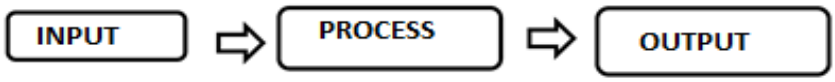
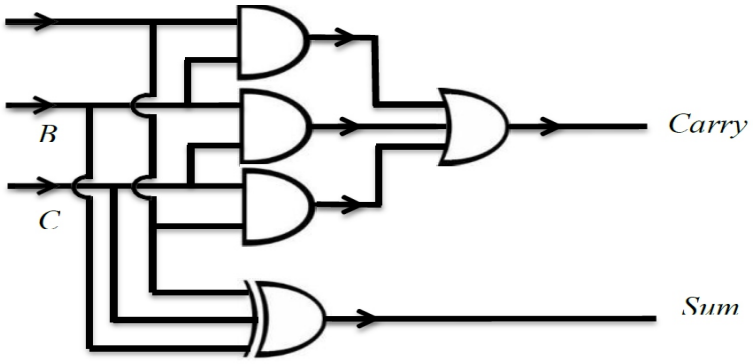
First Term Test - 2020
Information Communication Technology - Grade 13

Answer Script - MCQ

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

Q No		Answer Part A	Marks
1	a)	Data creation, Data Management, Removal of obsolete data	2 Marks
	b)		2 Marks
	c)		4 Marks
	d)	Direct Data Input, Online Data Input, Remorte Access	2 Marks
2	a)		6 Marks

	b)	A raqndom memory type can be designed by using this logic circuit diagram that consists logic gates. **S R Q Q'** 1 0 0 1 0 0 0 1 0 1 1 0 0 0 1 0 1 1 - -	4 Marks
3	a)		3 Marks
	b)	INSERT INTO BOOK VALUES (‘B0010’,’Upan daa sita’,’A005’,’Rs.550/=’,’2015’); INSERT INTO BOOK (BookID,BookName,AuthorID,Price,PublishedYear) VALUES (‘B0010’,’Upan daa sita’,’A005’,’Rs.550/=’,’2015’);	2 Marks
	c)	SELECT BookName FROM BOOK where AuthorID = 'A005';	3 Marks
	d)	There must not be Partial dependency.(There must be Full dependency.)	2 Marks
4	a)	`	6 Marks
	b)	Capacity of a Frame = Capacity of Memory / Number of frames = 8GB / 225 frames = 8x2^10x2^10x2^10/225 = 256 bytes	4 Marks

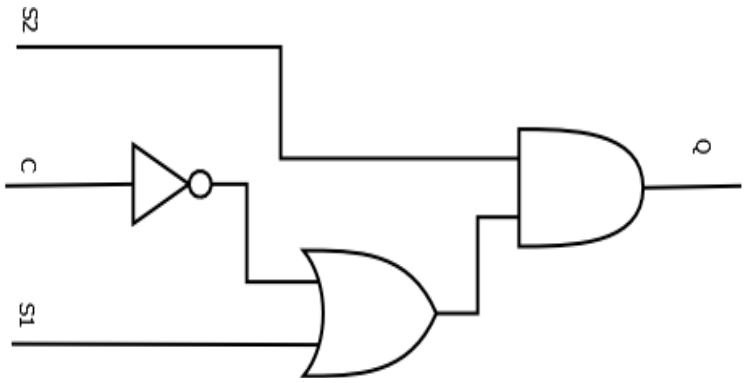
Essay

1	a)	**S1 S2 C Q** 0 0 0 0 0 0 1 0 0 1 0 1 0 1 1 0 1 0 0 0 1 0 1 0 1 1 0 1 1 1 1 1	04 Marks
	b)	Q=S1’ S2 C’ + S1 S2 C’ + S1 S2 C	Marks 2
	c)	Q=(S1+S2+C)(S1+S2+C’) (S1+S2’+C’) (S1’+S2+C) (S1’+S2+C’)	Marks 2
	d)	Q =S1’ S2 C’ + S1 S2 C’ + S1 S2 C	

= S1′ S2 C′ + S1 S2(C′ + C) (Distributive law)
= S1′ S2 C′ + S1 S2 (Complement law)
S2 (S1′ C′ + S1) (Distributive law)
= S2 (C′ + S1) (Redundancy law)

