G.C.E. (A/L) ICT

2017 Batch

June Examination

Field Work Center (FWC)

Marking Scheme

Part – I

(1)	2	*(11)*	4	*(21)*	1	*(31)*	4	*(41)*	4
(2)	1	*(12)*	3	*(22)*	3	*(32)*	3	*(42)*	3
(3)	5	*(13)*	4	*(23)*	3	*(33)*	2	*(43)*	5
(4)	4	*(14)*	1	*(24)*	4	*(34)*	1	*(44)*	3
(5)	5	*(15)*	2	*(25)*	3	*(35)*	1	*(45)*	4
(6)	4	*(16)*	2	*(26)*	3	*(36)*	3	*(46)*	5
(7)	2	*(17)*	1	*(27)*	4	*(37)*	5	*(47)*	3
(8)	1	*(18)*	1	*(28)*	2	*(38)*	4	*(48)*	4
(9)	5	*(19)*	2	*(29)*	4	*(39)*	4	*(49)*	5
(10)	4	*(20)*	5	*(30)*	3	*(40)*	1	*(50)*	5

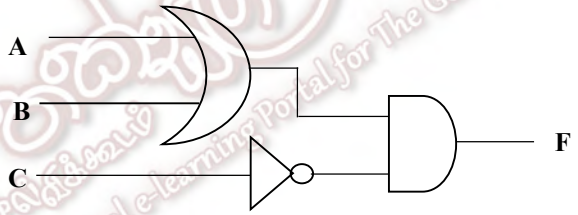
Part – II A Structured Essay – All questions

Question No.		Marks
(1) (a)	Shared memory , Message passing	2 marks [1+1]
(1) (b)(i)	Size of address space = 16 bits No. of address spaces / addresses = 2^{16} Max. usable virtual memory size = 2^{16} bytes = 64 KB	4 marks – steps needed
(1) (b)(ii)	0 → 2^{16} -1	2 marks or 0
(1)(b)(iii)	0101111001	2 marks or 0
(2) (a)	<table border=”1”> <tr> <th>Name:</th> <td>Bill Gates</td> </tr> <tr> <th rowspan="2">Telephone:</th> <td>555 77 854</td> </tr> <tr> <td>555 77 855</td> </tr> </table>	3 marks [6 x 0.5]

(2) (b)	External CSS **saves a lot of work**. / It can **control the layout of multiple web pages all at once**.	2 marks or 0
(2) (c)	**(i)** element selector **(ii)** id selector **(iii)** element selector **(iv)** class selector **(v)** group selector	1 x 5 = 5 marks
(3) (a)	16_{10} = 00010000_2 -12_{10}= 11110100_2 + 00000100_2	3 marks [1, 1, 1]
(3) (b)	• Entity integrity constraints • Domain integrity constraints • Referential integrity constraints	3 marks [1 x 3]
(3)(c)	**(i)** "Expoline" sells electronic goods to customers via the Internet. This is a B2C service model of e-commerce. **(ii)** No direct experience / testing about electronic goods. Sometimes no guaranteed of delivery of exact goods.	4 marks [2 + 2]
(4) (a)	• Syntax / compile-time error • Run-time error • Logical / semantic error	3 marks
(4) (b)	i=1 while i<=10: print(i,end= ' ') i=i+2 **: expected / no need ; / right indent needed for i = i +2**	4 marks Partial marks given
(4) (c)	i=2 s=0 while i<=10: s=s+i i=i+2 print(s,end= ' ')	3 marks Partial marks given

