FWC

G.C.E. A/L Examination July - 2017

Conducted by Field Work Centre, Thondaimanaru

In Collaboration with

Provincial Department of Education Northern Province.

Grade :- 12 (2018)	ICT	Marking Scheme

Part - I

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

(2x40 = 80 Marks)

Part – II A

1) a. MICR, OCR, OMR, CCTV, Sensor 3 Marks

b. 1) Cost reduction.

2) Input data will be accurate.

3) No need additional time to input data. 4 Marks

c. Two or more individual persons, located in different places carry out a discussion through network / internet by transmitting audio and video. 3 Marks

d.1) Computer / device like computer.

2) Video device (camera)

3) Audio device (mic, speaker)

4) Networkdevices 5 Marks

2) a. C2B – I ordered a birthday gift online though internet to kapruka.com. 2 Marks

B2C – Paypal like service 2 Marks

b. 1. It should reliable to get the item at all

2. To secure credit card details 3 Marks

c. 1. More choices of items

2. Purchase items any time any where

3. Cheap in prices 4 Marks

d. Security – Hackers may steal cash transaction details via online.

Reliability –Item delivery is not guaranteed and poor quality item.

Privacy 4 Marks

---

3) a. A – System Design

B – Coding

C –Implementation

D –Maintenance 4 Marks

b. Input– Insert a card and enter pin number.

Processing – ATM checks the pin number is correct.

Output–Display balance, withdrawal of cash amount. 3 Marks

c. 1) System shall be able to check the balance of an account.

2) System shall be able to facilitate withdraw the money.

3) System shall be able to give the facility to change pin number of a ATM card. 4 Marks

d. 1) System shall give a facility of touch screen.

2) The pin number of a ATM card shall be 6 digits length. 4 Marks

---

4) a. [2.3, 3.2] 2 Marks

b. J = 10

While J >5

J = J – 1

print (J) 6 Marks

c. 4 2 Marks

d. 0 to(2^{32}- 1) 5 Marks

Part – II B

1) a. i) X = $\bar{P}\bar{Q}\bar{R} + \bar{P}\bar{Q}R + \bar{P}Q\bar{R}$ 2 Marks

ii) $\bar{P}\bar{Q}(\bar{R} + R) + \bar{P}Q\bar{R}$ – (Absorption Law)

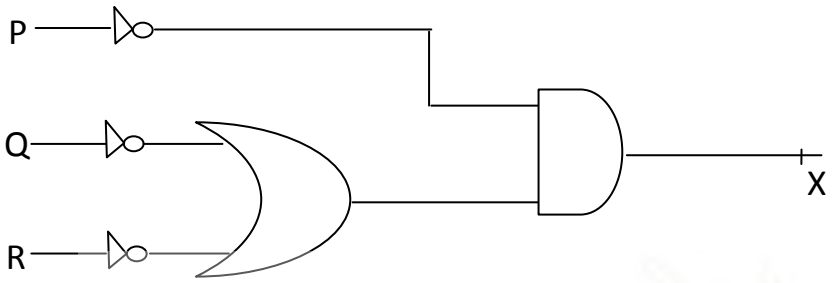
$\bar{P}\bar{Q} + \bar{P}Q\bar{R}(\bar{R} + R = 1)$

$\bar{P}(\bar{Q} + Q\bar{R})$

$\bar{P}(\bar{Q} + \bar{R})(\bar{Q} + Q\bar{R} = \bar{Q} + \bar{R})$ 5 Marks

(Correct rules-2 Marks, Correct computation-2Marks, Final answer-1 Mark)

(iii)



3 Marks

b. i) $Q = \overline{\bar{A}B + A\bar{B}}$ 2 Marks

ii) $\overline{\bar{A}B}\ .\ \overline{A\bar{B}}$ (De morgan's Law)

$(\bar{\bar{A}} + \bar{B}).(\bar{A} + \bar{\bar{B}})$ (De morgan's Law)

$(A + \bar{B}).(\bar{A} + B) \quad (\bar{\bar{A}} = A)$

$A(\bar{A} + B) + \bar{B}(\bar{A} + B)$ – (Expansion Law)

