A/L ICT Marking Scheme

2019 – November

2020 (Gr.13) Batch

Field Work Center (FWC)

Thondaimanaru

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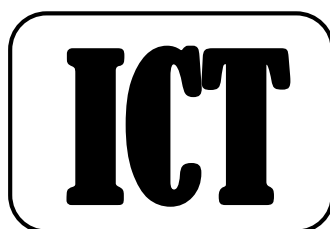
(1)	2	(11)	5	(21)	5	(31)	1	(41)	4
(2)	3	(12)	5	(22)	1	(32)	1	(42)	2
(3)	1	(13)	3	(23)	1	(33)	2	(43)	5
(4)	5	(14)	4	(24)	3	(34)	3	(44)	3
(5)	2	(15)	4	(25)	4	(35)	2	(45)	1
(6)	1	(16)	4	(26)	4	(36)	3	(46)	2
(7)	2	(17)	2	(27)	2	(37)	3	(47)	3
(8)	5	(18)	3	(28)	1	(38)	3	(48)	3
(9)	5	(19)	5	(29)	3	(39)	4	(49)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

Part – II A

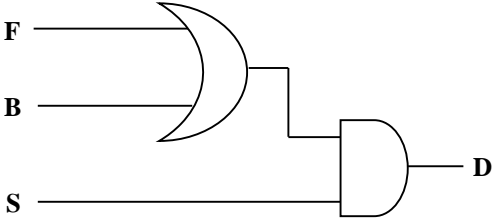| Ques. No.	Suggested answers	Marks
(1) (a)	<table><tr><td></td><td></td><td>**SRAM**</td><td>**DRAM**</td></tr><tr><td>**(i)**</td><td>அடர்த்தி</td><td>அதிகம் / <u>குறைவு</u></td><td>அதிகம் / <u>குறைவு</u></td></tr><tr><td>**(ii)**</td><td>கொள்ளளவு</td><td>அதிகம் / <u>குறைவு</u></td><td><u>அதிகம்</u> / குறைவு</td></tr><tr><td>**(iii)**</td><td>கிரயம் (cost)</td><td><u>அதிகம்</u> / குறைவு</td><td>அதிகம் / <u>குறைவு</u></td></tr><tr><td>**(iv)**</td><td>கதி</td><td><u>அதிகம்</u> / குறைவு</td><td>அதிகம் / <u>குறைவு</u></td></tr></table>	4 marks (4 x 1) Each row – 1 marks
(1) (b)	$-12_{10} = 11110100_2$ ⟵ 1 $16_{10} = 00010000_2$ ⟵ 1 00000100_2 ⟵ 0.5 [discard carry bit 1] ⟵ 0.5	3 marks
(1) (c)	• Doing POST (Power On Self Test) • Loading basic driver programs to the computer system • Keeping settings such as Date, Time , etc. for the computer system	3 marks [1.5 x 2]

(2) (a)	(i) True - உண்மை (ii) False - பொய் (iii) True - உண்மை (iv) True - உண்மை (v) True - உண்மை (vi) True - உண்மை (vii) True - உண்மை (viii) True - உண்மை	**4 marks** **(0.5 x 8)**
(2) (b)	(i) Odd parity - ஒற்றைச் சமநிலை (ii) Even parity - இரட்டைச் சமநிலை	**2 marks** **(1 x 2)**
(2) (c)	(i) 255.255.255.240 (ii) 16 (iii) **Subnet 1:** 192.10.10.0 – 192.10.10.17 OR 192.10.10.1 – 192.10.10.16 **Subnet 2:** 192.10.10.18 – 192.10.10.35 OR 192.10.10.19 – 192.10.10.34 **Subnet 3:** 192.10.0.36 – 192.10.10.53 OR 192.10.10.37 – 192.10.10.52 *Practically altertaive and possible answers accepted.*	**4 marks** **[1 + 1 + 2]** **(iii)** – 1 marks for 1 correct, 1.5 marks for 2 corrects, 2 marks for all corrects.
(3)(a)	❶ Order - கட்டளை ❷ Stock details - இருப்பு விபரங்கள் ❸ Sales unit - விற்பனைப் பிரிவு ❹ Reports - அறிக்கைகள் ❺ Manager - முகாமையாளர் ❻ Generating reports - அறிக்கைகளைத் தயாரித்தல் ❼ Stock - இருப்பு ❽ Order for stock - இருப்புக் கட்டளை	**4 marks** **[0.5 x 8]**
(3) (b)	**(i)** ① **(ii)** ⑤ **(iii)** ② **(iv)** ③ **(v)** ④	**5 marks** **[1 x 5]**

