

ରହସ୍ୟାବ୍ଦି .
ଅନ୍ତରାଙ୍କମାଣୁ

අ.පො.ක.(උ.පො) විභාගය - 2016

ක.පො.ත (ශ්‍යර් තර)ප පරිශ්‍යෙ - 2016

විෂයය අංකය] 20 විෂයය] තොරතුරු හා සන්නිවේදන තාක්ෂණය

ஓக்டூ டிமே பரிசுரையும்/புள்ளி வழங்கும் திட்டம் - I கனம்/பத்திரம் I

ප්‍රයෙන අංකය විනා මිල.	පිළිබුරු අංකය විනා මිල.								
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.	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 විශේෂ අං්‍රීචුත්තල

එක් පිළිතුරකට ලක්වූ ගුරු සරියාන විභැංක්

02

ବୈଜନି
ଶାସ୍ତ୍ର ବିଜ୍ଞାନ

50

මුව් ලකුණු මාත්තප ප්‍රසිඵල්

$$2 \times 50 = 100$$

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/A
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

භාණ්ඩ ගොන් නොවන
අනුකූල - ①

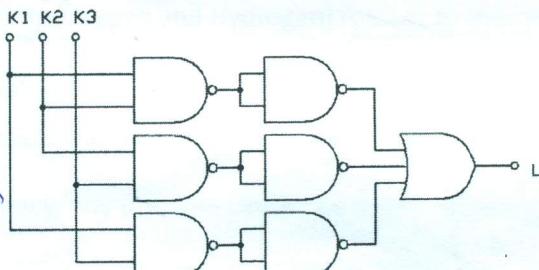
2 (a)	<p>C2C (I sell my <u>camera</u> online/through internet/website to an <u>African buyer</u>.)</p> <p>B2C: Paypal like service. Paypal සඳහා මෙහෙයු විට මෙම පෙනුව ඇතිවයි. <u>Paypal.com</u></p>	2 1
2 (b)	<p>To secure the payers sensitive data (<u>security</u>) Guarantee [for the delivery] and [the payment to the seller].</p>	1 1 1
2 (c)	<p>Reliability You may</p> <ul style="list-style-type: none"> not get the item at all not get the item you have ordered get a poor quality item <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>	1 1 1 1
	<p>Note :</p> <p><u>Any two answers are acceptable.</u></p>	
3 (a)	<p>Closed System</p> <p>(1) <u>Inputs (Water) is available within the system</u></p> <p>(2) <u>Outputs (Oxygen and Hydrogen) release to the system.</u></p>	2 2 2
3 (b)	<p>(1) Accuracy/Any problem caused by accuracy</p> <p>(2) Efficiency/Any problem caused by efficiency</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</p> <p>(examples : Natural vs Artificial; accuracy; reliability; emotional.....)</p> <p>Note: There should be an answer for each class.</p>	1 1

4 (a)	(i) Nothing/no output It has a never-ending(infinite) loop	1 1
	(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. <i>(0, 1 or 3)</i>	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 : Correct answer 1 mark Correct computation 4 marks	4

Information and Communication Technology(20 E)

