

Computers & Information Faculty
Total Assessment Marks:60



Tanta University

Faculty of Engineering

Course Title	Statistics and Probability (1)	Academic Year 2019/2020 First Semester Exam	Course Code	ST 121
Year	First			
Date	5 / 1 / 2020	No. of Pages (2)	Allowed time	2 hrs.

Question Number (1)

(36 Points)

- a) The following data represent the length of live, in years, of 50 batteries manufactured by a certain company:

4.2	1.0	2.1	3.2	3.6	1.9	3.8	2.1	1.8	1.2
1.1	0.0	3.6	4.2	0.8	0.4	1.7	1.1	4.2	2.2
1.5	0.8	4.7	2.5	2.5	3.7	2.0	1.2	2.4	1.5
4.7	3.9	2.9	1.9	2.0	3.8	2.4	4.0	3.0	1.6
1.7	3.6	1.3	3.3	2.0	0.6	4.0	3.0	2.0	1.0

Construct:

- A frequency distribution,
- A histogram,
- A frequency Polygon.

(12 Points)

- b) The probability that a randomly chosen student passes at exam is 0.70. if 5 students are sampled at random, *find*:

- The probability that exactly 4 of them pass the course,
- The probability that 3 or more of students pass the course,
- The probability that 2 of student for max pass the course.

(12 points)

- c) A randomly selected college students were asked to state the number of hours they slept last night. The resulting data are: 5, 6, 6, 8, 7, 7, 9, 5, 4, 8, 11, 6, 7, 8, and 7. Find:



The mean – the Mode – the Midrange – the Range – the Variance – the Standard Deviation – the Coefficient of Variation.

(12 points)

Question Number (2)

(24 Points)

a) If A and B are two events since $P(A/B) = 1/4$ and $P(B/A) = 1/2$ and $P(B) = 1/4$, discuss, are these sentences are false or true and why:

- A and B are two mutually exclusive events,
- A and B are two independent events,
- $P(A \cup B) = 1/2$.

(12 points)

b) A class in Statistics has 25 students, 15 males and 10 females. A committee of 5 students is needed to be appointed to handle the class decisions, what is the probability that a committee has:

- 1- No female,
- 2- females more than mails,
- 2- at least one mails and one females.

(12 points)

End of questions.....

With the best wishes

Dr. Sobhy Youne

Answer the Following Questions:

I-Read the following passage and answer the questions:

[A] Technology has not only changed the workplace; it has changed the place where we work. Increasingly more of us are working from home. Technology allows people to work from almost anywhere. Millions of people work outside of the traditional office: at home, at a cafe, at a park, and even in their cars! They are telecommuting - working away from the office (also referred to as teleworking).

[B] There are many benefits to telecommuting. For the employee, telecommuting saves precious time. People don't have to waste time sitting in rush hour traffic, crawling down the highway at five miles per hour. Telecommuters also save money they don't have to spend money on gas or public transportation. In addition, they have more flexibility about when to work. This allows them to balance work and family life better. All of these benefits increase job satisfaction for telecommuters. Telecommuting is also good for the environment. Millions of workers are no longer jumping in a car, burning gas, and contributing to air pollution. Finally, the company benefits: telecommuting saves companies money because they do not have to provide office space and parking to all their employees.

[C] Do these benefits point to the office becoming obsolete, or nonexistent? No! Not everyone agrees that telecommuting will bring happiness to the workplace or to workers. Some people are not happy about telecommuting. For example, the colleagues - co-workers of telecommuters - may feel that their telecommuting colleagues don't work as hard as they do. There are also employees who don't want to telecommute because they fear that they will be less known and have less influence if they work virtually away from the office. Another group concerned about telecommuting is employers. Some employers worry that knowledge among employees will not be shared as easily if they are not working together physically. And there's also concern that private company information might get out to the public.

[D] It looks like telecommuting won't replace the office, but it is here to stay. To end on a personal note, you can be sure that I'll keep writing from my home office as long as I can!

(A) State whether the following sentences are True or False

- 1- Technology has merely changed the workplace.
- 2- Telecommuting means working from the office.
- 3- Telecommuting shows inflexibility as regards when to work.
- 4- The benefits of telecommuting point to the office becoming obsolete.
- 5- There is unanimity about the benefits of telecommuting.
- 6- The main idea of this passage is that telecommuting is better than working from the office.
- 7- The writer confirms that telecommuting will replace the office.
- 8- Telecommuting wastes both time and money.

