

බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව  
 மேல் மாகாணக் கல்வித் திணைக்களம்  
 Department of Education - Western Province

වර්ෂ අවසාන ඇගයීම  
 ஆண்டிறுதி மதிப்பீடு - 2020  
 Year End Evaluation

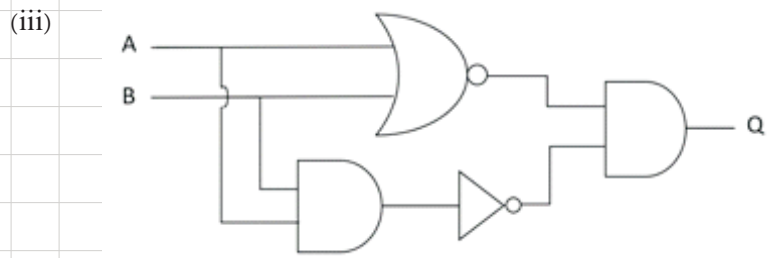
ශ්‍රේණිය } තරම } 11 Grade }	විෂයය } பாடம் } Information and Communication Subject } Technology	පත්‍රය } வினாத்தாள் } II Paper }	කාලය } காலம் } 02 hours Time }
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**First question is compulsory. Select 2 questions from part I, and select 2 questions from part II and answer 5 questions only.**

1. (i)(a) To find out more details about a product, Kamani scanned the QR code of the product printed in a certain magazine with the help of her mobile phone camera and inserts it into the QR code decoding application software installed on her mobile phone. Then the website relevant to the product was displayed. Indicate the inputs, processes, and outputs related to this process separately.

(ii)(a) Convert the hexadecimal number  $8AE_{16}$  to an octal number. Write down the steps used in your calculation

(b) Write the BCD value relevant to the decimal number  $258_{10}$ . Write down the steps used in your calculation



(a) Write the Boolean expression for the logic circuit above.  
 (b) What is the output when 1 is given as the input for A and B?

(iv) Some of the computer ports are labeled as → ? ?

(A)	(B)	(C)	(D)	(E)

Write the label corresponding to each of the following functions in front of the relevant task number.

- Task list :**
- ① Connecting a digital camera to a computer.
  - ② Connecting the modem to the computer.
  - ③ Connecting the computer to the Network switch.
  - ④ Connecting a Multimedia Projector to a Modern Laptop.

(v) In the given table below, the functions performed by an operating system are shown in column and the services provided under each of those functions are shown in column .

Match the items in these two columns and write them on the relevant pair labels.	
A. Device Management	P. Protects the computer system from malware
B. File Management	Q. Helps to rename files and folders
C. Security Management	R. Allocates memory required for various processes in the computer
D. Memory Management	S. Controls various peripheral devices

(vi) Some of the tools found in word processing software are labelled below.

Fill in the blanks by selecting the appropriate label for the tool that can be used to perform

each of the following tasks:

- The ..... tool can be used to simultaneously change the word line typed as microsoft word to Microsoft Word
- The ..... tool can be used to edit newspaper columns in creating of newspapers, magazines, etc.
- The ..... tool can be used to change the space between two typed paragraphs
- The ..... tool can be used to add a border to a page.

(vii) Select the most appropriate word from the two words given in brackets to fill in the blanks in the following sentences ? ? . In your answer, write only the statement label and the word relevant to the space).

- ? (Bluegriffon / Dream weaver) .....is an open source web editing software
- ? If the content of a website is constantly changing, it is called as a ..... (static / dynamic) website
- ? Maintenance related to the web server and database are maintained by .....(Website Administrator / Website Editor)
- ? -To publish a website on the Internet a unique ..... (web hosting service/ domain name) should be purchased.

(viii) Indicate whether the following statements about digital graphics are true or false in front of the relevant statement label

- A pixel is the basic measuring unit of a digital graphics, and the colours used in a graphic are represented by the number of bits per pixel .

B. A raster graphic is made up with an array of pixels in different colors .

① The measuring unit of the physical dimension of a digital graphics is called Image  
② resolution.