Marks 3

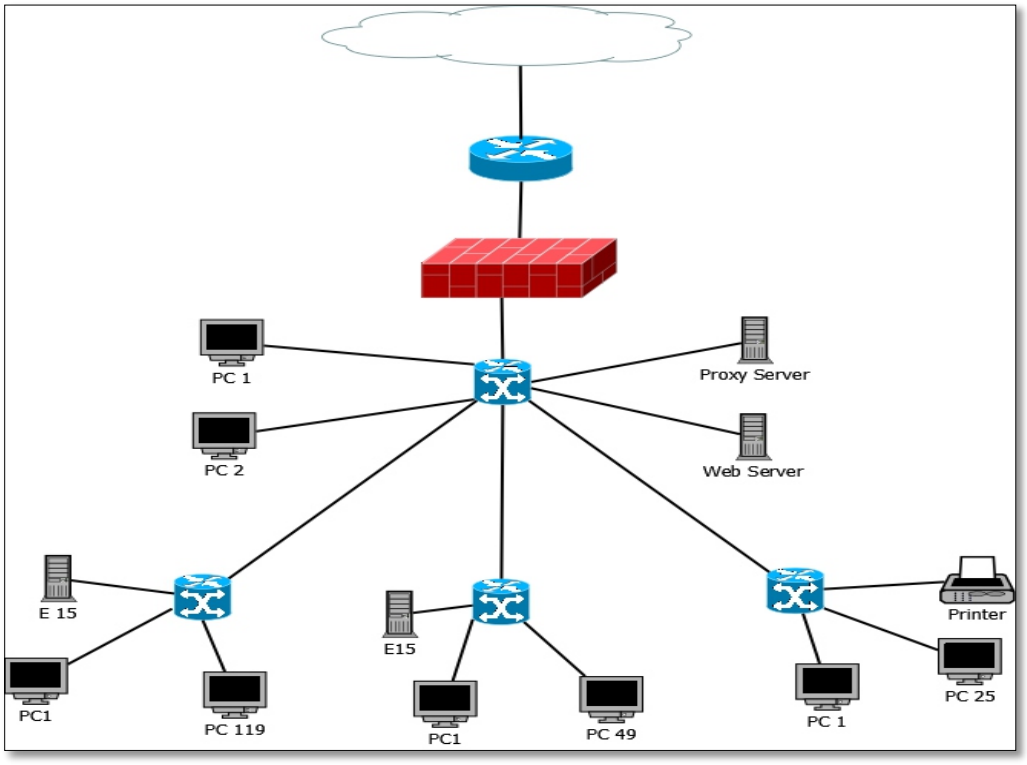
e)



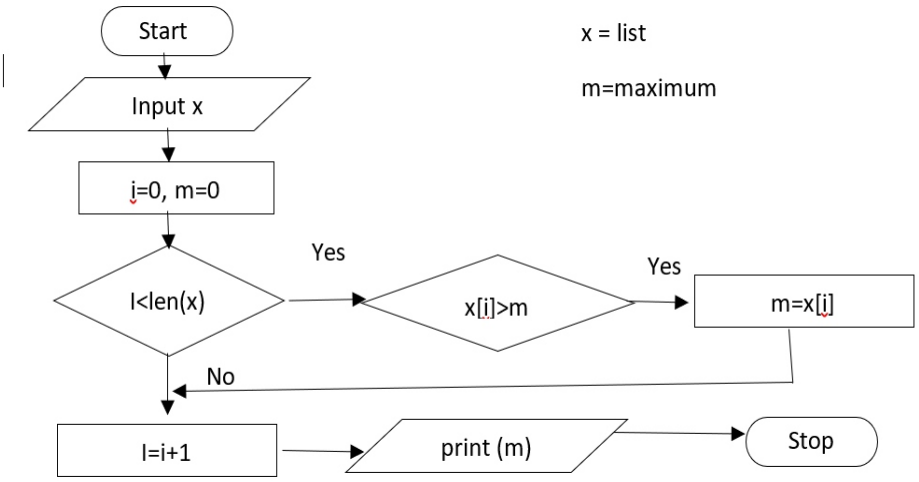
04 Marks

Department	Subnet Mask	Network Address	Broadcast Address	Host IP Range	Number Of Computers To Be Established In The Network.
PRODUCTION	255.255.255.0	172.40.0.0	172.40.0.255	172.40.0.1-172.40.0.254	54
SUPPLY	255.255.255.128	172.40.1.0	172.40.1.127	172.40.1.1-172.40.1.255	06
HUMAN RESOURCE	255.255.255.192	172.40.1.128	172.40.1.191	172.40.1.129-172.40.1.190	12
SALES	255.255.255.254	172.40.1.192	172.40.1.223	172.40.1.193-172.40.1.222	5

