

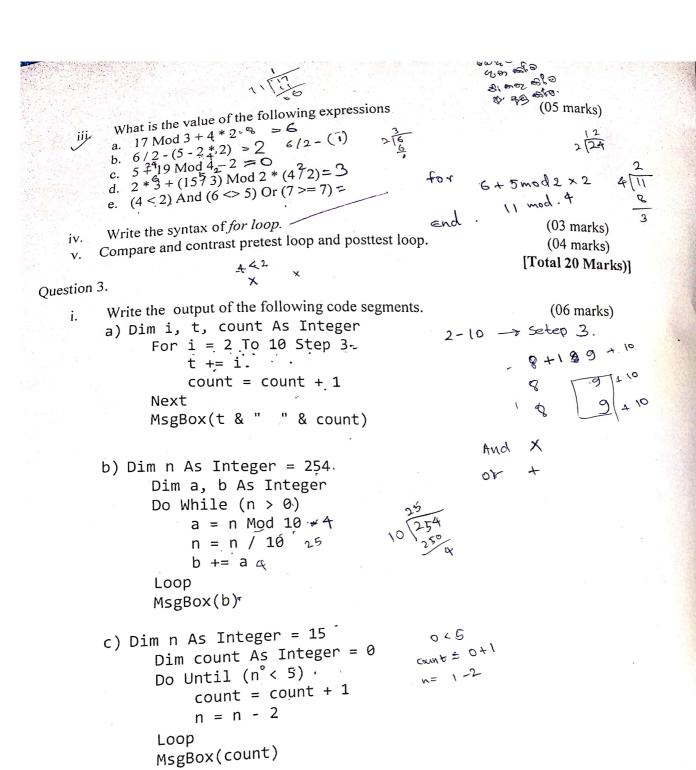
SLATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology Second Year, First Semester Examination – 2020 HNDIT 2311- Rapid Application Development

Instructions for Candidates:		e 1	No. of question	
Answer any Five (5) questions only.			No. of pages Time	: 06 : Three hours
All questions carry equal marks.			Muble. 59	
Question 1.				(02marks)
i. What is Rapid Application	Developmer	it (RAD).	riate software	• • • • • • • • • • • • • • • • • • • •
ii. State four factors that you model.	100	W5 50	Chhos C	(04 marks)
iii. Give four characteristics o	f Rapid Appl	lication Develo	pment.	(04 marks) (02 marks)
Define NET Framowork				
v. Explain four dimensions of software. 39 T	of Rapid App	lication Develo	pment to spee	(08 marks)
of software. 3P\				Total 20 Marks)]
Overtion 2		** **:	12 127 2	
Question 2. i. State whether the following s	statements ar	e true or false.		(05 marks)
i. State whether the following s a. Rapid Application De	velopment is	always the bes	st model for so	ftware false'
develonment	•9			
1 Vi 1 Studio is on ID	E which sup	ports to multip	le languages.	1 ~
vi ' le compont in I	λDichighe	r compared to	waterian mod	el. >1 400
. Tr 1 'IT congists	of cimilar ta	lented neonle.		-1400
a In DAD time and cos	t does not at	tect quality of j	product	Fais
a : > 1575 C alc 11000	disconnecte	d architecture.	<u> </u>	-11000
fNET framework uses g. Silver Bullet Syndron	ne is a produc	ct related mista	ke	e True
h Rapid Application use	es specialized	toois to devel	op application	lis.
i Logical operator can i	return Boolea	all value.		True.
j. XOR is a reverse exp	ression of Ol	coperator.		11000
ii. Declare the following var	riables with s	uitable data ty	pe based on g	iven value. (03 marks)
a. Name of student:	Ahamed	char.		
b. Marks:	73	integer.		
c. Date of Birth:	12-09-2000	Date.	,	
d. Z-Score:	1.2345 ·	Double.		
e. Salary:	45000	integoi.		
f. Apply:	True	÷		



ii. An application is created to categorize people according to their age as follows.

(06 marks)

	Type
Age of Person	Senior Citizen
$\Delta ge > 65$	Adult
Age between 18 and 65	Child
Age between 5 and 17	
Age between 5 direction 5	Baby
Age < 5	

Fill in the blanks (a to f) of the following source code based on the above scenario.

```
Dim age As Integer = 24

Dim type As String

Select (a) Reserve age

Case Is > 65

type = "Senior Citizen"

Case (b) 18 To 65

type = "Adult"

Case 5 (c) 15 To 17

type = (d) Could

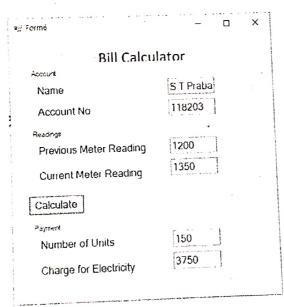
Case (e) Age < 5

type = "Baby"

(f)

MsgBox(type)
```

iii. Generate code to calculate number of units and charge for electricity according to the following scenario when press the "Calculate" button. (08 marks)



Price per Unit (Rs.)
Rs. 10.00
Rs. 25.00
Rs. 40.00

Number of Units = Current Meter Reading - Previous Meter Reading

[Total 20 Marks)]

Question 04.

