GCE AL Examination, August 2012 (AL/2012/20/E-II) – MCQs

(Model Answers)

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

GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part A

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
1	(a)	Multiprogramming Time sharing	2 2	4
	(b) i	Round trip delay time (RTD)/(RTT) – සිංහලෙන් Explain ගන්නවා		1
	(b) ii	131.111.8.46		1
	(b) iii	Class B		1
	(b) iv	0%		1
	(C)	Running Swapped out and blocked	1 1	2
2	(a)	A system is a group of interrelated, interacting resources forming a common goal. – specific task, call (only for this year) Or A purposeful collection of inter related components working together to achieve common objective		2
	(b)	Resource Interrelated Interacting (All three with at least 2 resources) Common goal – communication/call	1 1	2
	(c)	Open Justification Interacts with the outside world	1 1	2
	(d) i	Functional ~~Discussion~~ Discribe. It is a service	1 1	2

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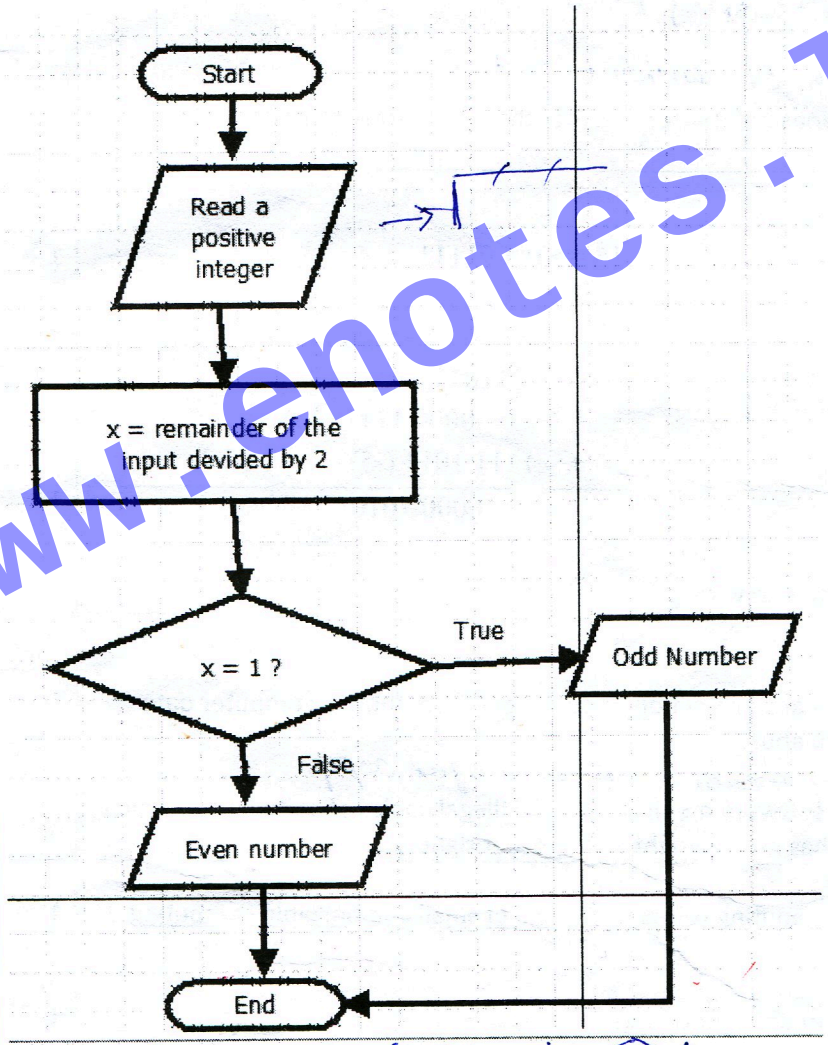
GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part A

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
	(d) ii	Non functional ~~Discussion~~ Limitation or costalu	1 1	2
3	(a) i	If the remainder of the division of the number by 2 is 1, then the number is odd, otherwise even		1
	(a) ii	 1 Mark for process & discision in ◇ box only for this year. If the above method is acceptable and the flowchart implements it give 2 marks.	1	2