$A\bar{A} + AB + \bar{A}\bar{B} + \bar{B}B$

$0 + AB + \bar{A}\bar{B} + 0(A.\bar{A} = 0)$

$AB + \bar{A}\bar{B}$ 5 Marks

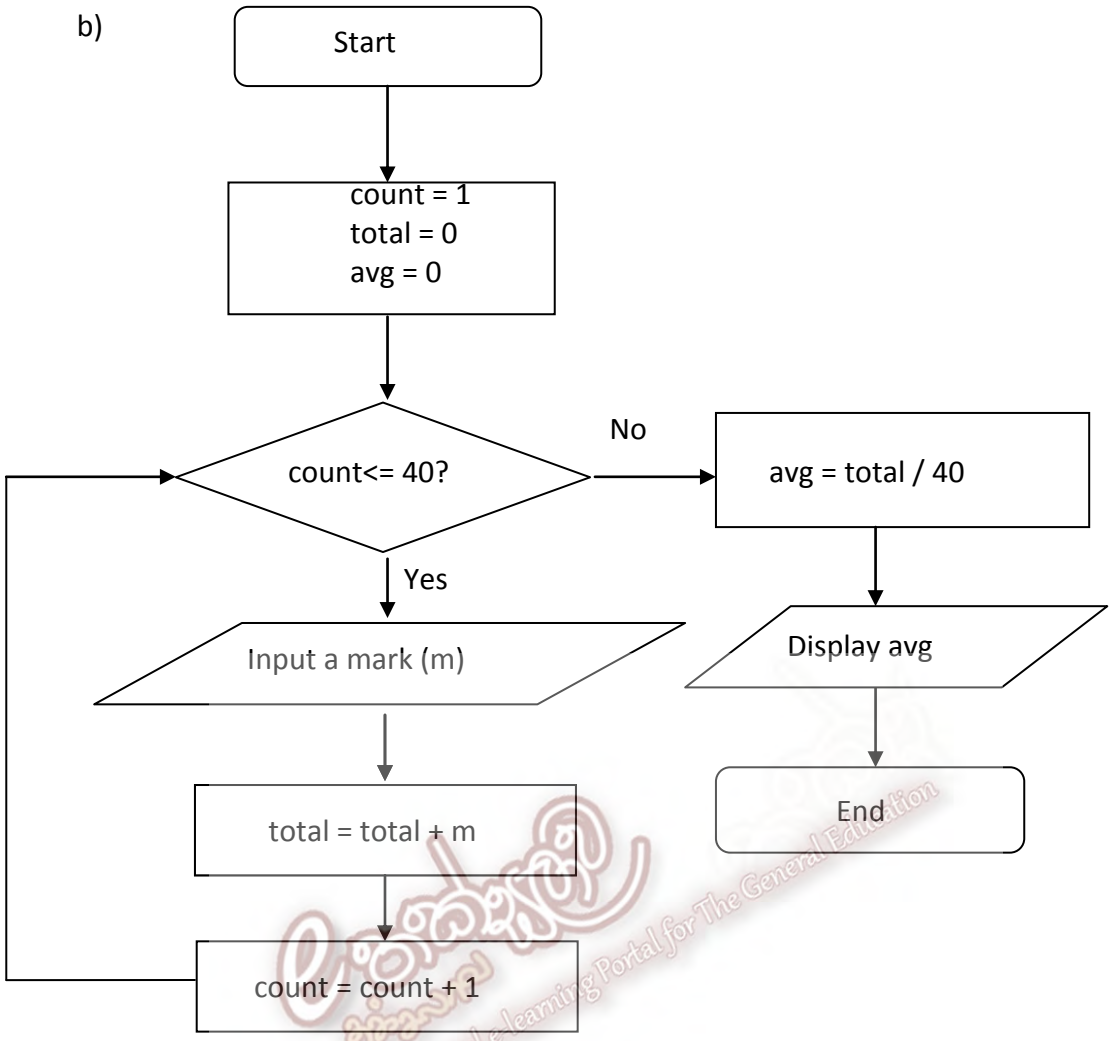
(Correct rules-2 Marks, Correct computation-2Marks, Final answer-1 Mark)

iii) XNOR gate 3 Marks

2) a) Program written in language which isunderstandable by programmers or human, cannot be understood by the processors of a computer.
Processor understands only machine language. Thus translators are needed to convert the program in to machine language.

3 Marks

b)



7 Marks

c. # Program p1.py is a comment of program and cannot be execute at runtime by python.

