



**අ.පො.ස.(උ.පෙළ) විභාගය - 2016**  
 ක.පො.ත (உயர் தர)ப் பரீட்சை - 2016

විෂය අංකය } 20 විෂය } තොරතුරු හා සන්නිවේදන තාක්ෂණය

ලකුණු දීමේ පටිපාටිය/புள்ளி வழங்கும் திட்டம் - I පත්‍රය/பத்திரம் I

ප්‍රශ්න අංකය විභාගය ල.ක.ව.	පිළිතුරු අංකය ල.ක.ව.	ප්‍රශ්න අංකය විභාගය ල.ක.ව.	පිළිතුරු අංකය ල.ක.ව.	ප්‍රශ්න අංකය විභාගය ල.ක.ව.	පිළිතුරු අංකය ල.ක.ව.	ප්‍රශ්න අංකය විභාගය ල.ක.ව.	පිළිතුරු අංකය ල.ක.ව.	ප්‍රශ්න අංකය විභාගය ල.ක.ව.	පිළිතුරු අංකය ල.ක.ව.
01.	5	11.	2	21.	3	31.	2	41.	5
02.	3	12.	3	22.	2	32.	3	42.	4
03.	2	13.	4	23.	5	33.	1	43.	2
04.	5	14.	1	24.	2	34.	5	44.	4
05.	4	15.	1	25.	2	35.	4	45.	3
06.	3	16.	2	26.	4	36.	1	46.	2
07.	3	17.	1	27.	2	37.	1	47.	4
08.	2	18.	3	28.	4, 1	38.	4	48.	1, 2
09.	2	19.	4	29.	4	39.	3	49.	2
10.	2	20.	3	30.	2	40.	4	50.	4

විශේෂ උපදෙස්  
 විෂය අංකය අනුව

එක් පිළිතුරකට  
 ඉලක්කම් 02

ලකුණු

02

වැගිල්  
 50

මුළු ලකුණු  
 මොத்தම புள்ளிகள்

2x50 = 100

**Information and Communication Technology(20 E)**  
**Part II A**  
**2016**

Q.No	Model Answer	Marks		
1 (a)	<p>(i) When <u>clicked</u> on 'Cover Page', the image named '<u>coverPage.jpg</u>' is <u>displayed/opened</u> on a <u>new tab/window</u>.</p> <p>(ii) When <u>clicked</u> on 'Content' the document '<u>content.html</u>' is <u>displayed/open</u> on the <u>same window/tab</u> (overwriting the content ).</p> <p>(iii) [When <u>clicked</u> on the <u>image 'figures.jpg'</u> ] [the document '<u>figures.html</u>' is <u>displayed/opened</u> on the <u>same window/tab</u> (overwriting the content on that page).]</p> <p>Note : Do not consider the case-sensitivity of the names(Content, Cover Page, coverPage.jpg, content.html, figures.jpg, figures.html)</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>		
1 (b)	<p>External style sheets/External/External CSS</p> <p>Note : Do not give any marks if more than one mechanism is given</p>	1		
1 (c)	<pre>&lt;style type= "text/css"&gt;   h2{     color: red;     text-align: center;   }    p{     font-family:"Courier New";     font-size: 14px;   }</pre> <table border="1" style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 50%; padding: 5px;"> <pre>p{ font-family:"Courier New"; font-size: 14px; }</pre> </td> <td style="width: 50%; padding: 5px;"> <pre>p{font : 14px "Courier New"; }</pre> <p><b>Note : Order is important if both values are given together</b></p> </td> </tr> </table> <pre>&lt;/style&gt;</pre> <p>Note:</p> <ol style="list-style-type: none"> <li>1) If the type is given the correct type text/css should be given within quotes(double or single).</li> <li>2) Single quote is also allowed in places where double quotes are used. <i>Non quot</i></li> <li>3) <del>All CSS properties and values are case sensitive.</del> <i>Px or pt</i></li> </ol>	<pre>p{ font-family:"Courier New"; font-size: 14px; }</pre>	<pre>p{font : 14px "Courier New"; }</pre> <p><b>Note : Order is important if both values are given together</b></p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>
<pre>p{ font-family:"Courier New"; font-size: 14px; }</pre>	<pre>p{font : 14px "Courier New"; }</pre> <p><b>Note : Order is important if both values are given together</b></p>			

