



UNIVERSITY OF COLOMBO, SRI LANKA

FACULTY OF TECHNOLOGY

LEVEL I EXAMINATION IN TECHNOLOGY - SEMESTER II - 2019

FT1004 – COMPUTER APPLICATIONS

Duration: Two (02) hours

Answer **All questions** in PART A and answer **one question** from PART B

No. of pages: 14

Important Instructions to Candidates

- If a page or part of this question paper is not printed, please inform the supervisor immediately.
- Write all your answers in the spaces provided in this examination paper.
- Write your index number on all pages.
- Electronic devices capable of storing and retrieving text, including electronic dictionaries and mobile phones are not allowed.
- Non-programmable calculators are allowed.

Index No:

Question No.	Marks
1	
2	
3	
4	
5	
Total	

PART A

Answer all questions in PART A.

- Table 1 shows the grades obtained by five students for eight subjects in semester 1 and semester 2. Assume that Table 1 can be populated with data although its partially filled as shown below. If a student is absent for a subject, the GPA will not be calculated for that subject. Using Table 1, Table 2 and Table 3 you are asked to prepare a MS Excel table in the format given in Table 4. Answer the following questions in order to fill Table 4.

	A	B	C	D	E	F	G	H	I
1	Student	Semester 1				Semester 2			
2	Index	C101	B101	M101	P101	C102	B102	M103	P103
3	18500	A	B	C	ab	...	...	...	...
4	18501	B	ab	ab	B	A	C	B	C
5	18502	C	...	...	...	...	...	...	...
6	18503	C	A	C	B	B	B	C	A
7	18504	F	...	...	...	...	...	...	...

Table 1: Student Marks for Semesters

	J	K
1	Letter Grade	Point Value for Grade
2	A	4.0
3	B	3.0
4	C	2.0
5	D	1.0
6	F	0.0

Table 2: Letter Grades and the Point Value

	M	N
1	Subject Code	Credit Value
2	C101	1
3	C102	3
4	B101	1
5	B102	1
6	M101	2
7	M103	1
8	P101	3
9	P103	2

Table 3: Credit value for subjects

	A	B	C	D	E	F	G	H
12	Student Index	Subjects Taken		Independent Study	GPA		Cumulative GPA	Pass/ Fail
13		Semester 1	Semester 2		Semester 1	Semester 2		
14	18500	C101, B101, M101		Submitted				
15	18501	C101, P101	C102, B102, M103, P103	Submitted				
16	18502	.....		Not Submitted				
17	18503	C101, B101, M101, P101	C102, B102, M103, P103	Not Submitted		3.14		
18	18504	.....		Submitted				

Table 4: Yearly Performance of the Students

- a. Write a formula in MS Excel to calculate the GPA of semester 1 for the student with the index number '18503'. (4 marks)

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$$GPA = \frac{\sum \text{credits per course} * \text{Point Value for Grade}}{\sum \text{credits}}$$

$$\sum \text{credits} = C1 + C2 + C3 + \dots + Cn$$

$$\sum \text{credits per course} * \text{Point Value for Grade} = C1xP1 + C2xP2 + C3xP3 + \dots + CnPn$$

$C1, C2, C3, \dots, Cn$ = Credit values for subjects in a semester

$P1, P2, P3, \dots, Pn$ = Point value for letter grades

- b. Provide the MS Excel formula to calculate the cumulative GPA for the year based on the individual GPA of the two semesters. Assume that the result obtained from (a) was stored in the cell E17 in Table 4. (4 marks)

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- c. Write a MS Excel formula to find how many students have submitted the Independent Study. (4 marks)

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- d. If a student has a cumulative GPA of 2.0 at the end of the year **and** has submitted the Independent Study, he/she shall pass to the next year. Write a MS Excel formula to obtain whether the student '18503' has met both these criteria. If both the conditions are satisfied, display a message in column "Pass/ Fail" as "Pass", if not display as "Fail". (7 marks)