B) Give synonyms of the underlined words.

II-Rewrite the Following Sentences Correcting the Mistakes:

- 1- The indicted police chief submitted his resignation the mayor accepted it.
- 2- Just between you and I, the Russian housekeeper is a good cook.
- 3-Of the two sisters, Sarah is the tallest.
- 4-There is only two good reasons for missing the class.
- 5-She has just found a work as an engineer.
- 6-Some people suffer from doing too hard work.
- 7- Neither Betty nor her neighbors is hosting the party.
- 8-Colonel Jack led Jim and Terry to the campsite themselves.
- 9-Mary lost the competition, she couldn't solve the question.
- 10-Yachting attracts much of the world's famous people.
- 11-Anita looked quite worry when she left the police station.
- 12-I cannot work in so much stressful conditions.
- 13-I can't help but wonder whether or not he is not unwelcome.
- 14-I prefer to make presents rather than buying them.
- 15- "Dispronounce" is the negative form of "pronounce".

III-Translate the following passage into Arabic:


- 1- Since our earliest days, humans have used tools to improve their lives. At first, these tools were simple and handheld, such as knives or hammers, and they were used to perform basic tasks that were necessary for survival. Over time, the tools and the technology for using them became more complicated. First they were mechanical, then electrical, and finally electronic. One of the most recent developments in tools is the robot. The latest robots can be taught to perform complex tasks that require an almost humanlike ability to process information and make decisions. Outside of industry, robots have also been developed and put to use by governments and scientists in situations where humans might be in danger. For example, they can be sent in to investigate an unexploded bomb or an accident at a nuclear power plant. Researchers also use robots to collect samples of hot rocks or gases in active volcanoes. In space exploration, robots have performed many key tasks where humans could not be present, such as on the surface of Mars.
- 2- Spyware is software that hides-somewhere on your computer. It collects information about what you do on the Internet and passes this information to companies without your permission. If you shop on the Internet and use your credit card, you should know that some spyware can record this information!

IV-Translate the following passages into English:

إن ما حدث في الثلاثين سنة الأخيرة كان أسرع وأعمق مما جرى في القرن التاسع عشر وبدايات القرن العشرين، فالثورة التقنية التي بدأت في نهايات القرن الماضي هي التي باتت تحدد ملامح القرن الحادي والعشرين حيث الاعتماد على العقل البشري ونظم المعلومات والاتصال والهندسة الحيوية والذكاء الصناعي ومظاهر السرعة والمنافسة ومعايير الإتيقان في نظام عولمة الاقتصاد والخدمات والبيئة والإنتاج والتعليم وغيرها، أي بمعنى آخر أن ماتسعي له العولمة بحكم مفاهيمها هو وضع العالم تحت سيطرتها في خبزه وحياته وشنون معيشتة، فنشاطها الإنتاجي بدأ واضحاً عبر مؤسسات عملاقة هي الشركات المتعددة الجنسية

رغم الانجازات التي حققتها التكنولوجيا المطورة في خدمة البشرية إلا ان لها أضرار اجتماعية كبيرة فهي من أكبر الاسباب في التفكك الاجتماعي والاسري الذي ماكان يعرف في مجتمعاتنا سابقا

Best Wishes, Dr. Waleed Samir

	TANTA UNIVERSITY		
	FACULTY OF COMPUTERS AND INFORMATICS		
	DEPARTMENT OF COMPUTER SCIENCE		
	EXAMINATION FOR (LEVEL ONE)		
	COURSE : FUNDAMENTAL OF COMPUTER SCIENCE	COURSE CODE: CS111	
DATE: 2-1-2020	TOTAL ASSESSMENT MARKS: 60		TIME ALLOWED: 2HOURS

Answer the Following Questions:

1-) Design an algorithm and flowchart to: (20 marks)

- Read a positive integer number n then print is it prime or not.
- Solve an equation of second degree.
- Read a positive integer number then print, count, calculate the sum of all odd numbers between 0 and n .
- Read the temperature degree in C° then print it F° , K° .

$$(\text{note: } K^{\circ} = C^{\circ} + 273.15 \text{ \&\& } C^{\circ} = (F^{\circ} - 32) / 1.8)$$

2-) Complete the following: (20 marks)

- $(4570)_8 = (\dots\dots)_2$
- $(B95D)_{16} = (\dots\dots)_2$
- $(6584)_{10} = (\dots\dots)_2$
- $(001010111)_2 = (\dots\dots)_{10} = (\dots\dots)_8$

3-) Explain: (20 marks)

- Operating system.
- Computer generations and types.
- Knowledge, data, information.
- Algorithm and flowchart.