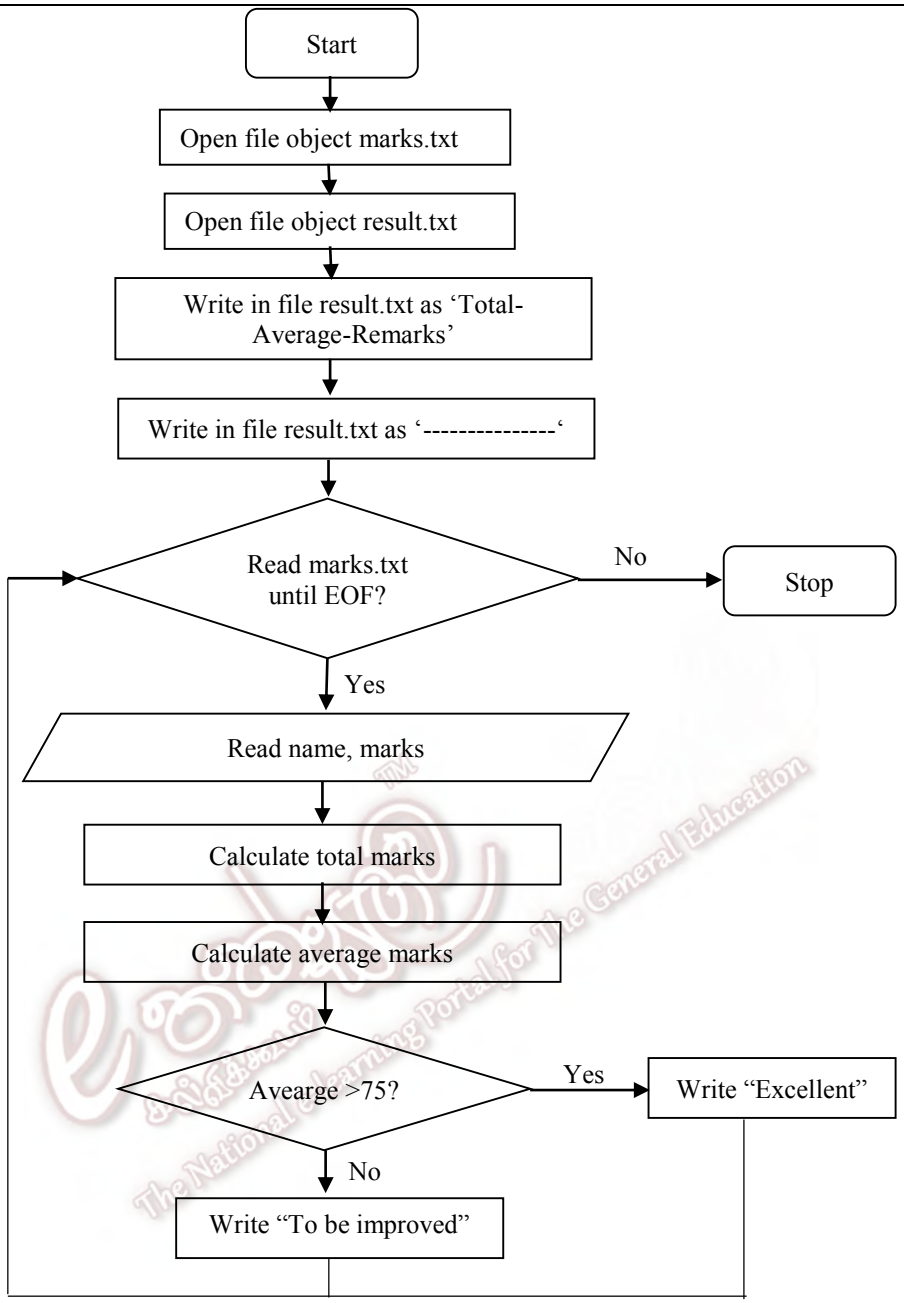
Part –II B Essay

<table>
<tr><th>Question No.</th><th>Suggested Answers</th><th>Marks</th></tr>
<tr><td>(1)(a)</td><td>
<table>
<tr><th>A</th><th>B</th><th>C</th><th>F</th></tr>
<tr><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>0</td><td>0</td><td>1</td><td>0</td></tr>
<tr><td>0</td><td>1</td><td>0</td><td>1</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>1</td><td>0</td><td>0</td><td>1</td></tr>
<tr><td>1</td><td>0</td><td>1</td><td>0</td></tr>
<tr><td>1</td><td>1</td><td>0</td><td>1</td></tr>
<tr><td>1</td><td>1</td><td>1</td><td>0</td></tr>
</table>
F - Output</td><td>4 marks [4 columns – 4 marks, Inputs in order]</td></tr>
<tr><td>(1)(b)</td><td>$\bar{A}B\bar{C} + A\bar{B}\bar{C} + AB\bar{C}$</td><td>3 marks</td></tr>
<tr><td>(1)(c)</td><td>$\bar{A}B\bar{C} + A\bar{B}\bar{C} + AB\bar{C}$
$\bar{A}B\bar{C} + A\bar{C}(\bar{B} + B)$, Distributive Law
$\bar{A}B\bar{C} + A\bar{C}.1$, Identity Law
$\bar{A}B\bar{C} + A\bar{C}$
$\bar{C}(A + \bar{A}B)$ $, A + \bar{A}B = A + B$
$\bar{C}(A + B)$</td><td>4 marks

Partial marks given</td></tr>
<tr><td>(1)(d)</td><td> 
</td><td>4 marks</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>(2) (a)</td><td>• Internet banking system shall be able to allow customers to pay electricity /water/ telecommunication bills
• Internet banking system shall be able to allow customers to know account balance
• Internet banking system shall be able to allow customers to do money transactions</td><td>6 marks [3 x 2]</td></tr>
<tr><td>(2) (b)</td><td>B2C service.
Bank is a business that provides the internet banking services for its customers.</td><td>4 marks [2 x 2]</td></tr>
<tr><td>(2) (c)</td><td>• Money security
• Data privacy
• Reliability</td><td>3 marks</td></tr>
</table>