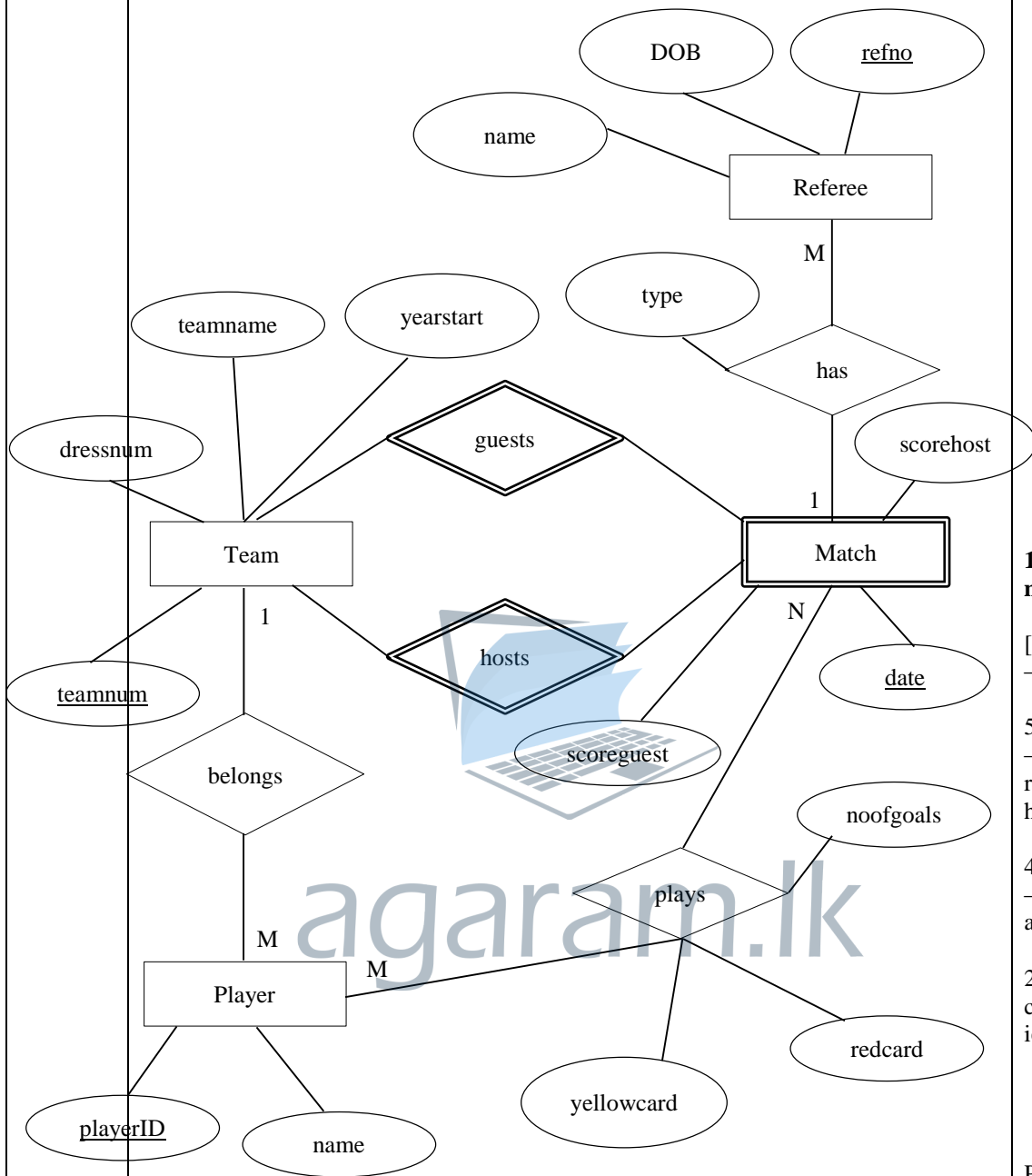|		
(3) (c)	• Internal / external fragmentation or simply fragmentation enough • Increasing file size is difficult • Extremely fast since the number of seeks are minimal • Both the sequential and direct accesses supported	**1 marks** **(0.5 x 2)** Or any acceptable answers
(4)(a)(i)	empid – identifier attribute – அடையாளப்படுத்தும் பண்பு age – derived attribute – பெற்ற பண்பு (வருவிக்கப்பட்ட பண்பு)	**0.5+0.5 = 1 marks**
(4)(a)(ii)	Employee – strong entity – பலமான உள்பொருள் Child – weak entity – பலவீனமான உள்பொருள்	**0.5+0.5 = 1 marks**
(4)(a)(iii)	Company (<u>companyid</u>, name, address) Department (<u>deptno</u>, deptname, companyid) Employee (<u>empid</u>, name, salary, companyid, deptno) Child (<u>name</u>, <u>empid</u>, age)	**0.5x4 = 2 marks**
(4)(a)(iv)	SELECT * FROM Employee WHERE salary > 80000 ;	**2 marks**
(4)(b)(i)	2^{20}	**1 marks**
(4)(b)(ii)	2^{14}	**0.5 marks**
(4)(b)(iii)	2^{20}	**0.5 marks**
(4)(c)	• Higher cost – உயர்ந்த செலவு • Designed specifically, not for general users – குறிப்பாக வடிவமைக்கப்பட்டது, பொதுவான பயனர்களுக்காக அல்ல • Flexible use – நெகிழ்வுடைய பயன்பாடு • Most of the software features are used by users – மென்பொருளின் பெரும்பாலான பகுதிகள் பயன்களால் பயன்படுத்தப்படுகின்றன	**2 marks** **[1 x 2]** Or any other acceptable answers

