**جامعة الملك سعود الاختبار الأول**

**كلية العلوم الفصل الأول 1431 / 1432**

**قسم الإحصاء وبحوث العمليات مقرر 324 احص**

**الأحد 23/ 11 / 1431 هـ الوقت 3 – 4:30**

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

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

**رقم الشعبة : ----------------------------- رقم التسلسل : ----------------------------------------------**

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Question*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Question*** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** |
| ***Answer*** |  |  |  |  |  |  |  |  |  |  |

***Good Luck***

Two different white cars, 5 red and three yellow ,how many different arrangement are possible if

1- The cars arranged in a line

(a) 3628800 (b) 362880 (c) 1440 (d) 2520 (e)none of these

2- The cars arranged in a circle

(a) 3628800 (b) 362880 (c) 1440 (d) 2520 (e)none of these

(حسب اللون) 3- Cars of the same color are identical

(a) 3628800 (b) 362880 (c) 1440 (d) 2520 (e)none of these

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Suppose that a biased coin tossed two times where the head is three times to occur as a tail ,then

4-The probability of getting at most one head is

(a) 0.4375 (b) 0.875 (c) 0.9375 (d) 0.375 (e)none of these

In a population of 160 doctors and Nurses working in a certain hospital ,Let

D = "is a doctor" and M =" Smoke" .We have the following (incomplete) table

|  |  |  |  |
| --- | --- | --- | --- |
| Total | Nurse(Dc) | Doctor (D) |  |
| 70 |  | 23 | Smoke(M) |
|  | 64 |  | Not Smoke(Mc) |
| 160 |  |  | Total |

If we randomly choose one employee in this hospital ,find that

5- The probability that the employee is a doctor

(a) 0.294 (b) 0.8375 (c) 0. 3063 (d) 0.1625 (e)none of these

6- The probability that the employee is a nurse or smoke is

(a) 0.8375 (b) 0.1438 (c) 0.6938 (d) 0.7063 (e)none of these

7- The probability that the employee is not smoke doctor is

(a)0.5625 (b) 0.1625 (c) 0.5444 (d) 0.7243 (e) none of these

8- If the employee is a nurse , what probability he smoke is

(a)0.2543 (b) 0.6712 (c) 0.2938 (d) 0.4234 (e) none of these

Three flowers are drawn at the same time from a bag containing 6 red flowers , 4 yellow flowers and 3 white flowers . All the flowers are of the same kind, then

9- The probability of selecting 3 different color flowers is

(a) 0.0874 (b) 0.2083 (c) 0.2517 (d) 0.4720 (e)none of these

10- The probability that the flowers are of the same color is

(a) 0.0874 (b) 0.2083 (c) 0.2517 (d) 0.4720 (e)none of these

11- The probability that one of the flowers are white is

(a) 0.0874 (b) 0.2083 (c) 0.2517 (d) 0.4720 (e)none of these

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How many five digit number can be formed from numbers 0,1,2,3,4,5,6,7,8,9 if the first number is even and the last is number 1 ( الرقم الأول (الاحاد) عدد زوجي والأخير رقم 1)

12- If the number can be used only once(التكرار غير مسموح )

(a) 500 (b) 336 (c) 1680 (d) 5000 (e) none of these

The following table represent the probability distribution for discrete random variable Y

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3 | 1 | 0 | -1 | Y |
| 0.2 | 0.35 | 0.3 | 0.25 | .f(y) |

13- P( Y< 1) =

(a) 0.2 (b) 0.55 (c) 0.8 (d) 0.65 (e) none of these

14- P( -1 < Y ≤ 1) =

(a) 0.2 (b) 0.55 (c) 0.8 (d) 0.65 (e) none of these

15-F( 0) =

(a) 0.2 (b) 0.55 (c) 0.8 (d) 0.65 (e) none of these

16- P( Y > 0) =

(a) 0.2 (b) 0.55 (c) 0.8 (d) 0.65 (e) none of these

For two disjoint events C , D. If P( C )= 0.5 , P(D) = 0.3. Then

17- P( C U D ) =

(a) 0 (b) 0.15 (c) 0.8 (d) 0.65 (e) none of these

18- P( D/ C) =

(a) 0 (b) 0.15 (c) 0.8 (d) 0.65 (e) none of these

\* Consider a continuous random variable Z with the following probability density function

f(z)=

19- The value of K is

(a) 0.33 (b) 0.11 (c) 9 (d) 3 (e) none of these

20- In how many way can a teacher give his 10 students three different gifts to the first second and third student finish solving the problem

(a) 720 (b) 120 (c) 10 (d) 6 (e) none of these

End of Question