}$	$\bar{B}$	$A.\bar{B}$	$\bar{B}.C$	$\bar{A} + \bar{B}.C + A.\bar{B}$	0	0	0	1	1	0	0	1	0	0	1	1	1	0	1	1	0	1	0	1	0	0	0	1	0	1	1	1	0	0	0	1	1	0	0	0	1	1	0	1	1	0	1	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	6 (row order is important) Proper columns must be in the answer. Marks can be distributed according to the correct portion.
A	B	C	$\bar{A}$	$\bar{B}$	$A.\bar{B}$	$\bar{B}.C$	$\bar{A} + \bar{B}.C + A.\bar{B}$																																																																			
0	0	0	1	1	0	0	1																																																																			
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1	1	0	0	0	0	0	0																																																																			
1	1	1	0	0	0	0	0																																																																			
(1) (d)	$\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.\bar{C} + \bar{A}.B.C + A.\bar{B}.\bar{C} + A.\bar{B}.C$	2 or 0																																																																								
(2) (a)	- Identifying regular patients. - Obtaining health related information about patient easily & quickly. - Patient's health status could be easily detected for further treatment. - Maintaining accuracy of data about patients.	6 [2 x 3] Or any other acceptable answers.																																																																								
(2) (b)	- Keeping accurate health status themselves. - In the case of obtaining treatment in another place / from another medical expert, this is the basic information tool for further treatment.	4 [2 x 2] Or any other acceptable answers.																																																																								
(2) (c)	Loosing of their privacy information or Getting threats from insurance company for premium on demand.	2 Or any other acceptable answers.																																																																								
(2) (d)	Data encryption.	3 Or any other acceptable answers.																																																																								
(3) (a)	- Error control - Access control - Framing - Physical addressing / MAC addressing	4 [2 x 2] Or any other acceptable answers.																																																																								
(3) (b)	62 hosts ($=2^6-2$)	2																																																																								
(3) (c) (i)	DNS translates / maps IP address into domain name or vice versa.	2																																																																								
(3)(c) (ii)	Encryption is a mathematical technique used to scramble or encode a message into an unreadable format to unauthorized person. The result of the process is encrypted information.	2																																																																								
(3) (d)	An <i>agent</i> is a computer system that is <i>situated</i> in an <i>environment</i> , and that is capable of <i>autonomous action</i> in this environment on behalf of its user in order to meet its design objectives.	5 [2 for definition , 3 for situations]																																																																								

	- e-commerce bidding agents. - Shopping agents. - Auction agents.	Or any other acceptable answers.
(4) (a)	Sequence  Selection  Iteration 	6 [2 x 3] Any acceptable depiction.
(4) (b)	- Ask users (“ How many marks to sum:?”) for string and convert it into integer and assigns and stores in memory location using variable n. - Ask users (“Enter marks”) as string format and assigns and stores in memory location using variable s /Stores marks entered by the user. - Adds marks together entered by the user [converts marks into integer before addition]. - Exits from loop when user finishes number of marks previously entered. - Prints total marks entered by the user. - Prints average marks entered by the user.	6 [1 x 6] Or any equal explanation.
(4) (c)	True	3 small letter true not accepted.

(5)



- Entities – 5 marks
- Attributes – for each entity – 5 marks
- Primary keys – 2 marks
- Relationships – 3 marks

15 marks

(6) (a)

Services provided by the system for the users or services expected by the users.

3

(6) (b)

- Staff of the department shall be able to store details about persons such as photo, finger print, bio-data and blood group. Or staff of the department shall be able to scan person's photo / finger print.
- Staff of the department shall be able to protect information from unauthorized people about persons.

4 [2 x 2]
Answers should be based on IEEE method and actor necessary.

(6) (c)	- Fraudulent identity cards could be prevented. - Data on chips could be digitally captured easily & quickly / accurately. - The chip stores the data printed on the card. While it may be possible to counterfeit the data visible on the card, the data stored on the card is secure and its integrity. - The chip guarantees the privacy of the citizen is respected.	6 [3 x 2] Or any other acceptable answers.
(6) (d)	Bar Codes / Magnetic Stripes / Wiegand interface / Watermark Magnetics / Proximity Cards / RFID/ Contact Smart Cards / Contact-less Smart Cards.	2 [1+1] Any two answers.

Note: - Teachers are expected to follow this marking scheme strictly for marking. (In the answers given, Words with **Bold** / Underlined must be in the answer scripts of students).

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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