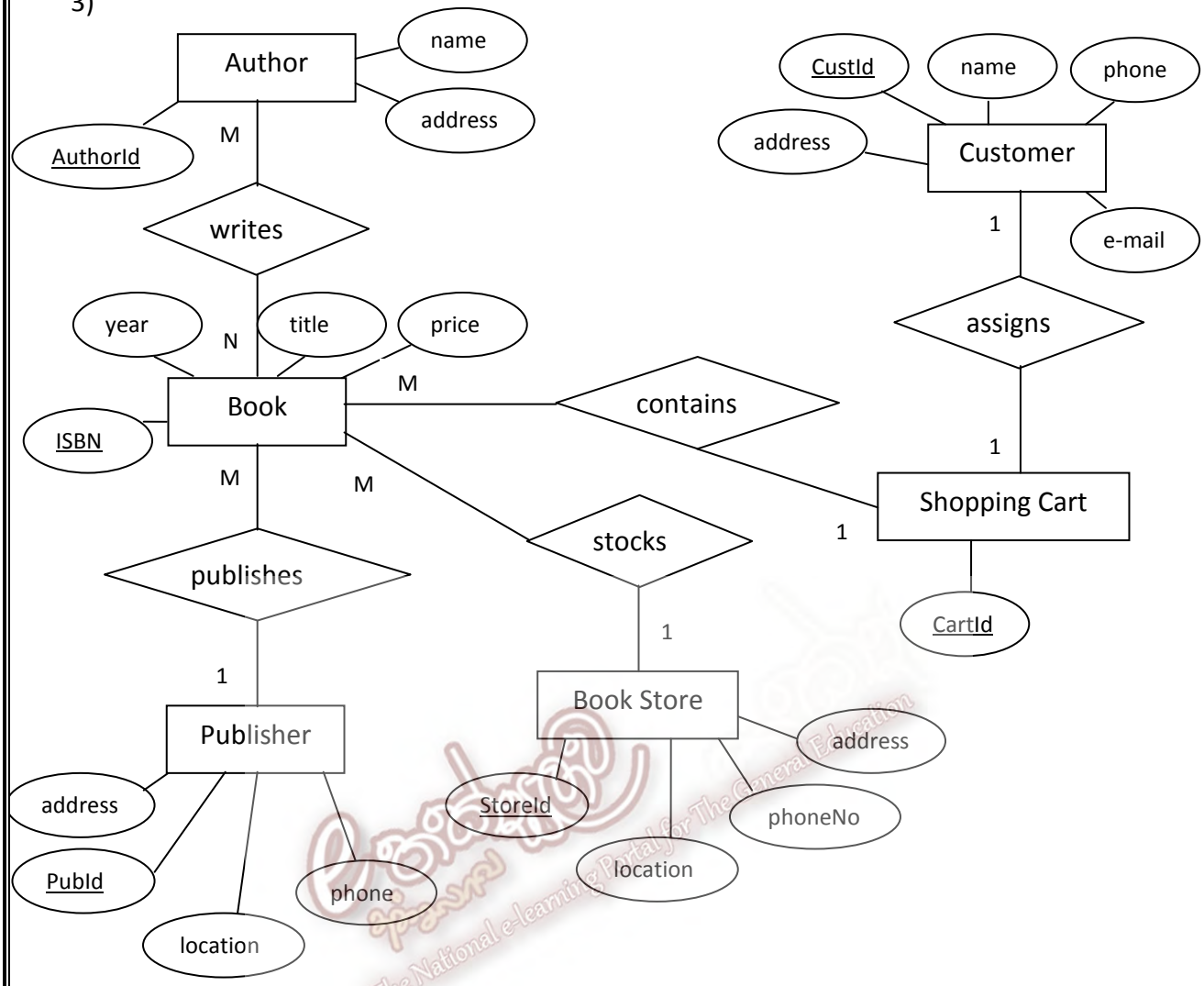
This program acquires storage to store an integer value, named as "n" and assign the value 1 at that location.

Then check the condition by n<=20 continuously by increasing the value of variable "n" one by one and displays even numbers from 1 to 20.

Finally string value "Done" is print at the end of program.

