

බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව மேல் மாகாணக் கல்வித் திணைக்களம் Department of Education - Western Province	වර්ෂ අවසාන ඇගයීම ஆண்டிறுதி மதிப்பீடு - 2017 Year End Evaluation	දෙවන පාඨමාලාව இரண்டாம் பாதம் Paper II
විෂය பாடம் } Information and Communication Subject } Technology I, II		
ශ්‍රේණිය தரம் } 11 Grade }		

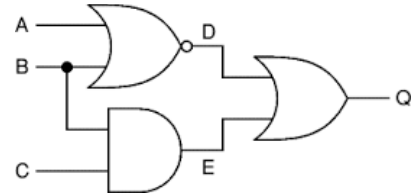
Note:

- Answer **first** question and **four** others.
- **First** question carries 20 marks and 10 marks for each of other questions.

1.

- Find the hexadecimal value of 345_8 . Write the steps of the conversation in your answer.
- Write following Boolean expressions for the logic circuit.

- Write the Boolean expression for the output "D".
- Write the Boolean expression for the output "E".
- Write the Boolean expression for the output "Q".

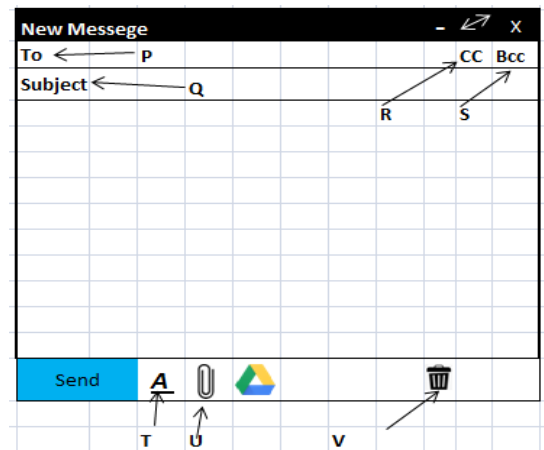


- There are three states of secondary storages. Mention any two states with one example for each.
- A column of the following table contains statements of networking. Identify the relevant network topology and fill in cells 1 to 4

Column A	Network topology
Every computer is connected to two other computers on either side.	1
Computers are connected to a switch in the center.	2
All computers are connected to a main cable.	3
All computers are interconnected each other.	4

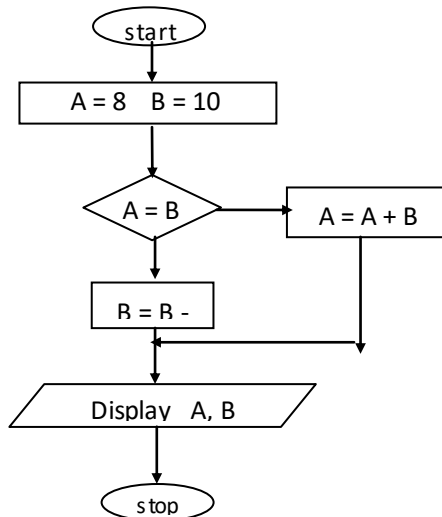
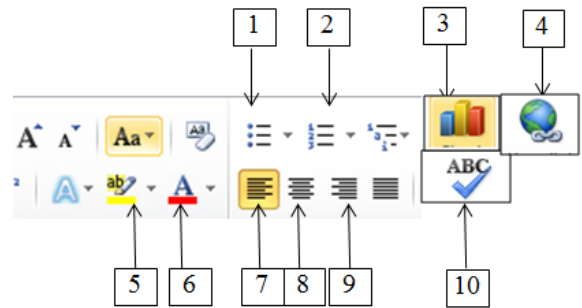
- Anupama plans to write an email to Ruvani to send details of the school trip with a digital picture, and she wants to send a copy of the same e-mail to Kasuni without a notice to Ruwani.

- Which label of the picture should be selected by Anupama to attach the digital picture?
- Which label should be selected to write Kasuni's e-mail address?







(vi) The picture shows tools used to perform certain formatting in a document. Write the letter of the task and the number in your answer sheet.

- (a) To center a paragraph.
- (b) To obtain a number list.
- (c) To check spelling.
- (d) To insert a hyperlink.



- (vii) Write the output of the above flow chart.
- (viii) Write two models of system development life cycle.
- (ix) Following table contains four of graphic software tools from 1 to 4 and statements from P to S. They are not in order.

P - to select a part of a picture using the mouse.	1 
Q - to copy a part of picture to a new location	2 
R - To blur the picture	3 
S - To select a color from the picture.	4 

Match the statement with the tool .write only the latter of the statement and the relevant number of the tool in your answer sheet.

- (x) Write two advantages for people due to the concept of green computing.

2.

- (i) Following table contains results of a survey on computer literacy.

Sector	Computer Literacy Rate (%)
Urban	38.5 %
Rural	26.1 %
Estate	9.9 %

- (a) How do you explain this anomaly?
- (b) Mention two steps taken by the Sri Lankan government to eliminate above situation.

