Answer – Part I

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

ANSWER - Part II (A)

Qu. No	Model Answer	Marks
(1)		
(a)	(i) <input type=``text" size=25> (ii) <input type =``Submit" Value= "send"/> (iii) <text area name="Suggestion" row=3 column=2> </text area>	1 1 1

(b)	P {
	Border:1px solid black;
	Padding=10px;
	}
		
		1
		1

(c)	<embed width=``340" height=``240" Src=``Song.mp4"></embed> **OR** <video width="600" > <Source src="Song.mp4"> </video>	1 1 1 1 1
(2)		
(a)	(i) www.ebuy.com www.amazan.com **(Any suitable answers)** (ii) • Security • Guarantee for the delivery and the payment to the seller (iii) • Credit card • e-cheque • e-cash • e-wallets **(Any of two)**	1 1 1 1 1 1 1 1
(b)	Advantages : Worldwide Presence Cost effective marketing Disadvantages : Security limitations Question of safety **(Any suitable answers)**	 1 1

(c)	e-commerce enablers Companies whose business model is focused on providing infrastructure necessary for e-companies to exist, grow and prosper. Eg: CISCO – Providing Network switches **(any suitable answers)**	1
(3)		
(a)	(i) Fetch next instruction Increment the programmer counter Decode the instruction Execute the instruction (ii) The instruction and the data are stored in the same computer memory. (iii) There is a single data bus which fetches data and instructions so only one instruction can be accessed of the same time. (Bottleneck)	2 1 1 1
(b)	11100111 – sign bit 1 So it is negative number 11100111 00011000 + 1 -25 00011001	1 1 1
(c)	Maximum usable memory = 4Gb 4Gb = 2^2 x 2^{10} x 2^{10} x 2^{10} bytes = 2^{32} bytes Address 32 bit So Computer system is byte addressable	1 1
(4)		
(a)	(i) 2 3 5 7 (ii) Print(“\ “Hello”\”)	1 1
(b)	(i) n = 0 For i in range (6,1,-1): print (n* “ ” , end= “ ”) n=n+1 For j in range (1,i): Print (“*”,end= “ ’’) Print ( ) (ii) n = 5 For i in range (1,6): print (n* “ ”, end= “ “) n = n - 1 For j in range (0,i): print (“*”,end= “ ’’) print ( )	 1 1 1 1 1 1 1 1
Total marks		**40**

ANSWER - Part II (B)

<table>
<tr><th>Qu. No</th><th>Model Answer</th><th>Marks</th></tr>
<tr><td>(1)</td><td></td><td></td></tr>
<tr><td>(a)</td><td>A – First Time
B - Second Time
C - Third Time
L - Login

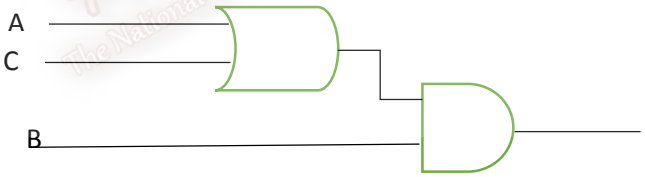
(It is not defined, deduct 1 marks from the total marks)

<table>
<tr><th>A</th><th>B</th><th>C</th><th>L</th></tr>
<tr><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>1</td><td>1</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>0</td><td>0</td><td>0</td></tr>
<tr><td>0</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>0</td><td>1</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>0</td><td>0</td><td>0</td></tr>
</table>

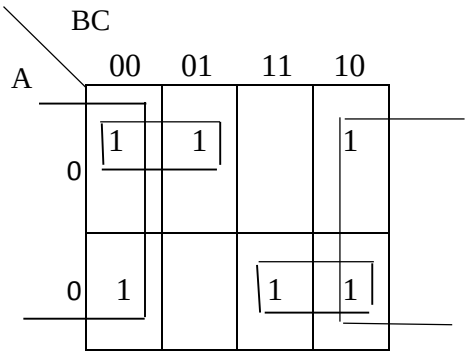
Each correct row with L = 1 will get 1 mark. (Maximum 3 marks)

