

Information and Communication Technology(20 E)

Part I

2016

Q.No	Answer		Q.No	Answer
1	5		26	4
2	3		27	2
3	2		28	1
4	5		29	4
5	4		30	2
6	3		31	2
7	3		32	3
8	2		33	1
9	2		34	5
10	2		35	4
11	2		36	1
12	3		37	1
13	4		38	4
14	1		39	3
15	1		40	4
16	2		41	5
17	1		42	4
18	3		43	2
19	4		44	4
20	3		45	3
21	3		46	2
22	2		47	4
23	5		48	1,2
24	2		49	2
25	2		50	4

Information and Communication Technology(20 E)

Part II A

2016

Q.No	Model Answer	Marks	
1 (a)	(i) When clicked on 'Cover Page' , the image named 'coverPage.jpg' is displayed/opened on a new tab/window .	1	
	(ii) When clicked on 'Content' the document 'content.html' is displayed/open on the same window/tab (overwriting the content).	1	
	(iii) [When clicked on the image 'figures.jpg'] [the document 'figures.html' is displayed/opened on the same window/tab (overwriting the content on that page).]	1 1	
Note : Do not consider the case-sensitivity of the names(Content, Cover Page,_coverPage.jpg,content.html,figures.jpg,figures.html)			
1 (b)	External style sheets/External/External CSS Note : Do not give any marks if more than one mechanism is given	1	
1 (c)	<code><style type="text/css"></code> <code>h2{</code> <code> color: red;</code> <code> text-align: center;</code> <code>}</code>	1 1 1	
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><code>p{</code> font-family:"Courier New"; font-size: 14px; <code>}</code></td> <td style="width: 50%;"><code>p{font : 14px "Courier New";</code> <code>}</code> Note : Order is important if both values are given together</td> </tr> </table>	<code>p{</code> font-family:"Courier New"; font-size: 14px; <code>}</code>	<code>p{font : 14px "Courier New";</code> <code>}</code> Note : Order is important if both values are given together
<code>p{</code> font-family:"Courier New"; font-size: 14px; <code>}</code>	<code>p{font : 14px "Courier New";</code> <code>}</code> Note : Order is important if both values are given together		
<code></style></code>			
Note: 1) If the type is given the correct type text/css should be given within quotes(double or single). 2) Single quote is also allowed in places where double quotes are used. 3) All CSS properties and values are case sensitive.			

අනුබලය
click කළ සිදු

tab වර්ගය
window වර්ගය

<style>
must say
use html 5

quotes වලට

<style>

</style>

pt

not case sensitive

X

data transactions
Security
paypal like service
definition no marks
මගේ කාර්යය
of
paypal මගේ මෙවලමක් මගේ මගේ මෙවලමකට
paypal — ① ①

2 (a)	<p>C2C: I sell my camera online/through internet/website to an African buyer.</p> <p>definition no marks</p> <p>B2C: Paypal like service.</p> <p>paypal මගේ මෙවලමක් මගේ මගේ මෙවලමකට</p> <p>paypal — ① ①</p>	2 1 1
2 (b)	<p>To secure the payers sensitive data (security) Guarantee [for the delivery] and [the payment to the seller].</p> <p>ඉදිරි ගෙවන දුර්වලතා සහතිකයක් ලෙස දැක්වීම</p> <p>ගාමනීයව මාගේ දායකත්වය වෙත ගාමනීය/වගකීමකට</p> <p>වෙනම වෙත ඉදිරි ගෙවන</p>	1 1 1
2 (c)	<p>Reliability You may not get the item at all not get the item you have ordered get a poor quality item</p> <p>දුර්වලතා You may not get the item at all not get the item you have ordered get a poor quality item</p> <p>Security Any other person may rob your credit card details.</p> <p>Privacy The buyer may use your credit card number to steal money or expose it/personal details to others</p> <p>Note : Any two answers are acceptable.</p> <p>* Any two options 04 marks</p>	1 1 1 1 1 1 1
3 (a)	<p>Closed System</p> <p>මඳුල් + CO₂ → ජලය + වීදුරු</p> <p>(1) Inputs (Water) is available within the system</p> <p>ජලය → මඳුල් + වීදුරු</p> <p>(2) Outputs (Oxygen and Hydrogen) release to the system.</p>	2 2 2
3 (b)	<p>(1) Accuracy/Any problem caused by accuracy</p> <p>(2) Efficiency/Any problem caused by efficiency</p> <p>related search slow data ගිණිගොඩ Slow වෙනම</p> <p>related reason - වැඩ කිරීමකට වැඩි වේලාවක් ගතවීම ∴ update කිරීම අවශ්‍යයි.</p>	1 1
3 (c)	<p>Compare : Both are I-P-O systems (Example : Both can process data)</p> <p>Contrast : Human brain is more intelligent than an information system Or any other acceptable reason (examples : Natural vs Artificial; accuracy; reliability; emotional.....)</p> <p>Note: There should be an answer for each class.</p>	1 1

