MCOM231 - Statistical Techniques

P. Pages : 3 **GUG/S/18/3041**

Time : Three Hours ‖‖‖‖‖‖‖‖‖‖ *0235* Max. Marks : 80

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Notes : 1. All questions are carry equal marks.

2. Solve **any five** questions minimum **one** question should be from each section-A.

SECTION – A (Theory)

1. What is meant by statistical quality control? Explain the characteristics and types of quality control. **16**

2. What are the components of time series? Explain the moving average method of estimating trend values. **16**

3. Explain different types of decision-making situations. **16**

SECTION – B (Problems)

4. From the table given below calculate the co-efficient of correlation between the ages of husbands and wives. **16**

	Age of Husbands (y)					
Age of wives (x)	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	Total
15 – 25	5	9	3	-	-	17
25 – 35	-	10	25	2	-	37
35 – 45	-	1	12	2	-	15
45 – 55	-	-	4	16	5	25
55 – 65	-	-	-	4	2	06
Total	5	20	44	24	07	100

5. A survey was conducted in respect of Marital status and success in examination out of 2000 person who appeared for an Examination 80% of them were Boys and rest were Girl. Among 300 married Boys 140 were successful. 1100 Boys were successful among unmarried Boys. In respect of 100 married Girls 40 were successful 200 unmarried girls were successful. **16**

　　　Construct two separate Nine-square Table and find out coefficient of association to discuss the association between marital status and passing of examination.

6. Set a table of analysis of variance for the yield of three straign of wheat planted in randomly blocks. **16**

	Straigns				
A	20	21	23	16	20
B	18	20	17	25	25
C	25	28	22	28	32

5% value of F, all the given number and degree of freedom is 3.88.

7. Among 64 off spring of a certain cross between guinea pigs 34 where red, 10 were black and 20 were white. According to the genetic model these number should be in the ratio 9:3:4. are the data consistent with the model at the 5% level. **16**

　　　You are given that the value of x^2 with its probability of 0.05 being exceeded is 5.99 for $V = 2$ and 3.84 for $V = 1$.

8. To find out the mean weight of girls student two independent sample of 100 each are taken which reveal no significant difference between the mean for the first sample the S. D. is 2.5 c.m. While for the second it is 3.5cm. Test the significance of the difference between these two measures taking S. D. of the universe to be 2.85 cms. **16**

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सूचना :- 1. सर्व प्रश्नांना समान गुण आहेत.

2. **कोणतेही पाच** प्रश्न सोडवा, प्रत्येक विभागातून कमितकमी **एक** प्रश्न सोडविणे आवश्यक आहे.

विभाग 'अ'

1. सांख्यिकीय गुण नियंत्रणाची व्याख्या करा त्याची लक्षणे आणि प्रकारावर चर्चा करा.   **16**

2. कालमालेचे घटक कोणते आहेत? प्रवृत्ती मुल्याचे आगणन करण्याची बदलती सरासरी पध्दती स्पष्ट करा.   **16**

3. निर्णय परिस्थितीच्या विविध प्रकाराचे विस्तृत विवेचन करा.   **16**

विभाग 'ब'

इंग्रजी माध्यमानुसार.

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सूचनाएँ :- 1. सभी प्रश्नों को समान गुण है।
2. **कोईभी पाँच** प्रश्न हल किजिए। हर विभाग मे से कम से कम एक प्रश्न हल करना अनिवार्य है ।

विभाग 'अ'

1. सांख्यिकीय गुण नियंत्रण का अर्थ क्या है? सांख्यिकीय गुण नियंत्रण की विशेषताएँ एवंम प्रकार स्पष्ट किजिये।   **16**

2. कालमाला के कारक कौनसे हैं? प्रवृत्ती मूल्य का आगणन करने हेतू परिवर्तनिय औसत पध्दती स्पष्ट किजिये।   **16**

3. निर्णय परिस्थितीयोके विविध प्रकारोंका विस्तृत विवेचन किजिये।   **16**

विभाग 'ब'

अंग्रेजी माध्यम के अनुसार।

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