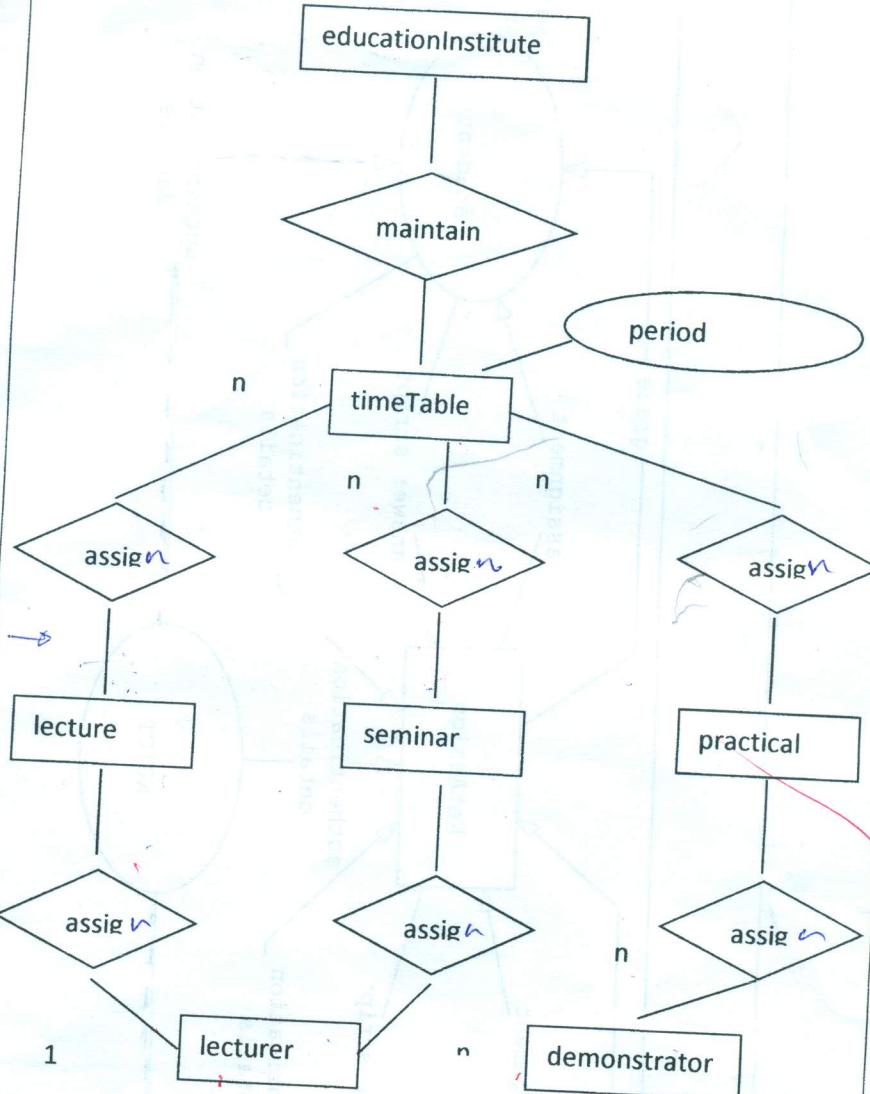
Part II B

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 $L = K1'.K2.K3 + K1.K2'.K3 + K1.K2.K3' + K1.K2.K3$</p> <p>Simplified Boolean expression $L = K1.K2 + K2.K3 + K3.K1$</p> <p>Note : <u>Correct rules</u> 2 marks <u>Correct computation</u> 2 marks <u>Correct answer</u> 1 mark</p> <p>Circuit using given gates</p>  <p>Note : Connections should be marked by dots or jumpers</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>6 තුළ Symbols යොමු කළ, assign කළ මතක ඇ සඳු ඇතුළු.</p> <p>output යොමු - 1 entire truth table - 4</p> <p>Method - 2 Implication - 2</p> <p>K-map යොමු කළ නැතිම තුළු නැතිව සංඛ්‍ය - 1</p> <p>2 5 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																																			

2	<p>a)</p>	5
	<p>Note :</p> <p>Router is in both LANs and L1 and L2 are separate LANs – 3 Marks</p> <p>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.</p> <p>IP address indicates the final destination and it does not specify the intermediate routers/gateways.</p>	2 3
	<p>c) R.</p> <p>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>IP packet සාමූහික ප්‍රාග්‍රැම් ප්‍රාග්‍රැම් ප්‍රාග්‍රැම්</p>	2 3
3	<p>a) B2E</p> <p>An online service provided by the bank to its employees</p> <p>Note : Final mark should be 0,1 or 3</p>	1 2 – justification – from bank විවෘත පුද්ගලික
	<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 	2 } 4 2
	<p>c) Yes/No.</p> <p>Note : If the answer is No justification must be given.</p> <p>It is expected to enhance their efficiency and satisfaction as it enhances the balance between the employees' work and personal life.</p>	yes 1 4
	<p>d)</p> <ul style="list-style-type: none"> Content selection and suggestion Content prioritization Alerting content restriction summarize (ස්මාර්ට් ප්‍රාග්‍රැම්) 	1 1 1

