Information and Communication Technology(20 E)
Part I
2016

Q.No	Answer		Q.No	Answer
1	5		26	4
2	3		27	2
3	2		28	1
4	5		29	4
5	4		30	2
6	3		31	2
7	3		32	3
8	2		33	1
9	2		34	5
10	2		35	4
11	2		36	1
12	3		37	1
13	4		38	4
14	1		39	3
15	1		40	4
16	2		41	5
17	1		42	4
18	3		43	2
19	4		44	4
20	3		45	3
21	3		46	2
22	2		47	4
23	5		48	1,2
24	2		49	2
25	2		50	4
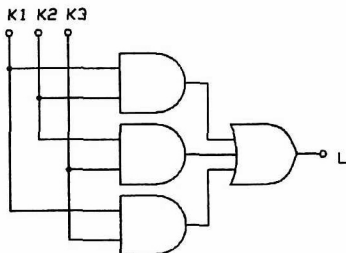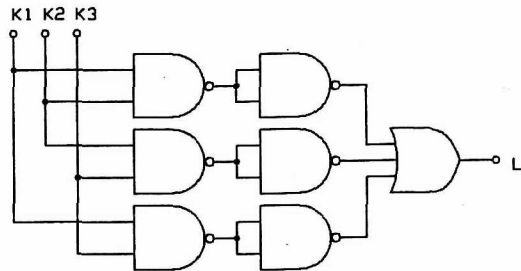
Information and Communication Technology(20 E)
Part II A
2016

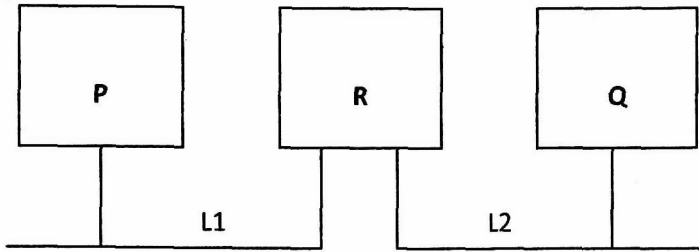| Q.No	Model Answer	Marks
1 (a)	(i) When clicked on 'Cover Page', the image named 'coverPage.jpg' is displayed on a new page/tab Or Displays a page with the content **Cover Page** which is a hyper link	1
	(ii) When clicked on 'Content' the document 'content.html' is displayed on the same page/tab overwriting the content on that page or Displays a page with the content **Content**, which is a hyper link.	1
	(iii) When clicked on the image 'figures.jpg' the document 'figures.html' is displayed on the same page/tab overwriting the content on that page or Displays an image, which is a hyper link	2
1 (b)	External style sheets	1

1 (c)	`<style type="text/css">`
	    h2{
	        color: red;
	        text-align: center;
	    }
	    p{
	        font-family:"Courier New";
	        font-size: 14px;
	    }
	`</style>`
		1
		2
		
		2

2 (a)	C2C: An individual seller selling the camera online to another individual buyer	1
	B2C: Using the Paypal service	1
2 (b)	To securely complete the online payment process and	2
	Ensure that the seller received the money for the item sold.	2
2 (c)	It may not be possible to inspect the item on sale before agreeing to buy	2
	There is a doubt that the item may not arrive even though the payment is done	2

3 (a)	Closed System	1
	(1) Inputs (Water) is available within the system	2
	(2) Outputs (Oxygen and Hydrogen) release to the system.	2
3 (b)		
	(1) Accuracy	2
	(2) Efficiency	1
3 (c)	I-P-O similar	1
	Human brain is more intelligent than an information system Or any other acceptable reason	1
4 (a)	(i)	
	Nothing	1
	It has a never-ending(infinite) loop	1
	(ii)	

	``
	total = 0
	i = 1
	while (i <= 10):
	    total = total + i
	    i = i + 1
	print(total)
	``
		3

4 (b)	Address bus width $= 16$ bit	1
	Address size $= 16$ bit	1
	Max number of unique addresses possible $= 2^{16}$	1
	Max number of bytes addressable $= 2^{16}$	1
	Max usable size of memory $= 2^{16} = 2^6 \times 2^{10}$	1
	$= 64$ KB	

Q.No	Model Answer	Marks
1	Truth table	4
		1

K1	K2	K3	L
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

Boolean expression

$L = K1'.K2.K3 + K1.K2'.K3 + K1.K2.K3' + K1.K2.K3$

Simplified Boolean expression

$L = K1.K2 + K2.K3 + K3.K1$

Note : Correct rules must be given for 4 marks

Circuit using basic gates (not necessary for the answer)

K1 K2 K3

L

Circuit using given gates

K1 K2 K3

L

Marks: 2, 5, 3

2	a)	5

b) Q.
IP address indicates the final destination and it does not specify the
intermediate routers/gateways.

