සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved]

Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Kha
කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලී
Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Kha
කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් Khalifa Niyas කලීෆානියස් කලීෆානියස් කලීෆානියස් කලීෆානියස් කලී
Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Khalifa Niyas Kha

අධ්‍යයන පොදු සහතික පත්‍ර (උසස් පෙළ) විභාගය, 2025
கல்விப் பொதுத் தராதரப் பத்திர (உயர் தர)ப் பரீடசை, 2025
General Certificate of Education (Adv. Level) Examination, 2025

තොරතුරු හා සන්නිවේදන තාක්ෂණය	II
தகவல், தொடர்பாடல் தொழினுட்பவியல்	II
Information & Communication Technology	II

20 E II

UNIT TEST

04

FULL NAME : .....

Important:

- This Question Paper compromises of Two Parts, **Part A** and **Part B.** The Time allotted is for both these parts.
- Use of Calculator is **Not Allowed.**

Part A - Structured Essay

- Answer **all** the Questions **on this paper itself.** Write your answers in the space provided for each question. Note that the space provided is sufficient for your answers and that extensive answers are not expected.

Part B - Essay

- Answer **all** the Questions in a Separate Paper. Start **each question** on a **New Page.**
- At the end of the time allotted for this paper, tie the **two parts together** so that **Part A** is on top of **Part B** before handing them over.
- You are Permitted to remove only Part B of the Question paper.

For Examiner's Use only

For Second Paper		
Part	Question No.	Marks
A	1	
	2	
	3	
	4	
B	5	
	6	
Total		

Final Marks

In Numbers	
In Words	

Markers Remarks

See Page 2

Part- II- A (Structured Essay)

01) Following diagram represents a decimal number in BCD format

0	1	0	1	1	0	0	1

I. What is the decimal number represented by the diagram?

II. Show how -33 is added to the above decimal number using twos compliment method. Show calculation clearly.

02) Consider you are given the following numbers.

$X=3E_{16}$ $Y=21_{16}$

I. Convert the number X and Y above, in twos compliment using 8 bit representation.

II. Using the answer in (a) above, solve the following equation and find Z =X+Y.

03) $AB92_{16}$

Convert the above to

I. Decimal

_ _

_ _

II. Octal

_ _

_ _

III. Binary

_ _

_ _

IV. BCD representation

_ _

_ _

04)

I. Find the MSB and LSB of 010010.0110_2

_ _

_ _

II. Find the MSB and LSD of 3921.063

_ _

_ _

05)

I. If 1000001is representing the letter ‘A’ in ASCII Coding system, how is the word **TECHNOLOGY** represented?

_ _

_ _

II. Represent $5E_{16}$ in octal

_ _

See Page 4

Part-II-B (Essay)

1)

i. Convert the following number $E39A_{16}$ into
   a) Binary
   b) Octal

ii. Convert the binary number 10110.101 into
   a) Decimal
   b) Octal

iii. Simplify given answer in decimal
   a) $101110_2 + 1011_2 + A2_{16}$
   b) $110110_2 - 20_{16}$

iv. Calculate -26+39 using twos complement showing steps.

2)

a) Write and advantage and a disadvantage for each of the following coding systems.
   a) BCD
   b) EBCDIC
   c) ASCII
   d) UNICODE

b) Why is the sign and magnitude method used?

c) Describe the steps to convert a value represented in twos complement to decimal.

d) Convert the following into binary
   a) 370.50_2
   b) 221.25_2

See Page 5