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- e. Write MS Excel formulas to find the maximum and the average GPA of the students at the end of the year. (6 marks)

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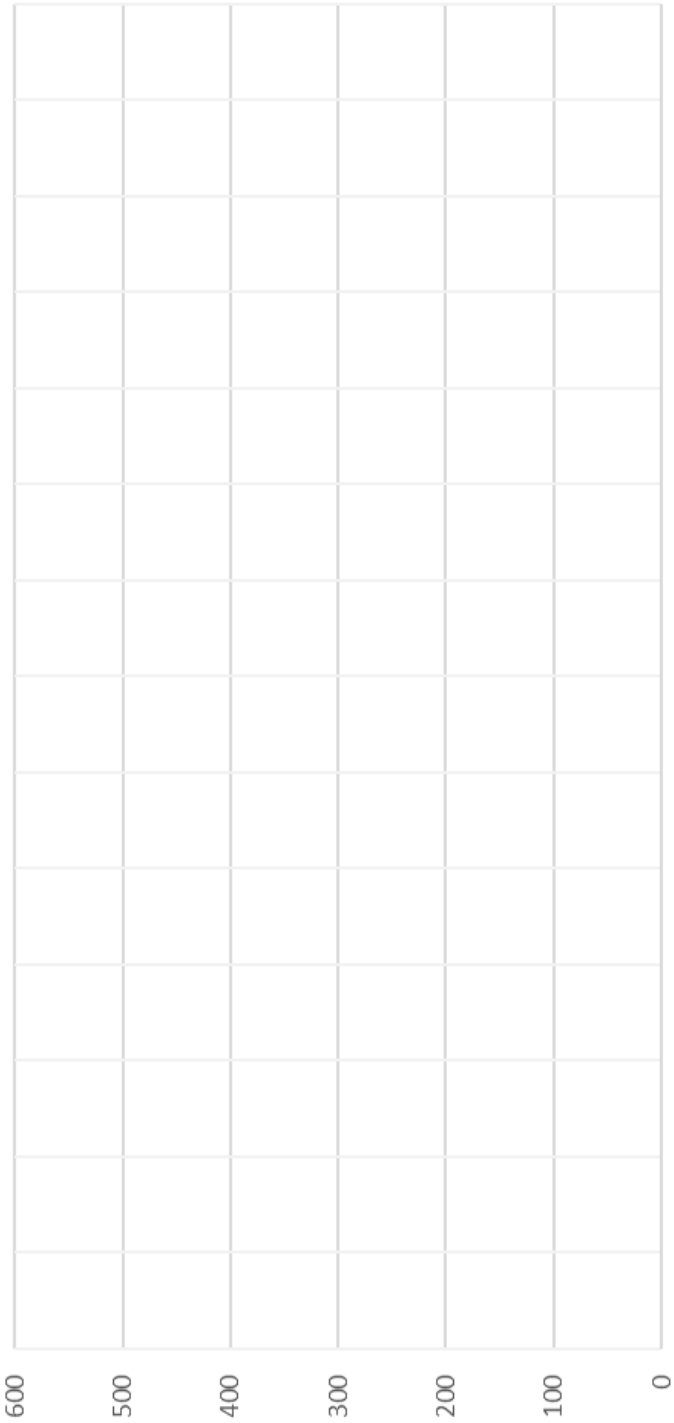
2. The table below shows the worldwide sales of a selected technology company from year 2011 to 2013. The company manufactures smartphones, tablets and personal computers. The sales of the products are indicated in millions by the quarters of the year.

Year	Smartphone	Tablet	PC
Q1 2011	187	47	38
Q2 2011	203	92	39
Q3 2011	171	111	49
Q4 2011	37	154	52
Q1 2012	351	118	4
Q2 2012	26	17	4
Q3 2012	269	14	49
Q4 2012	478	229	4
Q1 2013	374	195	4
Q2 2013	312	146	38
Q3 2013	338	14	46
Q4 2013	51	26	48

- a. What chart type is most suitable to illustrate the details above? The chart should indicate data only for the products smartphone and tablet for the year 2011 and 2012 including all the quarters. Add all the suitable chart elements. Use the graph paper provided in the next page. (6 marks)

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Index No.....