- (ii) Consider the following statement.
 “Today the employees must adjust their salary according to their job or the occupation. This situation has affected the employee’s lifestyle. So there is a tendency in the increase in health issues and stressful conditions.”

Explain two of such health problems briefly.

- (iii) Frequent power failure and fluctuations effect the electronic equipments in certain office. What equipment can we use for as a precautionary?

3. (i) A list of names of people connected with web development is in column A and the column B contains the roles, played by each person. The role and the person in the table do not match. Match the person in column A , with relevant role in column B and write it in your answer paper.

Column A	Column B
① Web developer	P. Coding and debugging.
② web administrator	Q. Designing an interface of a web page.
③ web publisher	R. To maintain databases.
④ web user	S. Uploading a website.
⑤ web editor	T. Use of web.

- (ii) Consider the following HTML code and the output in figure 2. Get the output as in figure 2.

```

<html>
<body>
<①>
<②>The Zoo</②>
<img ③="E:\zoo3.jpg" width="400"
height="150"></center>
<p align="justify">Dehiwala zoo is the oldest zoo in the
southern Asian region. It is a zoo with a large collection of
Foreign and local animals and it is famous tourist
destination.</p>
<h3>Animal Types</h3>
<⑤ type="⑥">
<li>mammal species- 72</li>
<li>Bird species-65 </li>
<li>reptiles-31</li>
<li>Bird species-89</li>
<li>marine species-30 </li>
<li>Amphibians</li>
</⑤>
For more details
<a ⑦="http://nationalzoo.gov.lk">nationalzoo.gov.lk</a>ent
er the website< ⑧>
<table ⑨="1">
<tr><th ⑩="2">Local</th></tr>
<tr><td>foreign</td><td>Children</td></tr>
<tr><td>LKR 100.00</td><td>LKR 30.00</td></tr>
</table>
<p>Details are from -> http://nationalzoo.gov.lk </p>
</body>
</html>
  
```

Figure 1

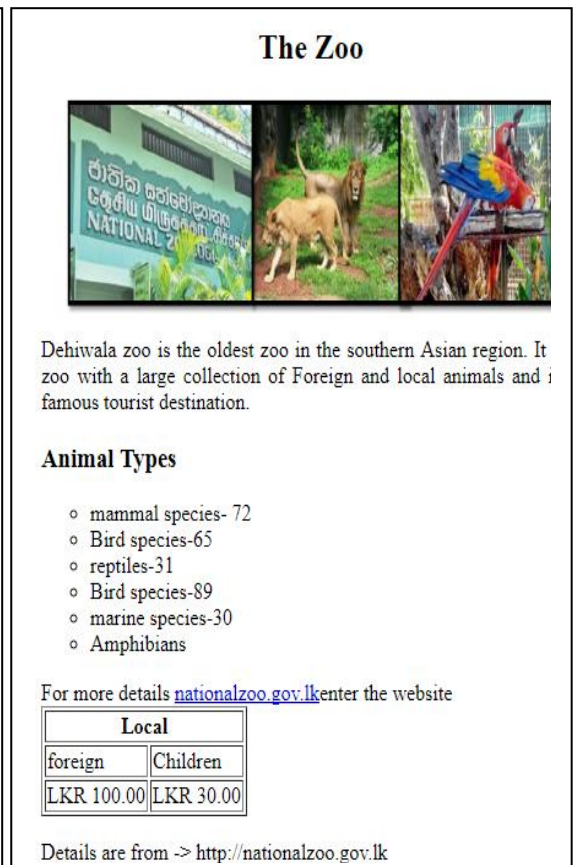


Figure 2

Fill in the blanks suitably from 1 to 10 in the HTML code to get the output as in figure 2. It is enough to write the HTML element or the attribute with the relevant number in your answer sheet.

4. Following part of spread sheet contains the purchasing of “Sahasra” retail shop from “Ravindu” whole sale shop.

	A	B	C	D	E	F
1	Shoe type	Purchasing	Unit price	Discount per unit	Unit price after discount	Payments
2	Children	225	RS 525.00	10.50	RS 514.50	RS 115,762.50
3	Ladies	152	RS 850.00	17.00	RS 135.00	RS 20,520.00
4	Boys	375	RS 1,250.00	25.00	RS 350.00	RS 131,250.00
5	Sports	120	RS 3,500.00	70.00	RS 50.00	RS 6,000.00
6	largest quantity of shoes purchased.	375				
7	discount rate	2%				
8	Total amount paid after discount.					RS 273,532.50