Part –II B

Question No.	Suggested Answers	Marks
(1)(a)	$D = (F + B).S$	**5 marks** [no partial marks given]
(1)(b)		**5 marks** [no partial marks given]
(1)(c)		**5 marks** (each column takes 1 marks)

For (1)(c):

F	B	S	F+B	(F+B). S
0	0	0	**0**	**0**
0	0	1	**0**	**0**
0	1	0	**1**	**0**
0	1	1	**1**	**1**
1	0	0	**1**	**0**
1	0	1	**1**	**1**
1	1	0	**1**	**0**
1	1	1	**1**	**1**

(1)(d)	**NOTE: REMOVE Q (1)(d)**	
(2) (a)		**4 marks** [0.5 x 8]

For (2)(a):

Application layer	Application layer
Presentation layer	
Session layer	
Transport layer	**Transport layer**
Network layer	**Internet layer**
Datalink layer	Network interface layer
Physical layer	

(2)(b)(i)	a v m v e q n d i z m h	2 marks

(2)(b)(ii)		3 marks

f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e

(2)(b)(iii)	- First cipher - cannot deduce rest of cipher having identified some characters OR more random substitution.	3 marks [1 + 2]

(2) (c)	• With UDP there is **no need to establish a connection** before sending data. (Data is simply packaged into a UDP datagram and transmitted to the destination). • **No acknowledgements (or sequence numbers)**. • No way for the transmitter to know **whether or not data has been correctly received by the receiver.**	3 marks [1+1+1] Each point carries 1 marks Or Same meaning

(3) (a)	• System shall be able to store patients' medical history on e-health cards • System shall be able to read patients' medical history on e-health cards • System shall be able to have the facility to access patients' medical history by hospitals	6 marks [2 x 3] IEEE method
(3) (b)	If patients' details are able to access by unauthorized people, • Privacy • Security issues may take place.	3 marks [1.5 x 2]
(3) (c)	• Data encryption OR • Username / password pair Or Any other relevant answers accepted.	2 marks
(3) (d)	**Advantages** • Getting technical support from outside / accessing of outside expertise • Lower cost / no need to hire more employees **Disadvantages** • Privacy / security of data issues / data about patients may be misused • Lack of control over system Or Any other relevant answers accepted.	4 marks [2 + 2]

(4) (a)	**First generation computer programming language** • Programs / sourcecode are written in binary form • No need translator to run programs • Programs run very fast • Tied-up with computer architecture **Third generation computer programming language** • Programs / sourcecode are written in mathematical symbols/ English words • Need a valid program translator to run programs • Programs run slowly comparing with 1GL / 2GL Or any other relevant answers accepted.	**3 marks** **(1.5 x 2)** Each carries 0.5 marks
(4) (b)	**(i)** • A space for an integer is allocated in memory. • The value of 5 is assigned to the variable a and stored in it. **(ii)** • A space for a list is allocated in memory. • The values of 4,3,7,6 are assigned to the list b and stored in it. **(iii)** • Asks user to enter a string value. • User is able to enter a value and that value is assigned to the variable c and stored on it.	**6 marks** **[2 x 3]** Each carries two marks Or equivalent meaning accepted
(4)(c)		**6 marks** [each rows takes 0.5 marks 0.5 x 10] partial marks given output 1 marks

HighF	HighC	TempF	OUTPUT
−100	−100		
		68	
68	18	46	
68	18	50	
68	18	86	
86	27	65	
86	27	50	
86	27	40	
86	27	30	
86	27	−1	The highest temperature is, 86 Fahrenheit, 27 Celsius.