(2) (d)	Data mining agents could be used to find trends and patterns of customers' saving in an abundance of information from many different sources. Monitoring / surveillance /predictive agents could be used to monitor customers' saving status and habits. [Or any appropriate answers]	2 marks
(3) (a)	Application layer Presentation layer Session layer Transport layer Network layer Data link layer Physical layer	4 marks 0r 0 Full answer expected
(3) (b)	**TCP** A file to be transmitted in its ***entirety without any errors***, therefore the error ***detection and correction properties*** of TCP are needed. **UDP** When watching a movie, ***delay is critical*** and therefore there isn't any time to seek the retransmission of any errors. **TCP** Web pages need to be delivered ***without error*** so that all content is properly formatted and presented. Therefore the ***error detection and correction properties*** of TCP are needed.	6 marks [2 x 3]
(3) (c)	There is a problem with DNS.	3 marks or 0
(3) (d)	192.133.219.1	2 marks or 0
(4) (a)	**1GL** Machine code is used to write programs No program translator is needed to execute programs **2GL** Assembly code is used to write programs Program translator (Assembler) is needed to execute programs	4 marks [4 x 1]

(4) (b)



5 marks

Partial marks given

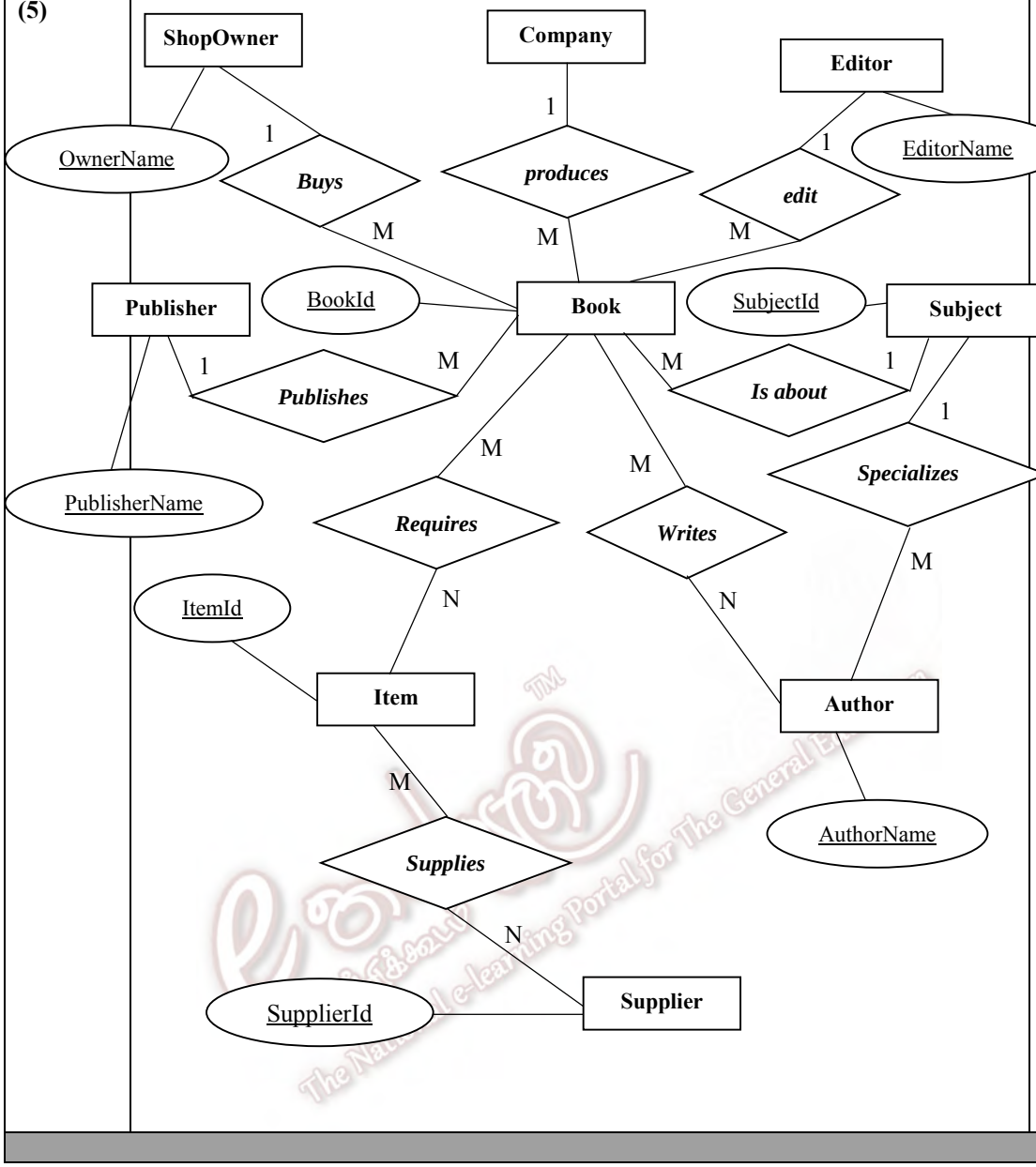
(4) (c)

```
f1=open('marks.txt','r')
f2=open('result.txt','w')
f2.write('Total-Average-Remarks\n')
f2.write('--------------------\n')
for line in f1:
    data=(line.strip()).split(",")
    total=int(data[1])+int(data[2])+int(data[3])
    average=total/3
    f2.write(str(data[0])+'-'+str(total)+'-'+str(average)+'-')
    if average>75:
        f2.write('Excellent\n')
    else:
        f2.write('To be improved\n')
f1.close()
f2.close()
```