duplication +
same error
repeat data
again

Input
Output
Process
Store

4 (a)	(i) Nothing/no output It has a never-ending(infinite) loop $i = i + 1$ නැතිවේ.	1 1
W accept	(ii) total = 0 i = 1 while (i <= 10): total = total + i i = i + 1 print(total) Note : The program should be executable and print 55 as the final value.	Indentation $i = 0$ while (i < 10) 2 1
4 (b)	Address size = 16 bit Max number of unique addresses possible = 2^{16} Max number of bytes addressable = 2^{16} Max usable size of memory = $2^{16} = 2^6 \times 2^{10}$ Note : 64 KB වේ 1 mark Correct answer 1 mark Correct computation 4 marks	64 KB වේ 1 mark

විභින අවස්ථා = 16 bits

අවම අවස්ථා විභින අවස්ථා = 2^{16}

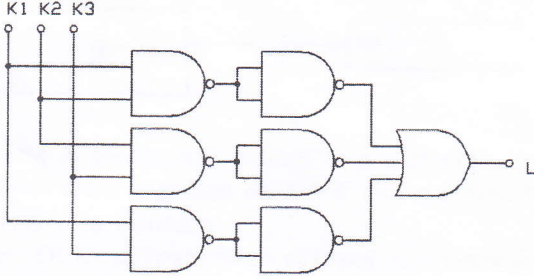
ප්‍රභවය වන අති අවම වශයෙන් අවස්ථා = 2

භාවිත වන අවස්ථා අවම අවස්ථා = $2^{16} = 2^6 \times 2^{10}$
අවස්ථා = 64 KB

Information and Communication Technology(20 E)

Part II B

2016

Q.No	Model Answer	Marks																																				
1	<p data-bbox="578 380 711 411">Truth table</p> <table border="1" data-bbox="591 443 862 789"> <thead> <tr> <th>K1</th> <th>K2</th> <th>K3</th> <th>L</th> </tr> </thead> <tbody> <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> </tbody> </table> <p data-bbox="480 793 1252 894">Note: <i>entire table correct</i> In the truth table the symbols K1,K2,K3,L should be used or should be defined.</p> <p data-bbox="574 940 808 972">Boolean expression</p> <p data-bbox="574 982 1133 1014">$L = K1'.K2.K3 + K1.K2'.K3 + K1.K2.K3' + K1.K2.K3$</p> <p data-bbox="574 1024 930 1056">Simplified Boolean expression</p> <p data-bbox="574 1066 870 1098">$L = K1.K2 + K2.K3 + K3.K1$</p> <p data-bbox="480 1104 834 1257">Note : Correct rules 2 marks Correct computation 2 marks Correct answer 1 mark</p> <p data-bbox="480 1308 768 1339">Circuit using given gates</p>  <p data-bbox="480 1675 1166 1707">Note : Connections should be marked by dots or jumpers</p> <p data-bbox="492 1728 1482 2095"> $\overline{K1}K2K3 + K1\overline{K2}K3 + K1K2\overline{K3} + K1K2K3$ $K2K3(\overline{K1} + K1) + K1\overline{K2}K3 + K1K2\overline{K3} \quad (\overline{x} + x = 1)$ $K2K3 + K1\overline{K2}K3 + K1K2\overline{K3}$ $K3(K2 + K1\overline{K2}) + K1K2\overline{K3} \quad x + y\overline{x} = x + y$ $K3(K2 + K1) + K1K2\overline{K3}$ $K3K2 + K3K1 + K1K2\overline{K3}$ $K2(K3 + K1\overline{K3}) + K2K1$ </p>	K1	K2	K3	L	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	1	0	0	0	1	0	1	1	1	1	0	1	1	1	1	1	<p data-bbox="1360 426 1385 499">4 1</p> <p data-bbox="1360 999 1385 1108">2 5</p> <p data-bbox="1360 1528 1385 1560">3</p>
K1	K2	K3	L																																			
0	0	0	0																																			
0	0	1	0																																			
0	1	0	0																																			
0	1	1	1																																			
1	0	0	0																																			
1	0	1	1																																			
1	1	0	1																																			
1	1	1	1																																			