- b. Interpret the results of the above chart in (a) by comparing and contrasting (8 marks)
between the years and the quarters.

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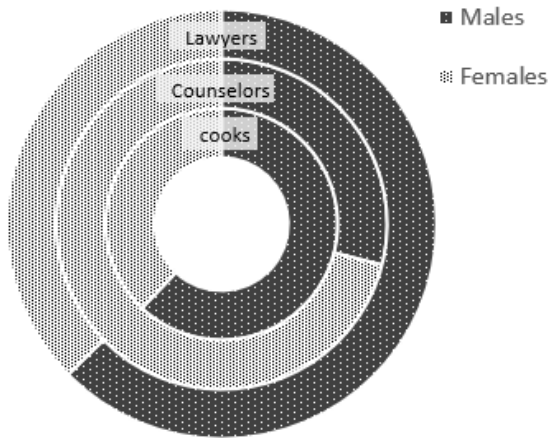
- c. What can you say about the sales of year 2011 of both the smartphone and the (2 marks)
tablet?

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- d. The doughnut chart below indicates three different professions (Cooks, Counselors and Lawyers) in US and the ratio of employees' gender wise.



- i. Interpret the chart specifying which gender type is skillful in each profession. (6 marks)
You may provide approximate values for ratios in your explanation.


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ii. What is the importance of using a doughnut chart compared to a pie chart? (3 marks)

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3. a. Name four (04) presentation views found in MS PowerPoint and write short notes on two of them. (8 marks)

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b. Write the five (05) options of the Character Spacing  tool found in MS PowerPoint. (5 marks)

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- c. What is superscript and subscript used for? Out of the following software (MS Word, MS Excel, MS PowerPoint) of the MS Office package which one has the superscript and subscript option? (3 marks)

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- d. What is the purpose of using hyperlinks in a presentation? Mention the two types of hyperlinks in MS PowerPoint. (3 marks)

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- e. A presentation can be printed as a handout. MS PowerPoint has multiple options to print a handout as 1 Slide, 2 Slides, 3 Slides, 4 Slides Horizontal, 4 Slides Vertical, and so on. Out of these, using a diagram explain the order of the slides in a presentation will be laid out for printing if the option was selected as “6 Slides Vertical” in the portrait orientation (2 marks)

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- f. Write four (04) guidelines to follow when inserting media and animations into a presentation. (4 marks)

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PART B

Answer only one (01) question in PART B.

4. a. Explain the use of Mail Merge in MS Word. (4 marks)

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- b. Write a short note on the use of watermarks in MS word. (4 marks)

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- c. In which part of a page are footnotes added? What is the purpose of adding footnotes? (3 marks)

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d. Listed below are some tools found in MS Word. Explain the functionality of (8 marks) them.

i. 	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
ii. 	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
iii. 	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
iv. 	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

- e. Identify the formatting options applied to transform the word document in Figure 1 to the document which is in Figure 2. (6 marks)

Natural Disasters

Natural disaster is any inevitable event that affects the environment. It not only results in mass loss of human lives but also adversely affect the economy of the region. Natural disasters have long history of occurrence which cannot be predicted, nor can it be avoided.

Figure 1

Natural Disasters

Natural disaster is any inevitable event that affects the environment. It not only results in mass loss of human lives but also adversely	affect the economy of the region. <i>Natural disasters</i> have long history of occurrence which cannot be predicted, nor can it be avoided.
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Figure 2

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5. a. What is the difference between batch processing and multi programming? (6 marks)

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b. Describe three (03) social issues of using computers in the modern era. (3 marks)

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c. Write five (05) tasks of an Application Software. (5 marks)

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d. List down four (04) functionalities of an Operating System. (4 marks)

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