(02 marks)

State importance of array in programming.

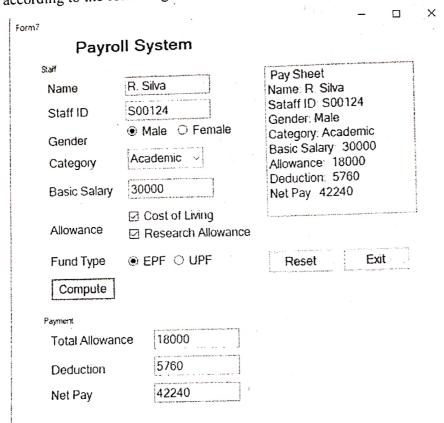
Write code in VB.NET to do following tasks

a) Create an array named *Num* to store the following sequence of numbers. ii.

(01 marks) 34,56,25,67,82,44,71,62 b) Count the number of odd numbers in the array. (03 marks)

A payroll system is developed for a company. In the system Net Pay is calculated

iii. according to the following scenario.



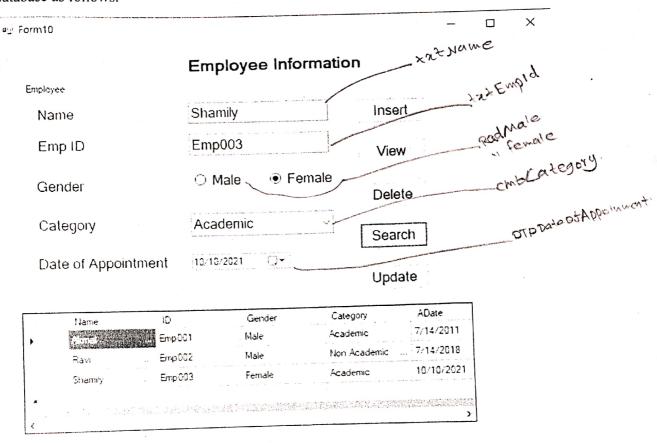
> Rs. 7500 is provided as a cost of living allowance and 35% of basic salary is given as research allowance. The system calculates the total allowance as respective checkboxes are checked. Some staff get cost of living allowance, research allowance or both.

Gross salary is computed as sum of total allowance and basic salary. (Gross salary = Total Allowance+ Basic Salary)

- > Deduction is 12% of gross salary for EPF employee and 20% of gross salary for UPF employee.
- > Net Pay is calculated by subtracting deduction from gross salary (Net Pay=Gross Salary - Deduction)
- Provide suitable name for all the objects except label in the interface according the A. .NET convention. (02 marks)

Question 06.

An Employee Information system has been developed to manage employee details in SQL server database as follows.



- i. Provide suitable name for all the input tools of the above interface according the .NET convention. (02 marks)
- Write a code segment to insert a record of Employee into the database using following information.
 (04 marks)
 Data Source=MAC\MACSERVER; Initial Catalog=Employee; Integrated Security=True Staff (Name, <u>ID</u>, Gender, Category, ADate)
- iii. Generate the code segments for the following actions.
 - a) To display employee details in the DataGrid View. (04 marks)
 b) To delete a record of employee by providing EmplD. (03 marks)
 c) To search details of employee based on their EmplD. (04 marks)
 d) To update employee information. (03 marks)

[Total 20 Marks]

- Write the code segment to do the following task when you press the "Compute" B. button.
 - Calculate the Total Allowance, Deduction and Net Pay and display in the (05 marks) respective text box.
 - Display staff information in the list box as shown in the interface. (03 marks)
- Write the code segment to clear the form when press "Reset" Button. (03 marks) (01 marks) C.
- Give the code to close the form when you press "Exit" button. D.

class is blue print that

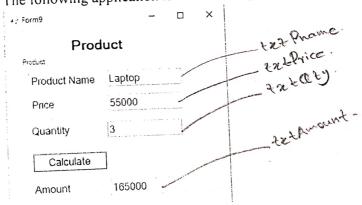
[Total 20 Marks)]

Question 05.

Briefly explain the Class. What do you mean by Class in object-oriented programing? i. (04 marks)

Differentiate sub procedure and function with examples. ii.

The following application is created using object-oriented concept. iii.



Public Class Product.

Public Product As integer

Emcsion (Cal Amornita)

Provide code segment for the following tasks.

a) Give appropriate names for all text boxes in the form.

(01 marks)

b) Create a class named "Product" with name, price and quantity attributes. (03 marks)

Initialize these attributes using parameterized constructor in the class.

(03 marks)

- d) Generate function named "calAmount ()" which returns product of price and (03 marks) quantity in the class.
- e) Display amount in the text box when you click "Calculate" button by creating object and calling "calAmount()" function. (04 marks)

[Total 20 Marks]