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part A

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
	(a) iii	If the pseudo code represents the flowchart, give 2 marks. Start/Begin Read a positive integer Divide the number by 2 and get the remainder If the remainder equals 1 Then number is odd Else number is even → Display 'odd' Stop/End → Display Even with or without end if. Note: it does not matter whether the flowchart is correct.		2
	(b)	15 => 00001111 5 => 00000101 -5 => 11111010 + 00000001 => 11111011 0000 1111 (15) + 1111 1011 (-5) 0000 1010 Ignore the carry	1 1 1 1 1	5
4	(a)	Privacy means protection of personal information in computer data bank from abuse. any meaning of illigal copy. Piracy of software means making of illegal copies of software on which the user has no copyright or any other right .	1 1	2
	(b)	Mobile computing refers to the use of small and portable computing devices in wireless enabled networks that provide wireless connections to a central main server.	1 1 1	3

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part A

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
	(c) i	Video conferencing		2
	(c) ii	Network devices Any Audio/Video devices Computer/Servers	1 1 1	3

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
1	(a) i	Suitable System such as payroll system Difference – Process, data(input), information(output) Note: Data → [Process] → Information Any expression represents this idea (explanation or diagram)	1 1	2
	(a) ii	1. in-Accuracy 2. In-Efficiency 3. Data duplication 4. Need for large Physical space **Any three from above** or any other acceptable reason. Note: Additional marks should not be given for the duplicate meanings. Ex. In-Efficiency and slowness in searching should be treated the same.	1 1 1 1	3
	(a) iii	(1) Hardware Any physical (tangible) objects in the computer. (2) Software Instruction given to the computer. (3) Firmware Program required for booting up a computer.	1 1 1	3

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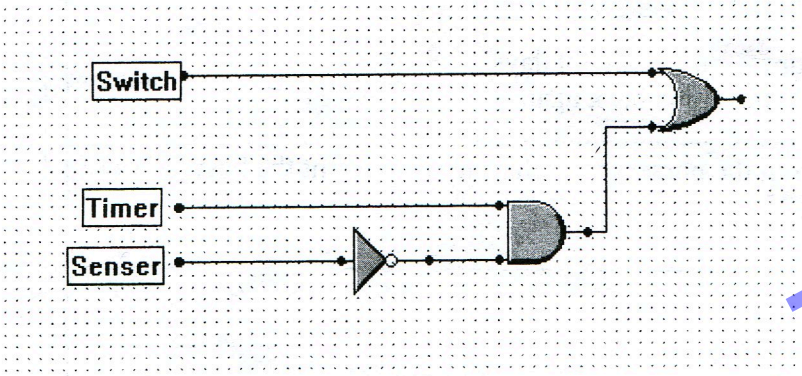
GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

<table>
<tr><th>Q. No</th><th>Section</th><th>Model Answer</th><th>Marks Break-down</th><th>Total Marks</th></tr>
<tr><td>1</td><td>(b) i</td><td> 
</td><td></td><td>3</td></tr>
<tr><td></td><td>(b) ii</td><td>
<table>
<tr><th>Manual/Switch (A)</th><th>Timer (B)</th><th>Sensor (C)</th><th>Not C</th><th>B and (Not C)</th><th>A or (B and (Not C))</th></tr>
<tr><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td></tr>
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</table>
</td><td></td><td>2</td></tr>
<tr><td></td><td>(b) iii</td><td>$D = \cancel{A + (B.\bar{C})}$ $A + B.\bar{C}$</td><td></td><td>2</td></tr>
<tr><td>2</td><td>(a)</td><td>The paragraph tag inserts a blank line
but the break tag does not insert a blank line</td><td>1
1</td><td>2</td></tr>
</table>

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
	(b)	Our evergreen school days will not come back again ..... From the nursery to high school we learnt the best	1 1 1	3
	(c)	<html> <head> <title> AgriSL </title> </head> <body> Agriculture in Sri Lanka ← Not essential. Sri Lanka is an agricultural country. Agriculture is one of the main sectors of the Sri Lankan economy. The main plantation crops are - tea - rubber - coconut Links to agricultural firms Jay Agro Technologies – with or without Lanka Agri Systems Pvt Ltd. </body> </html> html, head, body.	1 1 2 1 2 1 1 1	10

