





UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Second Year Examination - Semester II - 2019

SCS2111-Laboratory II (R1)

TWO (2) HOURS

(Part B)

To be completed by the c	candidate	
Examination Index No:		
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Important Instructions to candidates:

- 1. The medium of instruction and question is English.
- 2. Write your answers in English.
- 3. If a page or a part of this question paper is not printed, please inform the supervisor immediately.
- 4. Note that questions appear on both sides of the paper. If a page is not printed, please inform the supervisor immediately.
- 5. Write your index number on each and every page of the Question paper.
- 6. This paper has **02** questions and **7** pages.
- 7. Answer **ALL** questions. All questions carry equal marks (25 marks).
- 8. This paper consists of two parts, Part A (Question No 1 and Question No 2) and Part B (Question No 3 and Question No 4) and submit separately.
- Any electronic device capable of storing and retrieving text including electronic dictionaries and mobile phones are **not allowed**.
- 10. Non-Programmable calculators are allowed.

For Examiner's use only						
Question No	Marks					
3						
4						
Total						

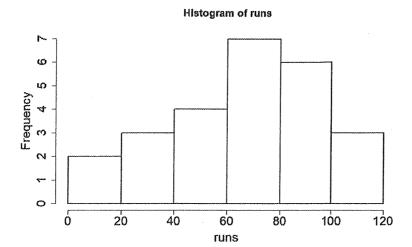
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Ques	stion 3			
(a)	A student has recorded tinternational cricket mate	he number ches which	of runs scored by his favourite cricketer in each	n inning at one-day
(i)	Identify the scale of meas	surement of	the variable "the number of runs scored".	[1 mark]
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(ii)	Specify whether the varia	ble "the nu	mber of runs scored" is discrete or continuous.	[1 mark]
	_	•	of the first 6 months of the year are as follows: 60, 35, 65, 78, 45, 38, 64, 73, 66, 78	a an al in 60 at the all the 10 at t
(iii)	Arrange the above data i	n a stem an	d leaf plot.	[3 marks]
		Stem	Leaf	
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(iv)	Find the median value of	the above of	data.	[2 marks]
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The student's favourite cricketer has played for 25 international cricket matches during the entire year. The histogram drawn for the number of runs recorded for the entire year is given below.



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(11)1												[1]	mark]	
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ii) Do you think the using the previous	he player has performed bet us calculations/findings.	ter in the latter 6 mor	nths of the year? Justify	your ansv [2 marks]
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-	ms) of the new born infants.  Ternative hypotheses to test the	ne students' interest. (I	₩	ed) [4 marks]
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95 percer 86.2340 sample es mean of >	nt confidence interval: 08 778.08592			

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What is the value of the test statistic?	[1 mark
	this was not they have the state that they had the state that they had they had they had they had they had the state they had
State the statistical conclusion of the test at 5% level of significance.	[3 mark
	ط لحمد المد الحمد حدم محمد الحمد

State the general conclusion arising from the above test.	
	[2 mark

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Ques	stion 4
(a)	The dataset "all.mammals.milk" contains a list of animals and the constituents of their milk. It contains two variables; percentage of water (water) and percentage of protein (protein) and a researcher is interested in knowing whether there is any linear relationship between these two variables.
(i)	Suggest a suitable graph which could reveal the above relationship. [2 marks]

(ii)	Suppose the graph drawn indicated that there is a negative linear relationship between the two variables. Suggest a measure which can quantify the strength of this relationship. [2 marks]
(iii)	The researcher next aims at predicting the percentage of protein in milk, when the percentage of water is given. What statistical technique should be used to obtain such predictions? [2 marks]

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The following R code and outputs were obtained for the above-mentioned analysis.

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) Using an	appropriate m	ieasure, com	ment on the	e goodness of	fit of the mod	del.	[3 mark
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AND DAY HER TOO MAD AND THAT AND	use are sen stay that are and has use has the sea our risk yes that the	and they are said and son that state and specifies you then paid the late and	is that then some first good that some first some first some	and who have good after then good every play good help sould help also dake have	gai yan bag ada bak bak ada ada ada ka bad bay ada ada bar ban bad ad	hay dige war man ayun haa man mah ayar dhin gish hair nish gish dige	aan waa kan dan han nas kee kee aan abu kan nee kee Adriche
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Clusters has	ne identified among the ammais:	Į i ma
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	process he followed, he reached the above number of clusters in tate whether he has used agglomerative method or divisive method.	the second st
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