2 Marks for each correct row.

2		 For correct connection of internet,router and firewall 1 Mark. For internet connection of PRODUCTION section 1 mark. Correctly conection of proxy server and web server 2 marks. Connecting the remaining 3 subnets correctly with devices 3 marks.	
3	a)	issue	
	b)	passenger - season_ticket -> 1:1 (One to One) Railway_department - season_ticket 1:m (One to Many) Railway_department - driver 1:m (One to Many) Railway_department -> timetable 1:1 (One to One) driver - train -> 1:1 (One to One) train - journey ->1:m (One to Many)	
	c)	passenger season_ticket driver journey train	

4	a)		For Data flows 0.5 X15 = 7.5 External Entities 1X 5 = 5 System 1X 2.5 = 2.5

5	a)	A = a[j]>a[j+1]: B = a[j+1],a[j]	
	b)	step 1 [5, 8, 2, 6, 9]	3 Marks
		step 2 [5, 2, 6, 8, 9]	
		step 3 [2, 5, 6, 8, 9]	
		step 4 [2, 5, 6, 8, 9]	
		final list [2, 5, 6, 8, 9]	
	c) i)		Marks -> (For input 1 , for process 2 , for print 1 , for Condition 2)

	ii)	def f2(x):
		  i=0
		  m=0
		  while(i<len(x)):
		  if(x[i]>m):
		  m=x[i]
		  i+=1
		  return m
		x=[5,7,9,2,4]
		print(f2(x))
			Marks : (For the funtion 1 , for while with incrementer 1 , for if statement 1 , if the code is correct extra 1 mark)

6	a)	<table border="1" cellpadding="10" align="center">	
		• (if suitable values for table **border** and **cellpadding** attributes are given)	2 marks
		<tr> <th rowspan="2">Unit</th><th colspan="2">Quiz Open</th><th colspan="2">Deadline</th></tr>	2 marks
		• (if all the 3 values 1xrowspan=”2”,2xcolspan=”2” are given)	
		<tr align="center"> <td>Date</td><td>Time</td><td>Date</td><td>Time</td></tr>	
		<tr align="right"><td align="left">1. Operating Systems</td><td>Feb 01, 2021</td><td>8.00 a.m.</td>	
		<tr align="right"><td align="left">2. Networking</td><td>Feb 10, 2021</td><td>8.00 a.m.</td>	
		<tr align="right"><td align="left">3. SSADM</td><td>Feb 20, 2021</td><td>8.00 a.m.</td>	
		<tr align="right"><td align="left">4. HTML</td><td>March 01, 2021</td><td>8.00 a.m.</td>	
		<tr><td colspan="5"> Maximum 03 attempts are allowed for each unit quiz set.	
		Maximum marks for all your attempts are added for you. </td></tr>	
		</table>	
		• If all the cell contents are correct,	1 Mark
		• If all the rows are formatted with correct **alignments,**	2 Mark
		• If all the required data to show the last row of the table (formatting and content) is given,	2 mark
		• If correct **table open** tag and **table close** tags are given,	1 mark
		Total	(10 mark)
6	b)		
		Operating Systems	
		<ul type="circle"> Competency Level 5.3 & 5.4	
		Networking	
		<ul type="circle"> Competency Level 6.7,7.8 & 6.9	
		SSADM	
		<ul type="circle"> Competency Level 7.1, 7.2 & 7.3	
		HTML	
		<ul type="circle"> Competency Level 10.1 10.2 & 10.3	
		• Open tag and close tag of	2 Marks
		• All the **ul** tags with type attribute correct	2Marks
		• Correct list contents	1Mark
		Total	(5Marks)