Happy new year
With my best wishes
Dr. Osama Ghoneim



TANTA UNIVERSITY
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DEPARTMENT OF COMPUTER SCIENCE
EXAMINATION FOR (LEVEL ONE)

COURSE : TECHNICAL REPORT WRITING

COURSE CODE: MA112

DATE: 18-1-2020

TOTAL ASSESSMENT MARKS: 60

TIME ALLOWED: 2 HOURS

Answer the Following Questions:

1-) Define mathematical induction and then use it to prove the following:

- i. $5^n - 2^n$ is divisible by 3.
- ii. $2 + 4 + 6 + \dots + 2n = n(n + 1)$

2-) prove that :

- a-) $[p \wedge (\neg p \vee q)] [q \wedge \neg(p \wedge q)] \equiv q$
- b-) $[(p \vee \neg q) \wedge (\neg q \vee \neg p)] \vee q \equiv T$

3-) prove that :

- a-) $[A \vee \neg(B \wedge C)] [(A \leftrightarrow C) \vee B]$
- b-) $A \cap (B - C) \equiv (A \cap B) - (A \cap C)$
- c-) If $A \cap B \equiv \emptyset$ prove that: $C \cap (A \cup B') \equiv C$

4-) If $F(x) = \sqrt{x^2 - 4}$ and $G(x) = \frac{1}{1+x^2}$ find the domain and range for $(F \circ G)(x)$

With my best wishes
Dr. Osama Ghoneim

جامعة طنطا
كلية الحاسبات والمعلومات
امتحان فرق الليسانس - دور يناير ٢٠٢٠
المستوى الأول
المادة/ حقوق الإنسان
الزمن: ساعتان
التاريخ : ٢٠٢٠/١/٨

أجب عن سؤالين فقط مما يأتي:

السؤال الأول: تكلم عن حقوق المرأة في قانون التأمين الاجتماعي رقم ٧٩

لسنة ١٩٧٥؟

السؤال الثاني: تكلم عن حقوق المرأة في قانون العمل رقم ١٢ لسنة

٢٠٠٣؟

السؤال الثالث: اهتم قانون العقوبات بحماية الحق في الحياة والحق في

حرمة الحياة الخاصة والحق في سلامة الجسم. اشرح ذلك؟

مع تمنياتنا بالتوفيق والنجاح،،،

Answer the Following Questions:

1- Determine if the system is consistent, or inconsistent using slope:

$$\begin{aligned} 2x - 5y &= 6 \\ -4x + 10y &= -1 \end{aligned}$$

2- Use Cramer's Rule to solve this system equations:

$$\begin{aligned} 3x - y + z &= -5 \\ -x + y &= 1 \\ x + z &= -4 \end{aligned}$$

3- If $f(x) = x^3$ find the slope at $x=3$ using the formula:

$$\lim_{x \rightarrow 0} \left(\frac{f(x + \Delta x) - f(x)}{\Delta x} \right)$$

4- Find the critical values where the function is: $f(x) = x^3 - 3x^2 + 5$ is concave up or concave down.


5- The annual labor and automated equipment cost (in millions of dollars) for producing TV sets is given by $C(x, y) = 2x^2 + 2xy + 3y^2 - 16x - 18y + 54$,

where x is the amount spent per year on labor, and y is the amount spent per year on automated equipment (both in millions of dollars). Minimize the cost.

6- Maximize $f(x, y) = 25 - x^2 - y^2$, subject to $2x + y = 10$.

7- Find $\int_1^2 \frac{1}{x} dx$

😊 Good Luck 😊

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	EXAMINATION FOR (LEVEL ONE)		
	COURSE : TECHNICAL REPORT WRITING	COURSE CODE: HU111	
DATE: 16-1-2020	TOTAL ASSESSMENT MARKS: 60		TIME ALLOWED: 2HOURS

Answer the Following Questions:

- 1-) What are the report writing style?
- 2-) What are key steps to write a technical report?
- 3-) Compare between technical and creative writing?
- 4-) What are the characteristics of effective technical writing?
- 5-) How to write synopsis?
- 6-) How to organize information in writing technical report?

With my best wishes
Dr. Osama Ghoneim