L1 (P) L2 (3) marks (R) (SW) L1 (R) L2 (SW) (Q)

<p>2</p>	<p>a)</p> <p>Note : Router is in both LANs and L1 and L2 are separate LANs – 3 Marks P and Q are in different LANs L1 and L2 – 2 Marks. This must be marked only when the first part is correct.</p> <p>b) Q. IP address indicates the final destination and it does not specify the intermediate routers/gateways.</p> <p>c) R. The frame F2 is originated at the router R and therefore the source MAC address in frame F2 is the MAC address of R.</p>	<p>5</p> <p>2</p> <p>3</p> <p>2</p> <p>3</p>
<p>3</p>	<p>a) B2E An online service provided by the <u>bank</u> to its <u>employees</u> Note : Final mark should be 0,1 or 3</p> <p>b)</p> <ul style="list-style-type: none"> • Manage their personal activities need to be done during work hours without leaving the workplace • Get information better and faster, easily <p>c) Yes/No. <u>1</u> only no — 0 marks Note : If the answer is No justification must be given. It is expected to enhance <u>their efficiency</u> and <u>satisfaction</u> as it enhances the balance between the employees' work and personal life. Note : Justification should support Yes/No claim</p> <p>d)</p> <ul style="list-style-type: none"> • Content selection and suggestion • Content prioritization • Alerting • Summarizing content • Agent interaction • User's work process analysis, select relevant content • Content recommendation and delivery (personalized) • Content delivery and storage • Content delivery and storage 	<p>1</p> <p>2</p> <p>2</p> <p>2</p> <p>1</p> <p>4</p> <p>1</p> <p>1</p> <p>1</p>

can give justification (if without mark only 1/2)