- (i) Use the above part of spread sheet to answer the questions given below.
- A function similar to “= function 1 (cell 1 : cell 2)” is written in B6 cell to get the highest quantity of shoes .Write the suitable words for “function 1”, “cell 1” and “cell 2”.
 - Write the formula in D2 cell to calculate “Discount per unit” of children shoes. The formula needs to be copied to other relevant cells to calculate the values.
(Discount per unit=Unit price* Discount Rate)
 - Write the formula in cell E2 to calculate “Unit price after Discount” for children shoes.
(Unit price after Discount=Unit price-Discount per unit)
 - Write the formula in cell F2 to calculate the payment for all children shoes.
 - Write the function in cell F8 to calculate the “Total amount after discount for all type of shoes”.
- (ii)

	A	B	C	D	E	F	G	H
1	x	-4	-3	-2	-1	0	1	2
2	x ²	16	9	4	1	0	1	4
3	2x	-8	-6	-4	-2	0	2	4
4		-6	-6	-6	-6	-6	-6	-6
5	y	2	-3	-6	-7	-6	-3	2

- Write the formula in cell B2 to get the relevant value.
- Write the formula in cell B5 to calculate values from B2 to B4.
- Name the suitable chart type to display X and Y relationship.

5. Ranrasa suppliers rent outs equipment for functions. The owner maintains a database with following tables.

Item Table

Item ID	Item	Stock
1001	Dinner Set	100
1002	Party Chairs	200
1003	Party Table	75

Buyer Table

B_ID	Name	Address
B006	Madira Traders	Colombo 03
B007	Samagi Motors	Nugegoda
B008	Minuri Flowers	Battaramulla

Hire Table

Date	Item_ID	B_ID	No of hire
20/04/2017	1002	B006	25
24/04/2017	1001	B008	20
30/04/2017	1001	B007	15

- List two primary keys with relevant database tables.
- Ranrasa institute buys 25 flower structures as another item on 2017/05/01.
 - Which table /tables should be updated?
 - Write the updated rows.

- (iii) Tech Vision –Maharagama borrowed 25 Dinner sets and 12 flower structures on 2017/05/02.
 - (a) Which table /tables should be updated?
 - (b) Write the updated rows.

6. Consider that you are a member in a system development group. You are expected to develop a system to a business which is currently manually maintained.
- (i) Information gathering is necessary to identify the requirements of an Information System. Mention 2 suitable methods.
 - (ii) Mention two advantages of automated system over a manual system.
 - (iii) Following tables contains steps of SDLC from A to D and the tasks from F to H. Match SDLC steps with their task .Write only the relevant letters in your answer paper.

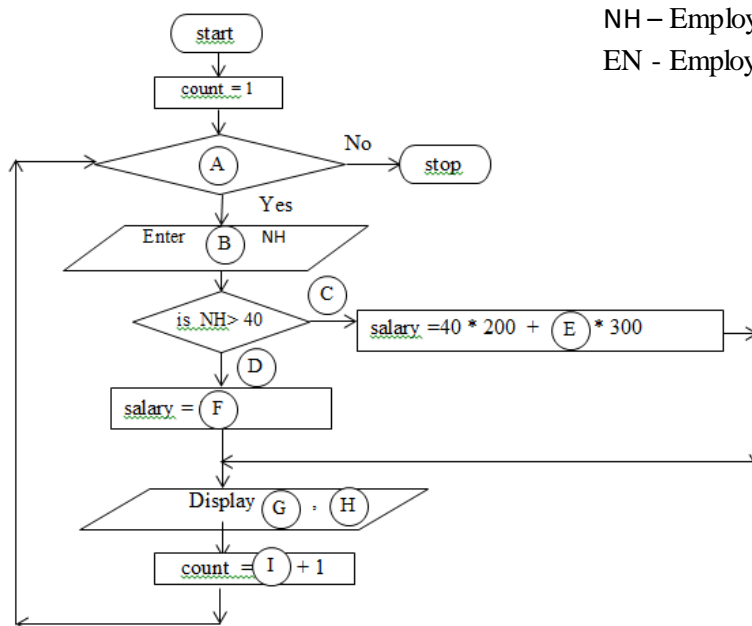
SDLC
A Coding solution.
B Planning solutions.
C Need identification.
D Installing system.

Task
E Developing databases and interfaces.
F Appoint programmers for proposed system development.
G Introducing new components of the system in place of old system.
H Interview employees and get ideas and views.

- (iv) Mention two suitable types to establish a system.
- (v) Mention two disadvantages, if waterfall model is applied to SDLC.

7.

- (i) “Perpal Orchid” is a flower supplying agency. There are 50 employees. Each employee is paid 200/= per hour for working hours and 300/= is paid per hour if exceeds 40 hours working per week. A program is necessary to output weekly salary of the employee with employee number. Complete the flowchart with required words from A to I.



NH – Employee working hours per week
EN - Employee Number

- (ii) Following table contains Z score ranges for biology courses in a university for G.C.E. (A/L) students.

Z score	Selected course.
0-1.5	You are not selected for a university.
1.6-1.9	You are selected for Biology stream.
2.0-2.4	You are selected for vet nary stream.
2.5 or above	You selected for medicine.

Write the pseudo code.