جامعة الملك سعود الاختبار الفصلي الأول

كلية العلوم الفصل الدراسي الثاني 1437/1438

قسم الإحصاء وبحوث العمليات مقرر 215 احص

الأثنين / /1438 هـ الساعة :12– 1

نمـــــــــوذج

(A)

اسم الطالبة : -----------------------------------------------------------------------------------

رقم الطالبة : -----------------------------------------------------------------------------------

رقم التسلسل :----------------------------------------------------------------------------------

أستاذة المقرر:----------------------------------------------------------------------------------

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ملاحظات :

1. سيتم تصحيح ورقة الإجابة فقط ( التصحيح الآلي ) فقط ولن يتم النظر إلى ورقة الأسئلة من الداخل.
2. عدد أوراق الامتحان هو 4 صفحات مع الغلاف الخارجي.
3. يلزمك كتابة أسمك على كلا الورقتين (الأسئلة والإجابة).

دعواتنا لكم بالتوفيق

Q1: Choose the right answer for the following

1. Which of the following is a probability mass function

|  |  |
| --- | --- |
| a) | b) |
| c) | d) |

1. If , find the standard deviation of X “”

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. If then

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. Which of the following **cannot** be a value for a **variance**

|  |  |  |  |
| --- | --- | --- | --- |
| a) 43331245 | b) | c) | d) |

1. If A and B are disjoint events where and , then

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. Let the continuous r.v X has . Then the Moment Generating Function

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

Q2: Consider the experiment of draw a card from a box containing 8 cards numbered from 1 to 8. Let

A: the event of having a card with number 10.

B: The event of having a card with even number.

C: The event of having a card with number less than 3. Then



|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) 0 | d) 0.125 |

1. is

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) 0.125 |

1. , and . Then B and C are

|  |  |  |  |
| --- | --- | --- | --- |
| a) Disjoint | b) Independent | c) Complements of each other | d) Impossible |

1. This experiment has

|  |  |
| --- | --- |
| a) Two outcomes. | b) Equally likely outcomes. |
| c) Zero mean. | d) Negative mean. |

Q3: Consider the following discrete distribution with mean .

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| X | 1 | 3 | 5 | 7 | 9 |
| f(x) |  |  |  | y | z |

1. Find y and z, respectively.

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

Q4: Consider the following probability density function

.

1. Find the cumulative distribution function at ;

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. Find

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

Q5: Consider the following discrete distribution

.

1. Find the cumulative distribution function

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. Find

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. The Moment Generating Function (MGF) for the discrete r.v X is

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

Q6: If

1. Find the mean .

|  |  |  |  |
| --- | --- | --- | --- |
| a) 12 | b) 4 | c) 6 | d) 2 |

1. The second **central** moment is

|  |  |  |  |
| --- | --- | --- | --- |
| a) 12 | b) 38 | c) 6 | d) 2 |

1. Find where .

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

1. Let and are two independent random variables where . Then

|  |  |  |  |
| --- | --- | --- | --- |
| a) | b) | c) | d) |

انتهت الأسئلة