NOT Justification

4

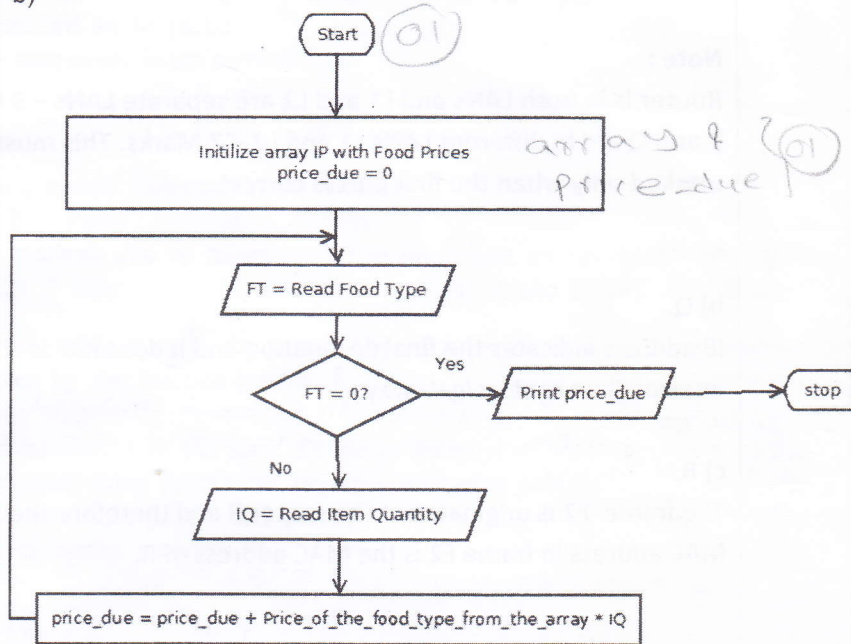
a) Inputs

- i) Input to indicate end of iteration
- ii) Food Type/Price of the food type
- iii) Number of items of the food type

Output

Payment due for the tray.

b)



Start/end : 1 Mark

Correct Initialization : 1 Mark

Correct Inputs : 1 Mark

Correct Loop : 1 Mark

Correct Computation : 1 Marks

Output : 1 Mark

c)

price_due = 0.0

IP = [10.00,12.00,15.00,10.00,25.00,45.00,50.00,25.00,10.00,12.00]

FT = int(input("Enter food type : "))

while FT !=0:

 IQ = int(input("Enter item Quantity : "))

 price_due = price_due + IP[FT-1] * IQ

 FT = int(input("Enter food type : "))

print(price_due)

Note :