(5)

DOB   refno

name

Referee

M

teamname   yearstart   type

has

guests   scorehost

dressnum   1

Team   Match

1   N   date

teamnum   hosts

scoreguest

belongs   noofgoals

plays

M   redcard

M

Player

yellowcard

playerID   name

NOTE: FLEXIBLE MARKING EXPECTED FOR THIS SCENARIO.

Tamil medium students are expected to write answer using Tamil words given in scenario. Translation is not permitted.

15 marks

[4 marks – entities

5 marks – relationships

4 marks – attributes

2 marks cardinalities]

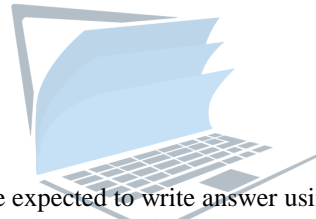Player entity – has atleast two attributes because player details are to be kept.

(6) (a)

Tamil medium students are expected to write answer using Tamil words given inn scenario. Translation is not permitted.
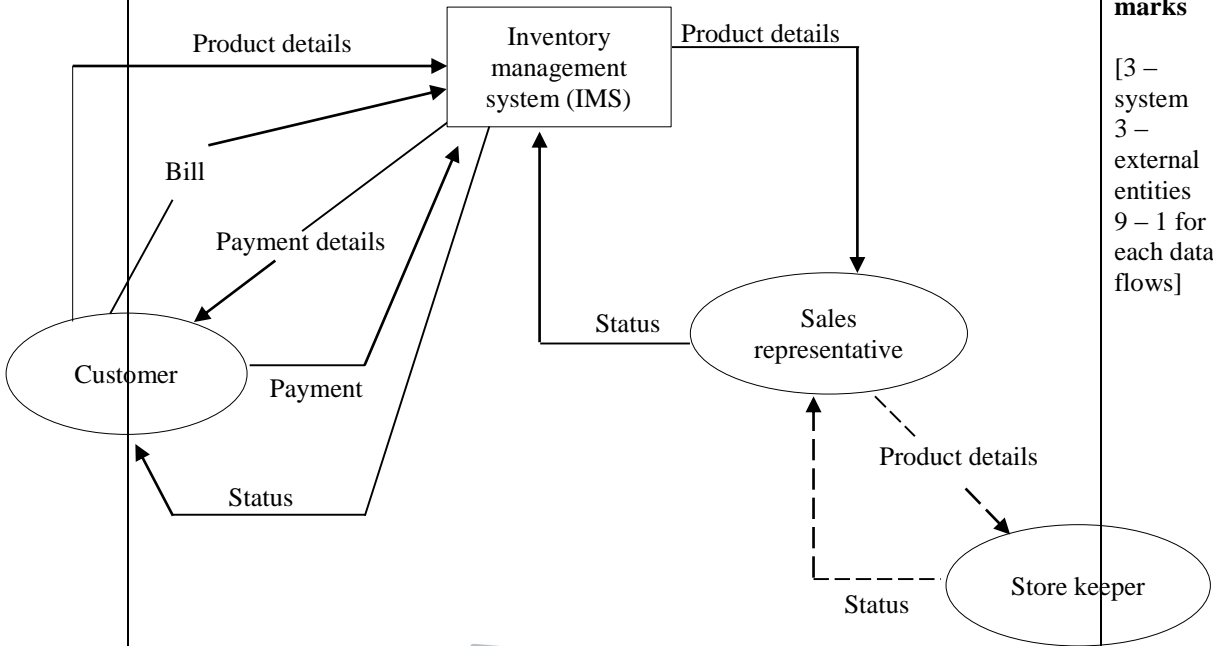
15 marks

[3 – system
3 – external entities
9 – 1 for each data flows]

Part – I   2 x 50 =100 marks

Part – II A

10 x 4 = 40 marks

Part – II B   15 x 4 = 60 marks

200 / 2 = 100 marks

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