Correct Table – 1 marks</td><td>4 marks</td></tr>
<tr><td>(b)</td><td>(i) ABC + AB$\bar{C}$ + $\bar{A}$ BC

(ii) ABC + AB$\bar{C}$ + $\bar{A}$ BC
AB(C+$\bar{C}$) + $\bar{A}$BC
AB + $\bar{A}$ BC ∴ C + $\bar{C}$ = 1
B(A + $\bar{A}$ C)
B(A+C) ∴ A + $\bar{A}$C = A + C

(iii)
 
</td><td>2 marks

4 marks

2 marks</td></tr>
<tr><td>(c)</td><td> 

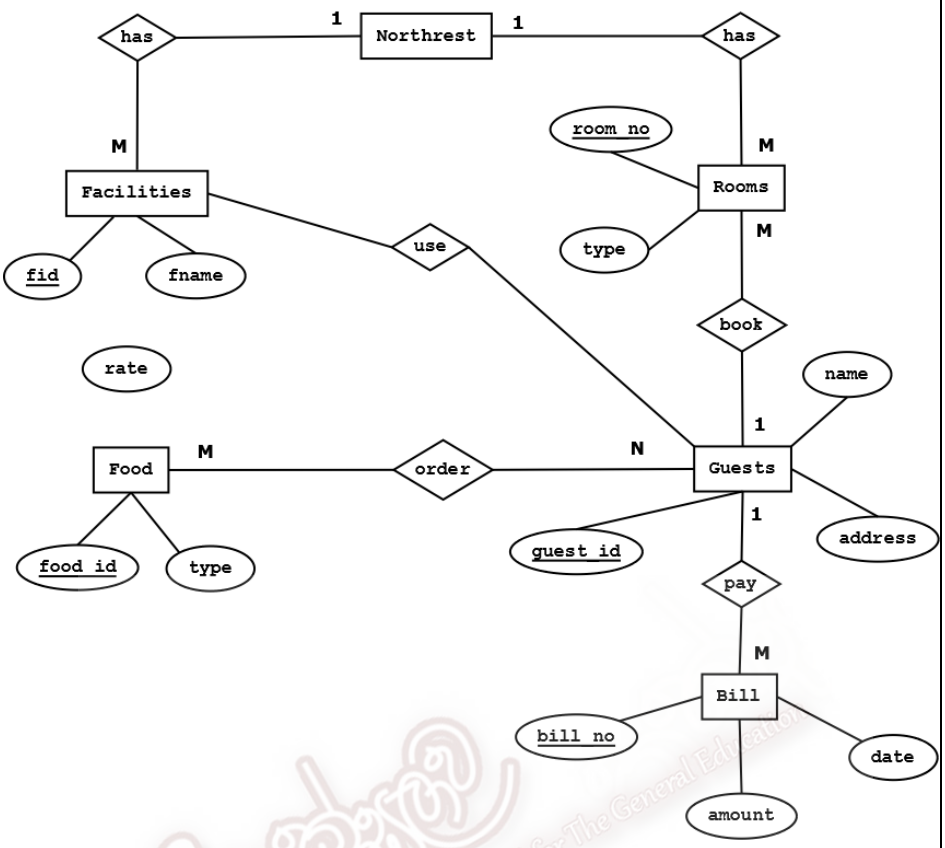
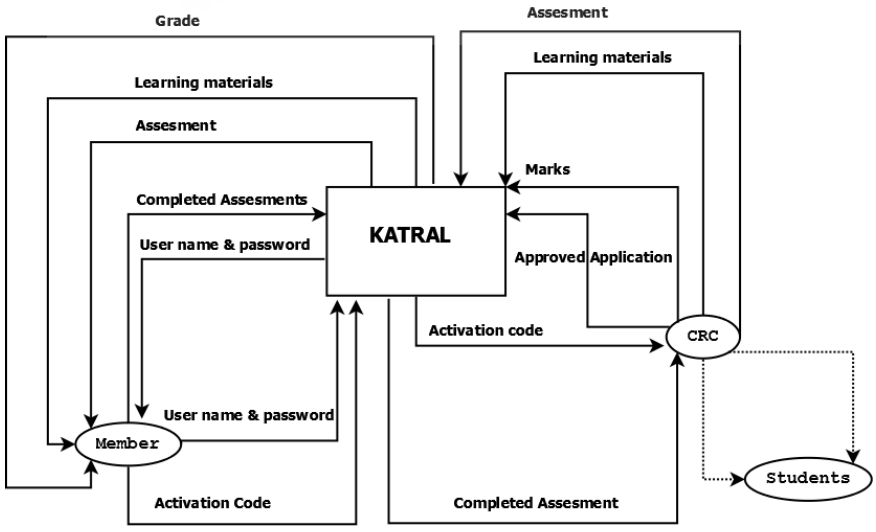
$\bar{A}\bar{B}$ + AB + $\bar{C}$</td><td>3 marks</td></tr>
<tr><td>(2)</td><td></td><td>Marks</td></tr>
<tr><td>(a)</td><td>Long term scheduler –
Selects process from a pool and load them into the memory for execution.</td><td>1 mark</td></tr>
</table>

