



# G.C.E. A/L Examination March - 2017

Conducted by Field Work Centre, Thondaimanaru

In Collaboration with

Northern Provincial Department of Education

Grade :- 12 (2018)

Information & Communication Technology

Marking Scheme

## Part- I

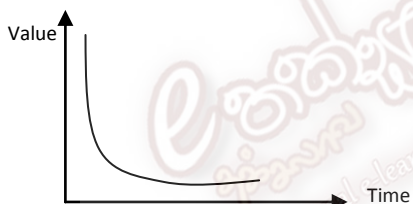
1) 1	11) 3	21) 2	31) 2
2) 5	12) 4	22) 4	32) 4
3) 2	13) 1	23) 3	33) 4
4) 3	14) 5	24) 2	34) 2
5) 2	15) 2	25) 5	35) 3
6) 3	16) 1	26) 4	36) 4
7) 5	17) 3	27) 3	37) 4
8) 5	18) 5	28) 5	38) 3
9) 3	19) 1	29) 1	39) 1
10) 2	20) 1	30) 1	40) 4

## Part- II A

- 01) . a)  $32 = 00100000$  ..... 1 mark  
 $- 56 = 11000111$  ..... 1 mark  
b)  $32 = 00100000$  ..... 1 mark  
 $- 56 = 11001000$  ..... 1 mark  
c)  $+32$  added to  $-56$  in two's complement. That is  $+32 + (-56)$  .....2 marks  
d) 1. check the MSB of the result . ..... 1 mark  
2. It is a positive number, if the MSB is 0. convert the result to decimal number. .... 1 mark  
3. It is a negative number, if the MSB is 1.  
Deduct 1 from the result, then flip bit by bit and convert to decimal number. ....2 marks

- 02) . a) Data Collected for a specific time period and process all together at a time ..... 2 marks  
b) Advantages :  
1. No need every day/time process.  
2. Efficient for large amount of data. ....2 marks  
Disadvantages:  
1. Need more storage to keep data until process begins.  
2. cannot get latest version of data.....2 marks  
c) 1. To fix the bugs of the system.  
2. Enhance system facilities.  
3. Customize additional user requirements after developed the system. ....2 marks  
d) 1. Get the user involvement during the system development.  
2. It is easy to change the requirements frequently ..... 2 marks

- 03) a) Temporary storage space created in a main memory to hold a string type value and labeled as a. The value 'peris' is assigned to variable space a. This same variable space and its value is referred by b. ....2 marks
- b) i) String  
 ii) List  
 iii) Tuple  
 iv) Dictionary ..... (1x4 = 4 marks)
- c) i) 'PcPcPc'  
 ii) 64  
 iii) True  
 iv) 7.0 ..... (1X4 = 4 marks)

- 04) a) Smaller in size  
 Faster processing  
 High capacity disks used for storage  
 High level programming languages are used for coding. .... 2 marks
- b) 1. Face scanner  
 2. Finger print scanner.  
 3. Iris scanner. .... 2 marks
- c)
- 
- 1 mark
- d) Plagiarism is the act of stealing another person creative work and showing it as one's own. .... 2 marks
- Stealing data from computer  
 Get a copy of data from internet  
 Get the design and coding from another software design. ....3 marks

**Part -II B**

- 01) a) Finger Print Scanner - A  
 Secrete Code Reader - B  
 Magnetic Stripe Reader - C

A	B	C	Door status
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

(4marks)

b)  $A\bar{B}C + AB\bar{C} + ABC$  ..... 1 mark

c)  $A\bar{B}C + AB\bar{C} + ABC$

$A\bar{B}C + AB(\bar{C} + C)$  - (Absorption Law)

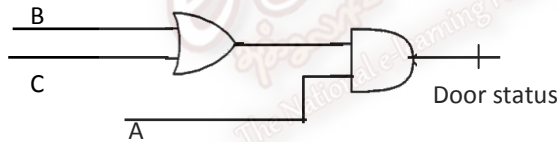
$A\bar{B}C + AB$  - ( $\bar{C} + C = 1$ )

$A(\bar{B}C + B)$  - ( $A + \bar{A}B = A + B$ )

$A(C + B)$

(simplification - 2, Laws - 1) 3 marks

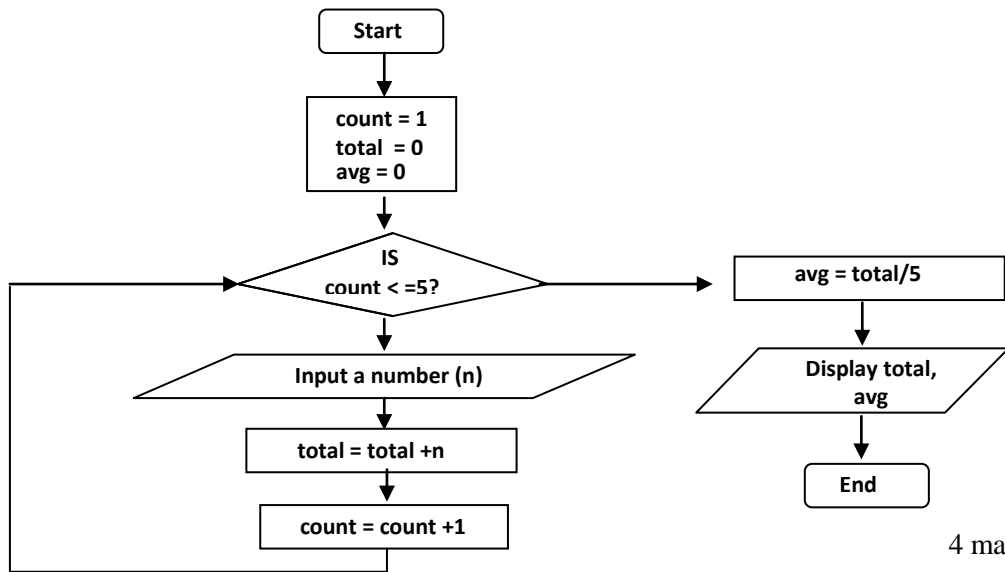
d)



.....2 marks

- 02) a) Computer processor understand only machine code.  
 Program written in English like keywords cannot understand by any computer processor.  
 Programming languages contains compiler / interpreter to translate programming written in high level languages to machine understandable code .....3 marks

b)



4 marks

c) BEGIN

```

SET count = 1 , total = 0 , avg = 0
WHILE count <= 5
    GET a number (n)
    CALCULATE total = total + n
    count = count + 1
END WHILE
CALCULATE avg = total / 5
DISPLAY total , avg
  
```

END

3marks

- 03) a) 1) lost of Book details  
 2) cannot get the book details and member details quickly  
 3) keep track of files ..... 2 marks
- b) 1) Maintain large amount of details in a single disk  
 2) searching a book is efficient .....cient  
 3) Book borrowing, returning process will be effectively  
 4) maintains the member details effectively ..... 3 marks
- c) 1) Get the details of available books  
 2) Book borrowing , returning will be quick and accurate . No need to keep queues  
 ..... 3 marks
- d) 1) Bar code system for books and membership cards.  
 2) make the books as e- books through online.  
 3) Sms facility to members for alert the due date of return a book ..... 2marks  
 Etc.....

part -I      1 X 40 = 40 marks  
 part - IIA    10 X 4 = 40 marks  
 part - IIB    40 X 2 = 20 marks  
100 marks