

M.Com. (NEP Pattern) Semester-III
CMPG03STM001 - Statistical Techniques

P. Pages : 4

Time : Three Hours



GUG/S/25/15818

Max. Marks : 80

- Notes : 1. All questions are compulsory.
2. All question carry equal marks.

1. a) What are the types of Decision-making situations. **16**

OR

- b) Following figures relates to the production in pounds of three varieties of wheat shown in 9 plots. **16**

Type A = 14 16

Type B = 14 13 15

Type C = 18 16 19 19

Is where any significant difference in the production of three varieties the table value of $f=5.14$.

2. a) Two treatment A and B were tried to control a certain type of plant disease. The following result were obtained. **16**

A = 200 plants were examined and 40 were found infected

B = 200 plants were examined and 10 found infected

If treatment B superior to treatments A. Table value of X^2 for one degree of freedom at 5% level of significance is 3.841.

OR

- b) Two investigator draw samples from the same town in order to estimate the number of person following in the income group poorer, middle class. Well to do their result are as follows. **16**

Investigator	Income Group			Total
	poorer	Middle class	Well to do	
A	140	100	15	255
B	140	50	20	210
Total	280	150	35	465

Show that the sampling technique of at least one of the investigator is suspect. The table value of X^2 for 2 degree of freedom at 5%. Level of significance is 3.841.

3. a) From the following data, estimate the no. of person in the income group of Rs. 20-25. **16**
- | | | | | | |
|----------------|----|----|-----|-----|-----|
| Income in Rs. | 10 | 20 | 30 | 40 | 50 |
| No. of persons | 20 | 45 | 115 | 210 | 325 |

OR

- b) Two laboratories carry out independent estimates of the fat content in ICE - cream made by a certain firm A Sample is taken from each batch and separated halved sent to the two laboratories. They obtained following results.
Percentage of fat content in Ice-Cream **16**

Batch No. =	1	2	3	4	5	6	7	8	9	10
Lab A =	7	8	7	3	8	6	9	4	7	8
Lab B =	9	8	8	4	7	7	9	6	6	6

Assuming that the two Laboratories carry out the same test in the reliable T. V. of 't' at 9 degree of freedom is 2.26.

4. a) From figures given in the following table compare the association between Literacy and unemployment is X and Y area. **16**

Particular	X(in lakhs)	Y(in lakhs)
Total Adults male	25	200
Literate male	10	40
Unemployment male	5	12
Literae and unemployment male	3	4

OR

- b) A Bag contain 7 white and 5 Black Baus, a single, draw of 4 Baus is made what could be the probability getting 4 white, 3 white, 2 white and 1 white and zero white. **16**

5. Write short note.

- i) Explain the different types of decision making situation. **4**
- ii) Explain briefly the techniques of statistical quality control. **4**
- iii) Explain the types of sampling. **4**
- iv) Write a short note on Association of Attributes. **4**

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- सुचना :- 1. सर्व प्रश्न सोडविणे आवश्यक आहे.
2. सर्व प्रश्नांना समान गुण आहे.

- | | | | |
|----|------|--|----|
| 1. | a) | निर्णय निर्माण संदर्भाच्या प्रकारांची चर्चा करा. | 16 |
| | | किंवा | |
| | b) | इंग्रजी माध्यमानुसार | |
| 2. | a) | इंग्रजी माध्यमानुसार | 16 |
| | | किंवा | |
| | b) | इंग्रजी माध्यमानुसार | |
| 3. | a) | इंग्रजी माध्यमानुसार | 16 |
| | | किंवा | |
| | b) | इंग्रजी माध्यमानुसार | |
| 4. | a) | इंग्रजी माध्यमानुसार | 16 |
| | | किंवा | |
| | b) | इंग्रजी माध्यमानुसार | |
| 5. | | थोडक्यात उत्तरे द्या. | |
| | i) | निर्णय निर्माण संदर्भाचे विविध प्रकार थोडक्यात स्पष्ट करा. | 4 |
| | ii) | सांख्यिकीय गुणवत्ता नियंत्रणाचे तंत्र थोडक्यात स्पष्ट करा. | 4 |
| | iii) | नमुन्याचे (sampling) चे प्रकार स्पष्ट करा. | 4 |
| | iv) | गुण संघाच्या सह संबंधाचे संक्षिप्त माहिती द्या. | 4 |

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- सुचनाएँ :- 1. सभी प्रश्न अनिवार्य हैं।
2. सभी प्रश्नों के अंक समान हैं।

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|------|------|--|----|
| 1. | a) | निर्णय निर्माण संदर्भ के प्रकारों की चर्चा करें। | 16 |
| अथवा | | | |
| | b) | अंग्रेजी माध्यम के अनुसार। | |
| 2. | a) | अंग्रेजी माध्यम के अनुसार। | 16 |
| अथवा | | | |
| | b) | अंग्रेजी माध्यम के अनुसार। | |
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| अथवा | | | |
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| 4. | a) | अंग्रेजी माध्यम के अनुसार। | 16 |
| अथवा | | | |
| | b) | अंग्रेजी माध्यम के अनुसार। | |
| 5. | | संक्षिप्त में उत्तर लिखें। | |
| | i) | निर्णय लेने की विभिन्न प्रकार की स्थितियों को समझाइए। | 4 |
| | ii) | सांख्यिकीय गुणवत्ता नियंत्रण की तकनीकों को संक्षेप में समझाइए। | 4 |
| | iii) | नमूनाकरण के प्रकारों की व्याख्या किजिए। | 4 |
| | iv) | गुण संघ के आपसे संबंधों के बारे में संक्षिप्त जानकारी दें। | 4 |