D. GIF and PNG are some of the most lossy file formats used in graphical  
③ compression .  
④

(ix) Consider the following statements regarding problems in the use of information and communication technology

A malware that has the ability to execute automatically, keeping links with other networks.

An album of songs written by an individual, is bought and copied to digital discs and sold to earn money.

A Pain comes from shoulders to the fingers and then it is swelling and hardness.

Uses various tricks to mislead people, release fake information and photos about them on the internet.

count := integer ;

Select the word that matches the statements given above to from the list below, and write it in front of the relevant number.

The list of words [Cyber-Crime, Fraud, Social media websites, Repetitive Strain Injury,

Carpal Tunnel Syndrome, Plagiarism, Computer worms, Bots]

End

(x) Given below is a list of Pascal programs for displaying consecutive numbers from 1 to 10 in descending order. Write the correct words for the labels shown as ? ,? ,? and ?

2. Answer the following questions

- (i) The Meteorological Department intends to physically protect their computer system. Write two steps they can take.
- (ii) The Sri Lanka Police maintains a computerized database of criminals. Write two possible steps that can be taken for logical security of that database
- (iii) De-skilling is also one of the effects of using ICT. Write two examples.
- (iv) Mention an organization in Sri Lanka that provides cyber security
- (v) Consider the statements labeled from ? to ? and identify the most suitable

term for

each label from the list given below. Write the statement label and the relevant word for each answer.

- ? A step that can be taken to create a digital bridge.
- ? Numbness and pain in the fingers
- ? Copy another's creative work and presenting it as one's own without the permission of the owner.

patient number	name	telephone number
P0001	Sunil Weerasinghe	0772035480
P0002	Mohomed Musthafa	0751556977
P0003	Malcam Ivan	0715689243
P0004	Sujatha Attanayake	0786238146
P0005	Jesica Perera	0763569814

physician no	name	specialties	telephone number	charges per patient
D1001	usil Wijesundara	Gynecology and obstetrics	0715264259	1100
D1002	Gamini	Dental	0772398654	1000
D1003	Wijedasa	Ophthalmologist	0776974238	1200
D1004	Suneetha	Surgeon	0716512398	1300
D1005	Famil Jameel	Surgeon	0768912356	1400

hospital management system  
patient table (contains patient details)

patient number	physician no	date
P0002	D1003	2020/02/10
P0003	D1002	2020/02/11
P0001	D1003	2020/02/12
P0004	D1001	2020/02/12
P0001	D1002	2020/02/13
P0002	D1005	2020/02/14

physician table (contains details of physicians)

reservation table (contains details of patient appointments by physicians)

4. (i) Note the detailed statements labeled to Write the most suitable word to fill in the blanks from the given list

- A. <http://www.elearning.lk/ICT/Grade10/lesson1.pdf> The elearning.lk domain name of the URL ..... is the top level domain name. .... is the location of the file
- B. .... is the software used to access the Internet and ..... is an example of that
- C. The ..... address is used to uniquely identify each computer on the Internet.
- D. The ..... protocol notifies the message in case of errors.
- E. The ..... protocol is used to transfer files from client computer to another computer in the internet.
- F. .... is used to store mails that are composed to be sent but could not be completed, sent mail will be store in Sent.

List : (.lk , Draft , IP , Uniform Resource Locator, ICMP, Web browser , eLearning , ICT/Grade10 , Chrome , FTP, lesson1.pdf )

(ii)(a) The HTML source code of the web page shown in Figure 2 is shown in Figure 1 without the elements, attributes, or values of the bearings labeled to .