6 marks

Partial marks given

(5)



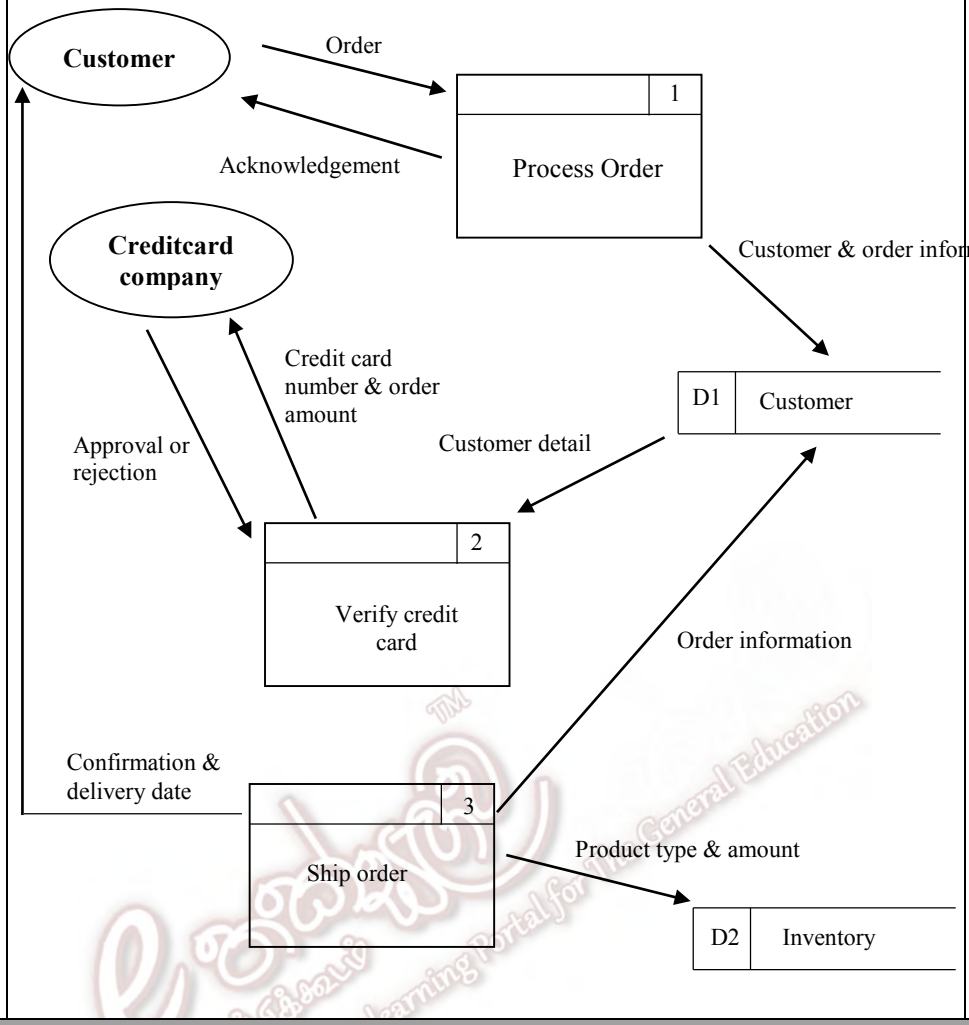
15 marks

[9 entities – 9 marks, Relationships – 3 marks, Primary keys, attributes – 3 marks]

Partial marks given

Entities – singular noun form.

(6)



External entities – 2 marks, processes – 3 marks, data stores – 2 marks, data flows – 8 marks

Partial marks given

Process – verbal form

Data store / external entity / data flow – noun form

Part – I 2 x 40 = 80 marks

Part – II A 15 x 4 = 60 marks

Part – II B 20 x 3 = 60 marks

Total = 200 marks is divided by 2

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