2 (a)	<p>C2C: <u>I sell my camera online/through internet/website</u> to an <u>African buyer.</u> } 2  <i>3 condition - seller</i>  <i>- buyer</i>  <i>- media</i>  <i>මෙ, (මෙහි)</i></p> <p>B2C: Paypal like service. } 1  <i>Paypal මෙන් වග 3% කොමිස්.</i></p>	2  1
2 (b)	<p>To secure the payers sensitive data (security)          Guarantee [for the delivery] and [the payment to the seller].</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>Security          Any other person may rob your credit card details.</p> <p>Privacy ,          The buyer may use your credit card number to steel money or expose it/personal details to others.</p> <p>Note :          Any two answers are acceptable.  <i>2 marks each for two of above</i></p>	1 1  1 1  1 1
3 (a)	<p>Closed System</p> <p>(1) Inputs (Water) is available within the system</p> <p>(2) Outputs (Oxygen and Hydrogen) release to the system.</p>	2  2 2
3 (b)	<p>(1) Accuracy/Any problem <del>caused by</del> <i>related to</i> accuracy</p> <p>(2) Efficiency/Any problem <del>caused by</del> <i>related to</i> efficiency</p>	1  1
3 (c)	<p>Compare : Both are I-P-O systems          (Example : Both can process data)          Contrast : Human brain is more intelligent than an information system          Or any other acceptable reason          (examples : Natural vs Artificial; accuracy; reliability; emotional.....)          Note: There should be an answer for each class.</p>	1  1

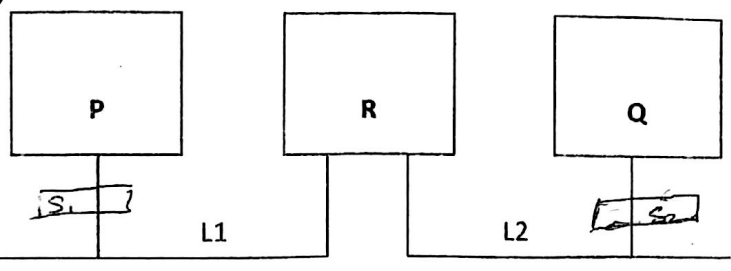
4 (a)	<p>(i)</p> <p>Nothing/no output</p> <p>It has a never-ending(infinite) loop</p>	<p>1</p> <p>1</p>
	<p>(ii)</p> <pre>total = 0 i = 1 while (i &lt;= 10):     total = total + i     i = i + 1 print(total)</pre> <p>Note :</p> <p>The program should be executable and print 55 as the final value.</p> 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