5

c) R.
The frame F2 is originated at the router R and therefore the source
MAC address in frame F2 is the MAC address of R.

5

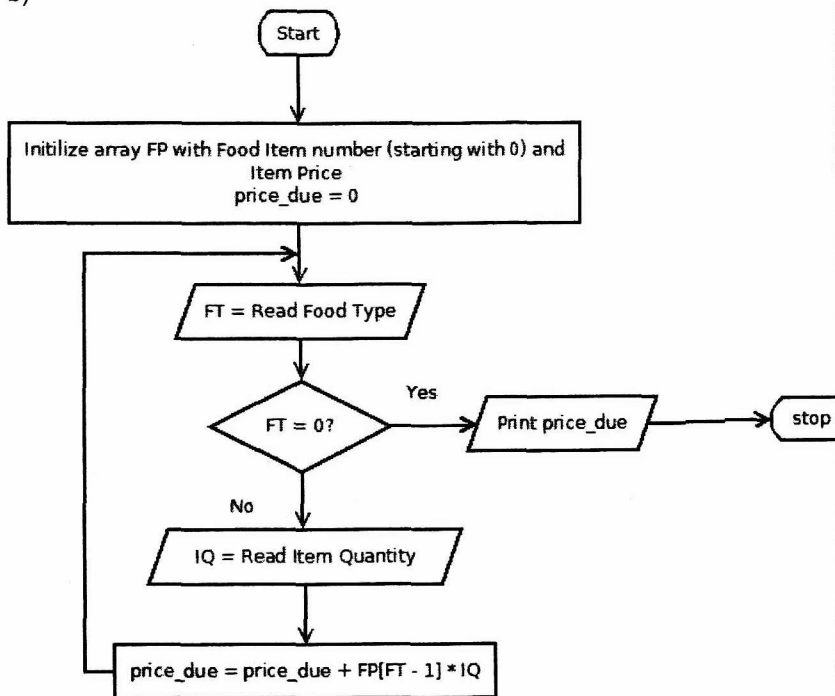|			
3	a)	B2E – An online service provided by the bank to its employees	2 or 0
	b)	• Manage their personal activities need to be done during work hours without leaving the workplace	2
		• Get information better and faster, easily	2
	c)	Yes.	2
		It is expected to enhance their efficiency and satisfaction as it enhances the balance between the employees' work and personal life	4
	d)	• Content selection and suggestion	1
		• Content prioritization	1
		• Alerting	1

4	a) Inputs	
	i) Input to indicate end of food items	1
	ii) Food Type	1
	iii) Number of items of the food type	1
	Output	
	Payment due for the tray.	1

b)

```
                    ┌─────────┐
                    │  Start  │
                    └─────────┘                           1
                         │
                         ▼
┌──────────────────────────────────────────────────────┐
│ Initilize array FP with Food Item number (starting    │
│ with 0) and Item Price                                │  1
│ price_due = 0                                          │
└──────────────────────────────────────────────────────┘
                         │
          ┌──────────────┤
          │              ▼
          │      ┌──────────────────────┐
          │      │ FT = Read Food Type  │                 1
          │      └──────────────────────┘
          │              │                                1
          │              ▼                    Yes
          │         ╱──────────╲      ┌──────────────┐   ┌──────┐  1
          │        ╱  FT = 0?   ╲────▶│ Print price_ │──▶│ stop │  1
          │         ╲──────────╱      │    due       │   └──────┘
          │              │            └──────────────┘
          │           No ▼
          │      ┌──────────────────────┐
          │      │ IQ = Read Item        │
          │      │    Quantity           │
          │      └──────────────────────┘
          │              │
          │              ▼
          │  ┌────────────────────────────────────┐
          └──│ price_due = price_due + FP[FT - 1]  │       1
             │            * IQ                     │
             └────────────────────────────────────┘
```