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<html>
<①><title>සිසු රක්ෂණය</title></①>
<body>
<②><h2>සුරක්ෂා සිසු රක්ෂණය</h2>
<③ src="children.jpg" width="200" height="100" alt="stay home"><④>
<⑤ face="arial" size="3">ඔබ දැන් සුරක්ෂිතයි</⑤></②>
<⑥ align="justify"> සෑම සාසල් දරුවකුට ම නොමිලයේ ලැබෙන මෙම
රක්ෂණවරණය තුළින්, හදිසි අනතුරු හා රෝගාබාධ සඳහා වින්දි හිමිකම් ලබා
ගත හැකිය. </⑥>
<table ⑦="3" align="⑧">
<⑧><⑨>රක්ෂණවරණය </⑨><⑨>හිමිකම් මුදල</⑨></⑧>
<⑩><⑩>
<li>රෝහල් ගතවීමක දී </li>
<li>හදිසි අනතුරකදී </li>
<li>මාසි සහායක දී</li>
<li>අසාධ්‍ය රෝගාබාධ සඳහා </li>
</⑩>
<⑩><⑪ type="⑫">
<li>200,000</li>
<li>100,000</li>
<li>75,000</li>
<li>100,000</li>
</⑩></⑧>
</table>
<②><h3>වැඩි විස්තර සඳහා :- <a href="https://nie.lk/en/covid-19">
සිසු සුරක්ෂා රක්ෂණය</a></h3></②></body></html>

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(b) The above web page is created by using Sinhala Unicode system. How do you store the

5. Wholesale purchases of rice during January and February are calculated using the following spreadsheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1		Purchase												
2		January						February						
3	Items	Unit price	Quantity	After the discount of unit price	Price Before the discount	Price after the discount	Profit	Quantity (kg)	After the discount of unit price	Price Before the discount	Price after the discount	Profit	Total	Total Profit
4	Suwandel	200	500	180	Rs.100,000.00	Rs.90,000.00	Rs.10,000.00	500	170	Rs.100,000.00	Rs.85,000.00	Rs.15,000.00	175,000.00	25,000.00
5	Kuruluthuda	100	500	90	Rs.50,000.00	Rs.45,000.00	Rs.5,000.00	250	85	Rs.25,000.00	Rs.21,250.00	Rs.3,750.00	66,250.00	8,750.00
6	White raw	80	2000	72	Rs.160,000.00	Rs.144,000.00	Rs.16,000.00	1500	68	Rs.120,000.00	Rs.102,000.00	Rs.18,000.00	246,000.00	34,000.00
7	Red raw	70	1500	63	Rs.105,000.00	Rs.94,500.00	Rs.10,500.00	1000	59.5	Rs.70,000.00	Rs.59,500.00	Rs.10,500.00	154,000.00	21,000.00
8	Kiri Samba	100	1500	90	Rs.150,000.00	Rs.135,000.00	Rs.15,000.00	500	85	Rs.50,000.00	Rs.42,500.00	Rs.7,500.00	177,500.00	22,500.00
9	Samba	80	3000	72	Rs.240,000.00	Rs.216,000.00	Rs.24,000.00	2000	68	Rs.160,000.00	Rs.136,000.00	Rs.24,000.00	352,000.00	48,000.00
10	Total					Rs.724,500.00	Rs.604,500.00				Rs.446,250.00	Rs.78,750.00	Rs.1,170,750.00	Rs.159,250.00
11	Maximum Value					Rs.216,000.00	Rs.24,000.00				Rs.136,000.00	Rs.24,000.00	Rs.352,000.00	Rs.48,000.00
12														
13	Discount													
14	January		10%											
15	February		15%											
16														

(i) Write the formula to be inserted in cell F10 as =function1(cell1:cell2), to calculate the amount spent on total purchases in the month of January.

(ii)(a) Write down the formula that should be included in cell D4 to calculate the unit price of Suwandel after the discount for the month of January.

Unit price after discount of an item in the relevant month = Unit price of the item - Unit price of the item \* Discount of the relevant month

(b) If you copied the formula in (ii) (a) above for the white raw rice for the month of January, write the formula that appears in cell D6

(iii)

(a) Write down the formula to be included in cell F4 to calculate the price after discount of suwandel rice in January.

The price of an item in the relevant month after the discount = Unit Price of an item after the discount \* Quantity

(b) Write down the formula should be included in cell G4 to calculate the profit for Suwandel rice in January.

Profit of an item in the relevant month = Price before the discount of the item - Price after the discount of the item

(iv) Write down two ways of writing formula to be inserted in cell M4 to calculate the total purchases in January and February.