# Information and Communication Technology(20 E)

## Part II B

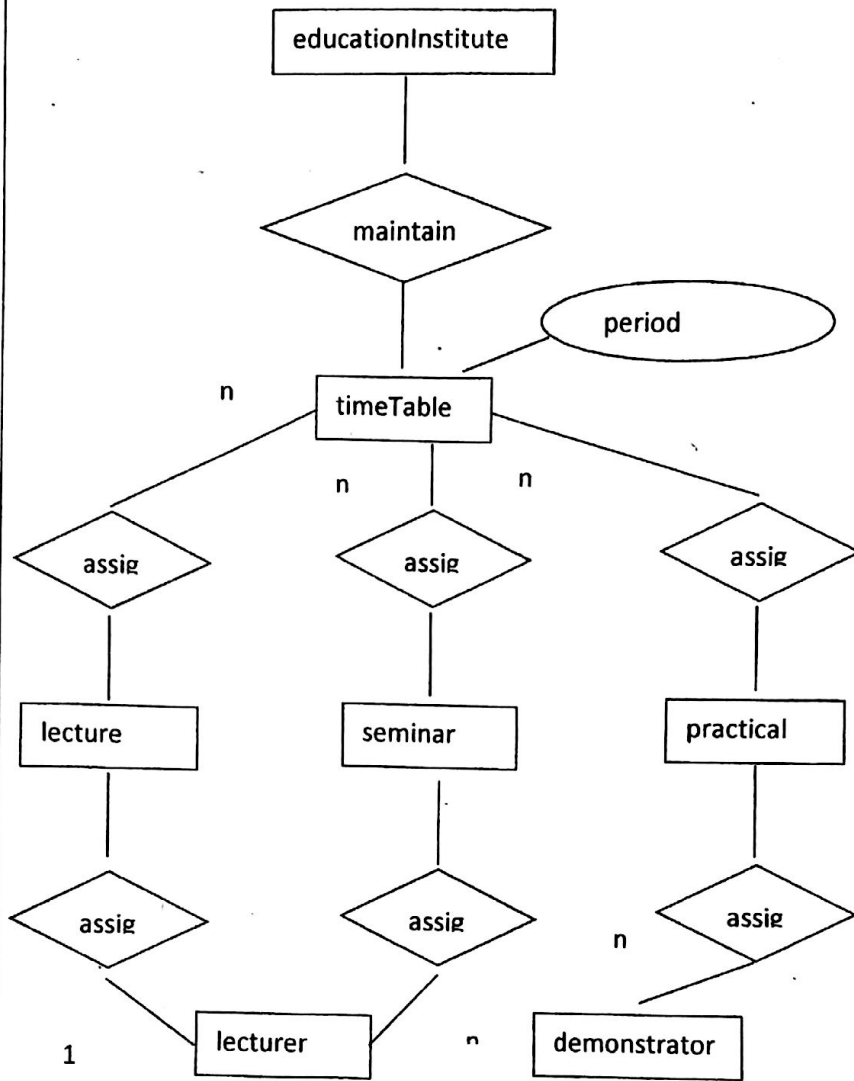
2016

Q.No	Model Answer	Marks																																				
1	<p>Truth table</p> <table border="1"> <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>Note: In the truth table the symbols K1,K2,K3,L should be used or should be defined.</p> <p>Boolean expression  <math>L = K1'.K2.K3 + K1.K2'.K3 + K1.K2.K3' + K1.K2.K3</math></p> <p>Simplified Boolean expression  <math>L = K1.K2 + K2.K3 + K3.K1</math></p> <p>Note : <i>(or name of the rule)</i>                  Correct rules 2 marks                  Correct computation 2 marks                  Correct answer 1 mark</p> <p>Circuit using given gates</p> <p>Note : Connections should be marked by dots or jumpers</p> <p><i>Correct IC ✓</i></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>4</p> <p>1</p> <p>2</p> <p>5</p> <p>3 or 0</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>2</p>	<p>a)</p>  <p><b>Note :</b>  <b>Router is in both LANs and L1 and L2 are separate LANs – 3 Marks</b>  <b>P and Q are in different LANs L1 and L2 – 2 Marks. This must be marked only when the first part is correct.</b></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 bank to its employees  <b>Note : Final mark should be 0,1 or 3</b></p> <p>b)</p> <ul style="list-style-type: none"> <li>• Manage their personal activities need to be done during work hours without leaving the workplace</li> <li>• Get information better and faster, easily</li> </ul> <p>c) Yes/No.  <b>Note : If the answer is No justification must be given.</b>          It is expected to enhance their <u>efficiency</u> and <u>satisfaction</u> as it enhances the balance between the employees' work and personal life.  <b>Note : Justification should support Yes/No claim</b></p> <p>d)</p> <ul style="list-style-type: none"> <li>• Content selection and suggestion</li> <li>• Content prioritization</li> <li>• Alerting</li> <li>• restriction. (සීමා කිරීම)</li> <li>• Summarized</li> </ul>	<p>1</p> <p>2</p> <p>2</p> <p>2</p> <p>1</p> <p>4 or 0</p> <p>1</p> <p>1</p> <p>1</p>

<p>4</p>	<p>a) Inputs</p> <p>i) Input to indicate end of iteration ii) Food Type/Price of the food type iii) Number of items of the food type</p> <p>Output Payment due for the tray.</p>	<p>1 1 1 1</p>
	<p>b)</p>	<p>1 1 1 1 1 1</p>
<p>Start/end : 1 Mark Correct Initialization : 1 Mark Correct Inputs : 1 Mark Correct Loop : 1 Mark Correct Computation : 1 Marks Output : 1 Mark</p> <p>c)</p> <pre> 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)                 </pre> <p>Note :</p> <ul style="list-style-type: none"> <li>1 mark : price due initialization</li> <li>1 mark : array initialization</li> <li>1 mark : input food type and Quantity</li> <li>1 mark : correct loop</li> <li>1 mark: correct computation</li> </ul>	<p>1</p>	