5



Note :

Each entity 1 marks (7 total)

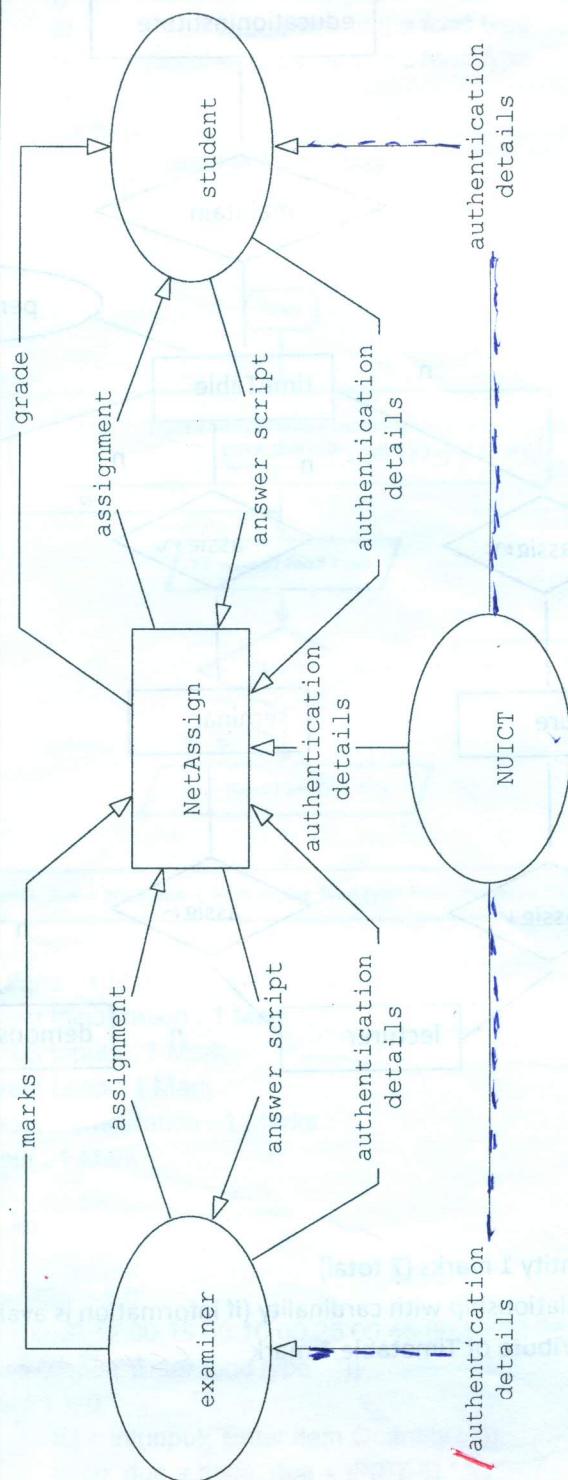
Each relationship with cardinality (if information is available) (7 total)

The attribute of Timetable 1 mark

(Start time - End time
OK)

entity must be singular.

6



**username
password** / authentication details

(1 mark for each component)

- * Data flows 2 කා මෙම direction මෙම 5 කා
- * කිසේක තොන යොන් යොන්
- * Entity name → singular. (ොනු)
- * ex. entities → shapes | system → shapes නොදා යොදා
- * Adobe තු තොන් පැන් තොන් තොන්
- * good