(v) Write the formula to be included in cell N11 to calculate the maximum profit earned on items in January and February

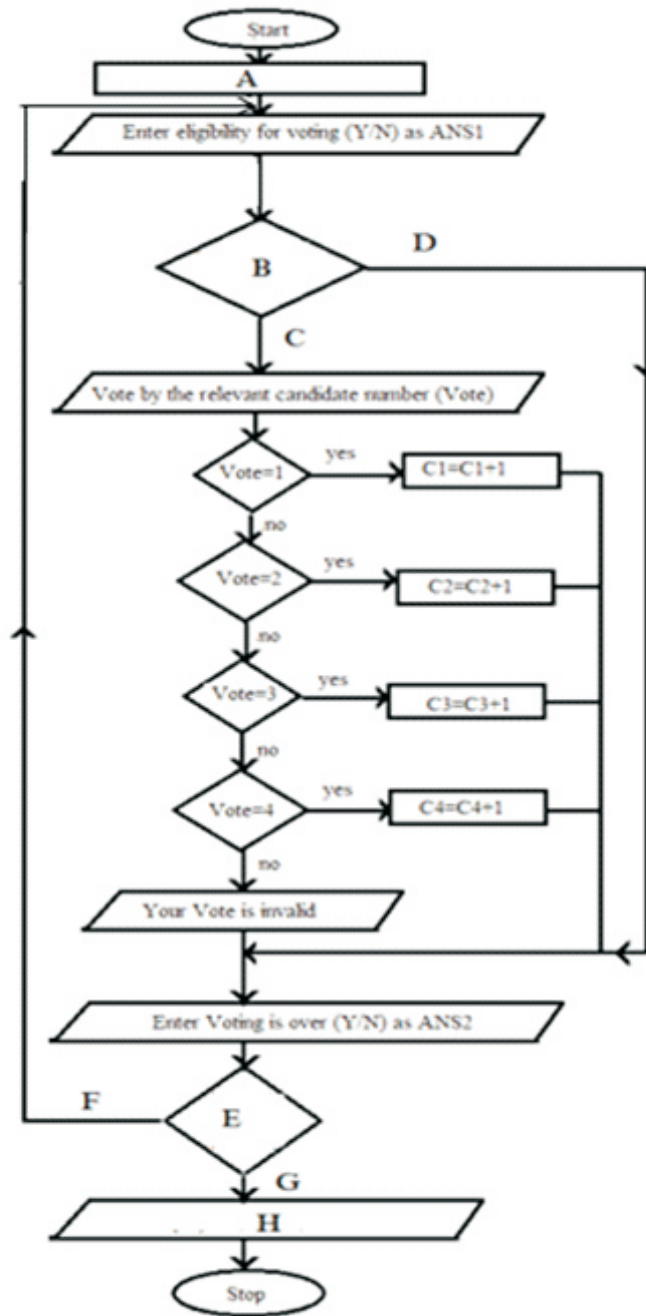
6. The following diagram shows the six major steps in the system development lifecycle.  
Provide correct answers to the questions asked

- (i) In the above note, write the steps with regard to the ? ,? and ? labels in front of the relevant label
- (ii) Name three things to be noted in written, when the steps of identifying about the new system. →
- (iii) Put a tick ( ✓ ) for the tasks performed and a cross ( ✕ ) for the not performed in step ? of the tasks given below from ? ?

(P)	Identify the main hardware systems and its components.	
(Q)	Planning of tests	
(R)	Identify the system errors.	
(S)	Coding the system using a suitable computer language.	
(T)	Identification of software architecture	
(U)	Identification of system objectives	
(V)	Preparing Interfaces and database	

- (i) Mention two methods of deployment of the system and briefly explain them
- (ii) Mention two differences between the waterfall model and the Iterative Incremental model

7. Four candidates from four political parties are contesting for the presidency. After verifying the identity of a voter who is eligible to cast the vote by an official of polling station, the voter can declare his or her preference for only one candidate's relevant number. If the voters finished casting their votes, this task is finished and if it



- (i) Write the suitable terms for labels A, B, C, D, E, F, G, H in this flow chart
- (ii) Write the relevant pseudo-code for the flow chart.
- (iii) It shows that the coding of the Pascal program relevant to this flow chart by using an array in the above task A. So define a suitable array to do that.