5

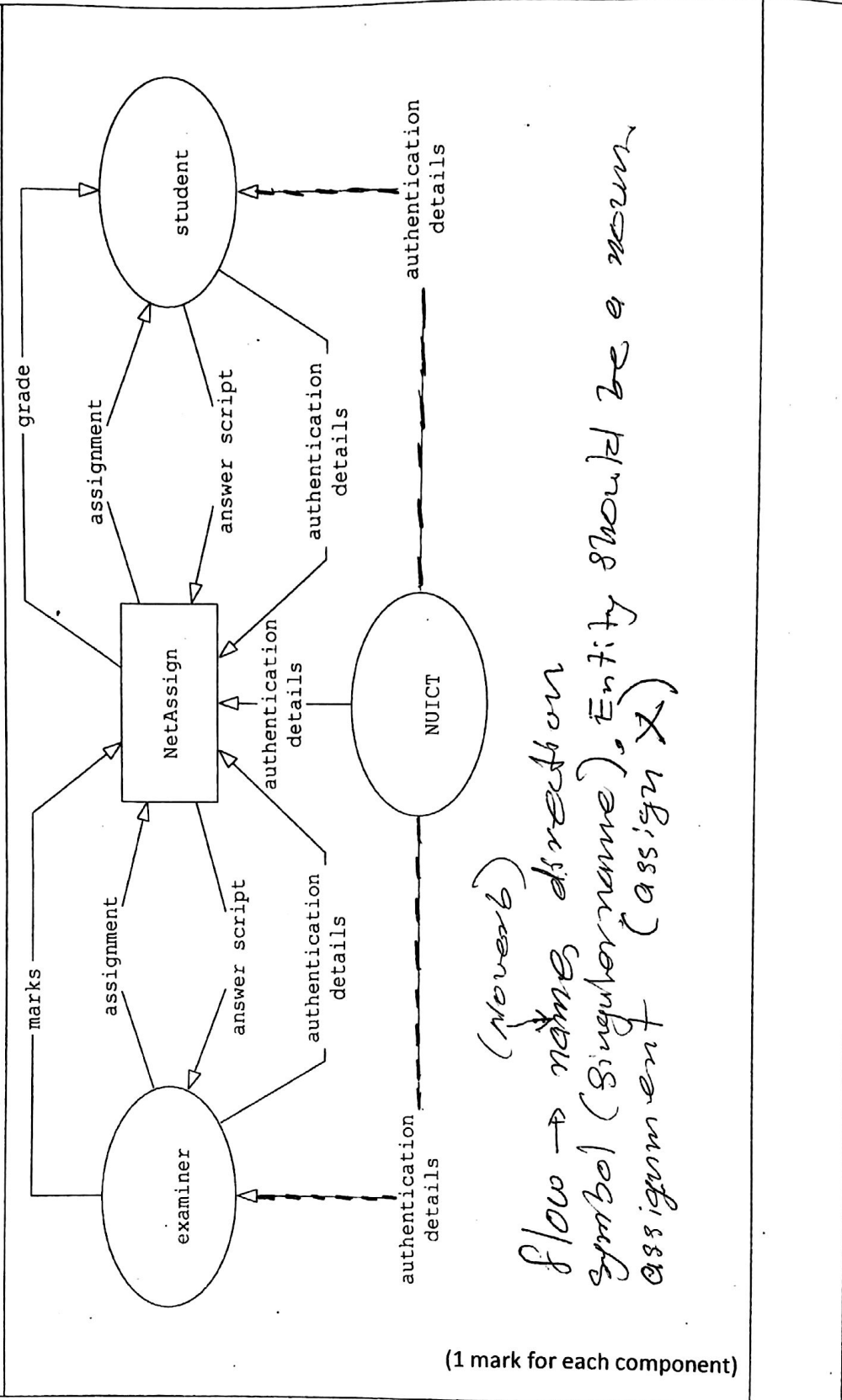


Note :

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



6



(never)

flow → name direction  
 symbol (singular name), Entity should be a noun  
 assignment (assign X)

(1 mark for each component)