Star/end : 1 Mark
Correct Initialization : 1 Mark
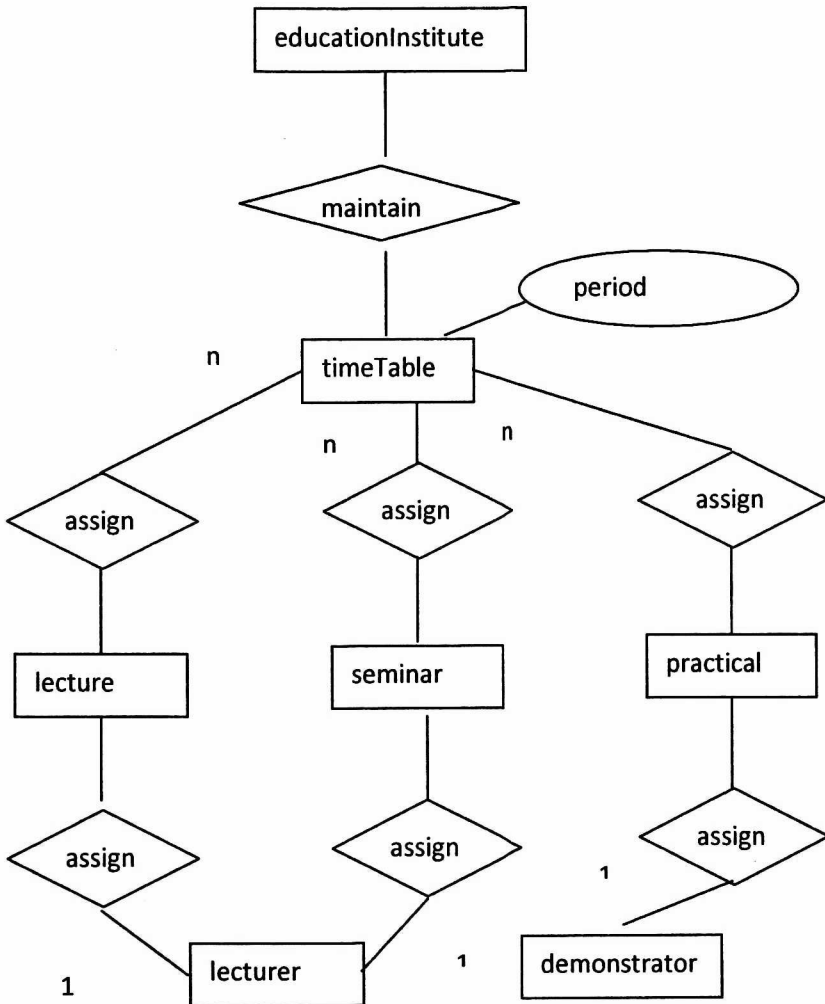Correct Inputs : 1 Mark
Correct Loop : 1 Mark
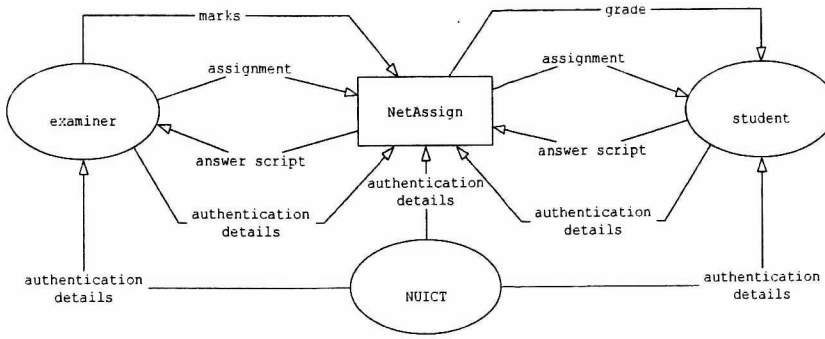Correct Computation : 1 Marks
Output : 1 Mark

c)

```
price_due = 0.0
IP = [10.00,12.00,15.00,10.00,25.00,45.00,50.00,25.00,10.00,12.00]
FP = int(input("Enter food type : "))
while FT !=0:
        IQ = int(input("Enter item Quantity : "))
        price_due = price_due + FP[FT-1] * IQ
        FT = int(input("Enter food type : "))
print(price_due)
```

Note :
1 mark : price initialization
1 mark : array initialization
1 mark : input food type and Quantity
1 mark : correct loop
1 mark: correct computation

6

(1 mark for each component)