



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

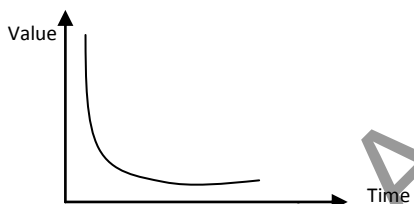
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|-------|-------|-------|-------|
| 1) 1 | 11) 3 | 21) 2 | 31) 2 |
| 2) 5 | 12) 4 | 22) 4 | 32) 4 |
| 3) 2 | 13) 1 | 23) 3 | 33) 4 |
| 4) 3 | 14) 5 | 24) 2 | 34) 2 |
| 5) 2 | 15) 2 | 25) 5 | 35) 3 |
| 6) 3 | 16) 1 | 26) 4 | 36) 4 |
| 7) 5 | 17) 3 | 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)

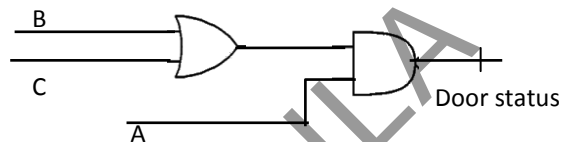
$A\bar{B}C + AB - (\bar{C} + C = 1)$

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

$A(C + B)$

(simplification - 2, Laws - 1) 3 marks

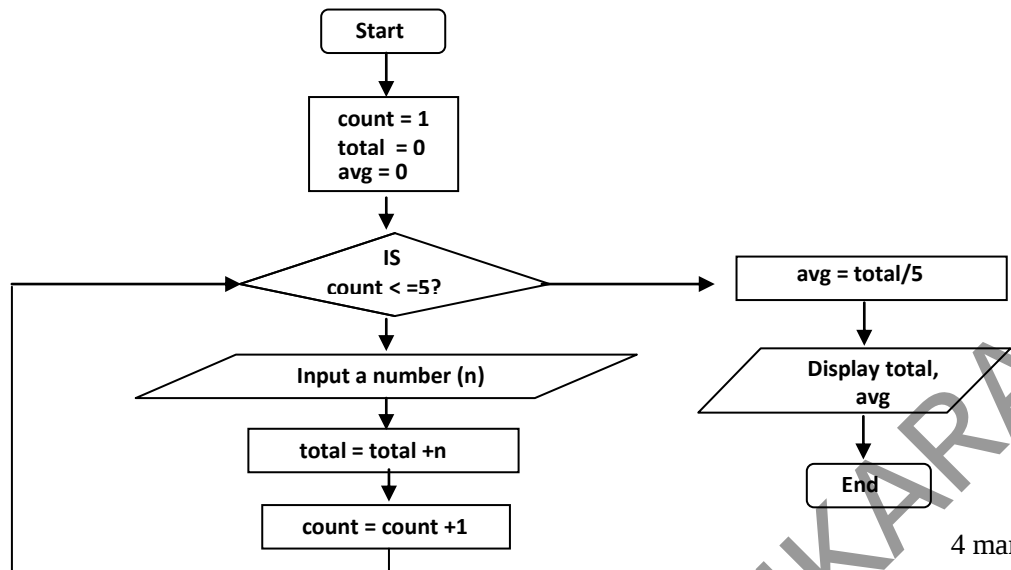
d)



.....2 marks

- 02) a) Computer processer 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 code3 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 client
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