	Short term scheduler – Select those processes which are ready execute for dispatching. ***Medium term scheduler –*** Suspend out / swapped in the process between the main memory and the secondary memory.	1 mark 1 mark
(b)	Garbage collection is automatic memory management mechanism to reclaim the memory space occupied by objects that are no longer in use by the program.	3 marks
(c)	Created (New) Waiting / Ready Running Blocked Swapped out and blocked Swapped out and waiting Exit ***(Do not give part marks)***	3 marks
(d)	Context switch is the mechanism to store and restore the state or context of a CPU in process control block (PCB). So that a process execution can be resumed from the same point of a later time.	3 marks
(e)	Kernal is the part of the operating system that resides in the main memory all the time	3 marks
(3)		

(a)	def search (list1, value):
	found= False
	position = 0
	While (position < len(list1)):
	If (list1[position= = value):
	found = True
	break
	position = position + 1
	return found
	
	Correct function definition - 1
	Initialize the variables-2
	Correct loop structure – 2
	If statement - 3
		8 marks

(b)	F1=open(`input.txt',`r')
	F2=open(output.txt,`w`)
	Line=f1.readline( )
	Data=(line1.strip()).split(",")
	For i in range(len(data)):
	Data[i]=int(data[i])
	n=str(n)
	
	if x==True:
	f2.write(n+ " is not in the file")
	else:
	f2.write(n+ "is in the file")
	f1.close()
	f2.close()
		7 marks

	Opening files – 1 mark **Read 'input.txt' and make it as list – 1mark** **Correct loop - 1 mark** **Get the input and call the function – 1 mark** **If statement - 2 marks** **Closing files – 1 mark**	
(4)		
(a)	**Advantages :** • Ability to simulate human behavior and cognitive process. • Capture and preserve human expertise. • Fast Response. • The ability to comprehend large amounts of data quickly. **(Any of two)** **Disadvantages :** • No common sense. • Cannot readily with mixed knowledge. • May have high development costs. • Raise legal and ethical concerns. **(Any of two)**	2 marks 2 marks
(b)	A consumer oriented technology for new product development based on consumer's, psychological image and feeling.	1 mark
(c)	An agent is a computer system that is situated in some environment, and that is capable of autonomous action in this environment in order to meet its design objectives.	4 marks
(d)	• Autonomy • Proactiveness • Reactiveness • Social ability • Mobility • Veracity • Benevolence • Rationality • Learning & etc. **(Any of three)**	3 marks
(e)	• Computer game • Film • Co-ordinated defense system • Cloud computing • Geographical information system **(Any of three)**	3 marks

(5)	 **Entity – 5 marks** **Relationship – 5 marks** **Attributes – 5 marks**	15marks
(6)	 **System – 1 mark** **External entity – 3 marks** **Data flow – 11 marks**	15marks
Total marks		**60**