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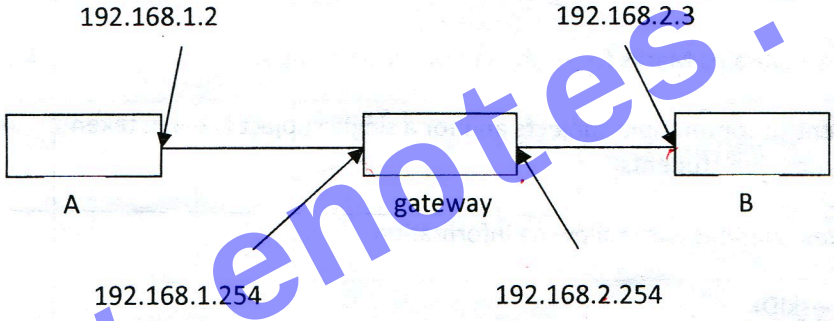
GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
3	(a) i	2^{16} = 8, 192 Bytes = 8 KB		1
	(a) ii	0 to (2^{16} -1)		1
	(a)iii	8x8/4 = 16 4 bits are sufficient	1 1	2
3	(b) i	 (Each IP address – 1 mark , Gateway – 1 mark)		5
	(c)	i. firewall A firewall is a computing devices that enforces a set of rules to prevent unauthorized access to an internal network while allowing legitimate communications to pass. ii. proxy server A proxy server is a computer system or an application that acts as an intermediary for requests from clients seeking resources from other servers. iii. honey pots A honeypot is a trap set to detect, deflect or counteract attempts at unauthorized use of information systems.	2 2 2	6

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
4	(a)	Relationship "Obtain Marks for"		2
	(b)			4
		Class – Has – Student : One-to-many One class has many student while one student belongs to a class	1 1	
		Student -- has – Desk: One-to-one A student has a desk while one desk is for a single student	1	
		House –has—Student: One-to-many A student should belong to a house while one or more student belong to the same house	1	
		Student—Obtains Marks for –Subject : Many-to-many A student sit for multiple subjects and for a single subject is being taken by one or more students	1	
	(c)	Tables or relations with following information		6
		Desk(DeskID) House(HouseID, Name) Class(ClassID) Student(StudentID, NIC, Name) Subject(SubjectID, Title) Marks(StudentID, SubjectID, Marks) Note: table 'Marks' and attribute 'Marks' can have any meaningful name Not drow table Subtam 2 Marks	1 1 1 1 1 1	
	(d)	Desk – DeskID House-HouseID Class-ClassID Student – StudentID Subject – SubjectID Marks – StudentID+SubjectID One of the above Note: table 'Marks' can have any meaningful name		1

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
	(e)	select Marks from Marks where StudentID='ST001' and SubjectID='AL001' Note: table 'Marks' and attribute 'Marks" can have any meaningful name	1+1	2
5	(a)	**Variable Name Data Type** datasummary Dictionary datakeys List Note –	 1 1	2
	(b)	# example.py Note - 1) What is essential is the comment symbol **#** followed by the program name **example.py.** 2) The comment character # can start at any position in the line. 3) Character spaces in between these two parts have no effect. 4) In addition to these two parts any other words may have being included anywhere in the comment line for elaboration, but will not get any additional marks.		2
	(c)	**Open a file** named **'input.txt'** to **read data and return a corresponding stream**. Opean a file named 'input.txt' for reading. **Return** a file stream(file object .....) Note -	 1 1	2

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Q. No	Section	Model Answer	Marks Break-down	Total Marks
	(d)	readdata() : • Read the data from the input file named 'input.txt'. • Update the tally of numbers in the **datasummary** dictionary together with the number. • Gather the **distinct** values in the input file in the **datakey** list. printdata() : • Write the data in the **datasummary** dictionary to the file named 'output.txt' • In the order of data in the **datakey** list processdata() : • **sort** the symbols in the datakey list • in the **ascending** order. Note –	2 1 1 1 1	6
	(e)	a-3 b-2 d-2 n-2 x-1 Note :- 1)Characters should be in **alphabetic order**. 2)The numbers should represent the tally of characters- **at least three values must be correct.** 3)Character and the tally should be separated by the character –		3

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GCE AL Examination, August 2012 (AL/2012/20/E-II) – Part B

(Model Answers)

Q. No	Section	Model Answer	Marks Break-down	Total Marks
6	(a)	Does not need to visit the book shop physically Payments could be carried out on-line 24 hours	3 3	6
	(b)	1. Does not have the facility to look at the book before it is selected 2. Needs to follow up to ensure the overall process has been completed 3. In-Secure payment mode 4. Needs credit card 5. Computer literacy **One of the above or any acceptable reason**		4
	(c)	1. By making e-books available on-line 2. By introducing a system to acknowledge each transaction 3. secure website with secure protocols 4. any acceptable alternative payment mechanism 5. Use help facility **One of the above related to the answer given in (b) or any acceptable method**		5

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