10 Marks

3)



20 Marks

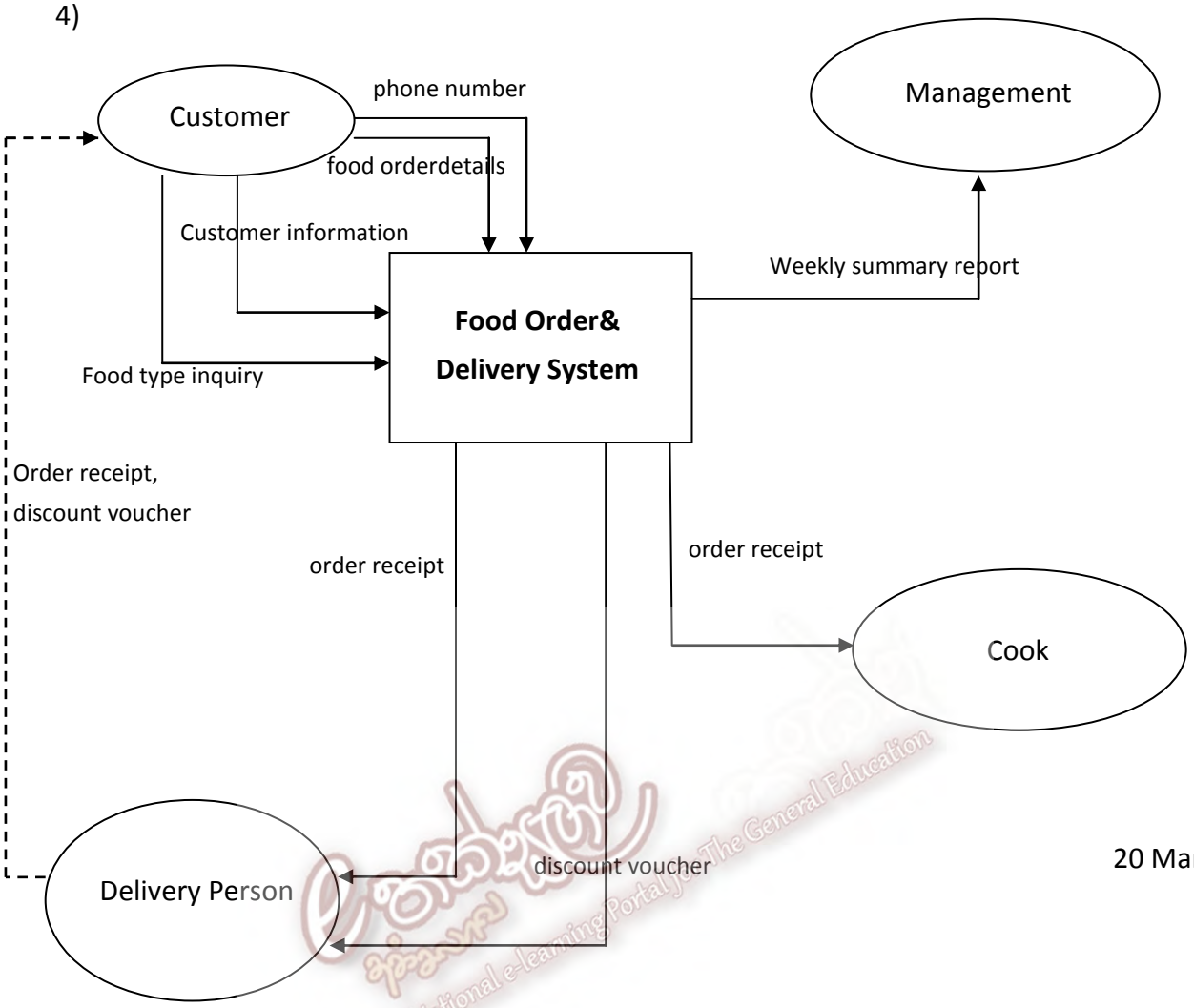
Entity – 6

Relationship – 5

Key attribute – 6

Cardinality – 3

4)



20 Marks

Define the system 2 Marks

External entities (2x4) 8 Marks

Data flows

System to external entities 8 Marks

External entity to external entity 2 Marks

Part – I 2x40 = 80 Marks

Part – IIA 15x4 = 60 Marks

Part – IIB 20x3 = 60 Marks

Total 200 Marks

Final Mark = Total / 2