1 mark : price due initialization

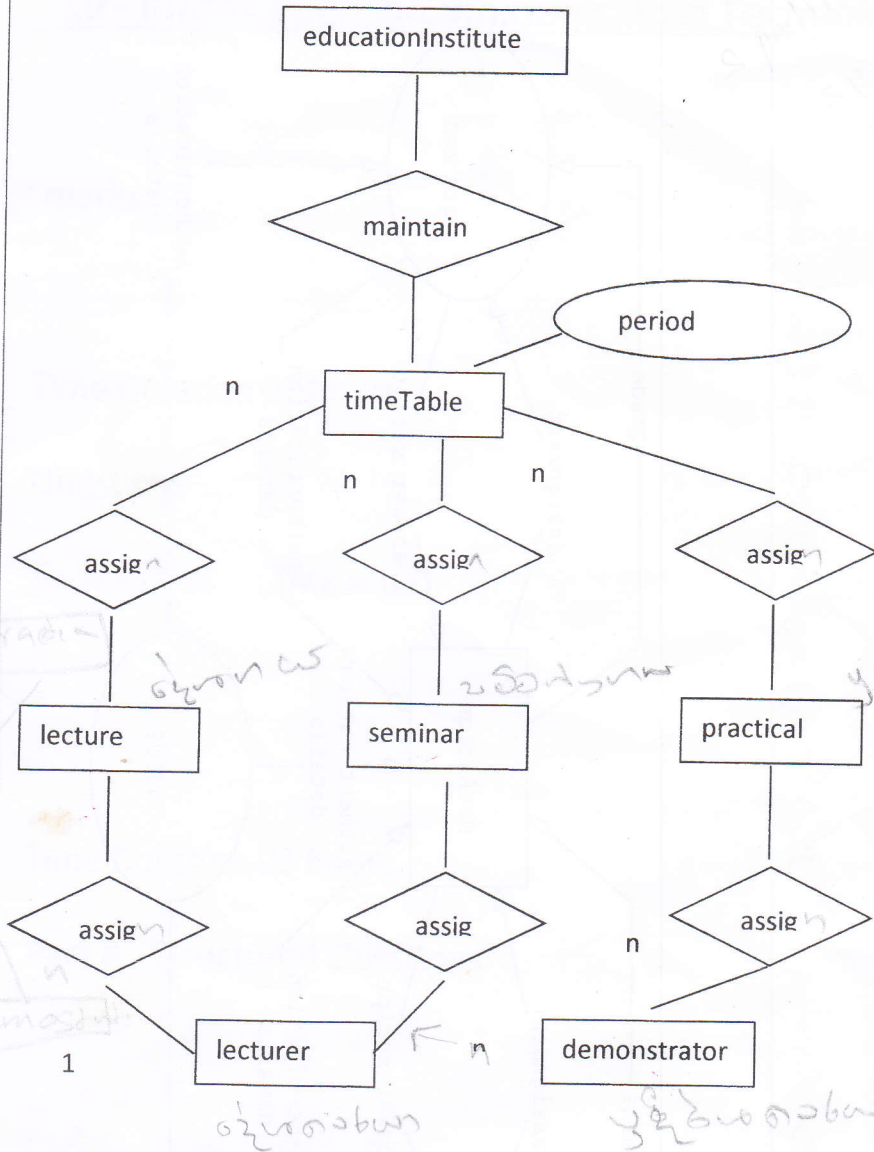
1 mark : array initialization

1 mark : input food type and Quantity

1 mark : correct loop

1 mark: correct computation

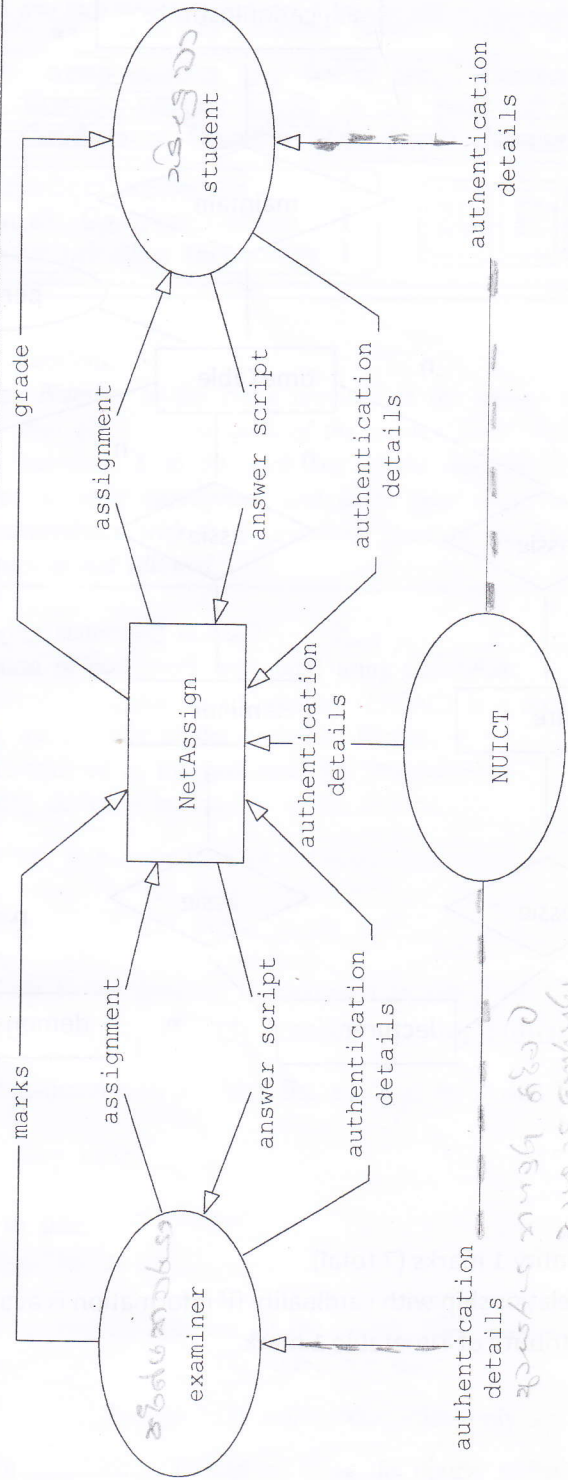
5



Note :
 Each entity 1 marks (7 total)
 Each relationship with cardinality (if information is available) (7 total)
 The attribute of Timetable 1 mark

මෙහි ඇති සියලුම කොටස් පිළිබඳව

6



(1 mark for each component)