

GOVERNMENT COLLEGE (A), RAJAMAHENDRAVARAM
II B.A. SEMESTER: III -2023-24
PAPERE III-Probability Distributions and Statistical Methods
(Without mathematical derivations)

Time: 2 ½ hrs

MODEL PAPER

Max Marks: 50

Section-A

Answer any FIVE questions.

5x 4 = 20M

1. What is Probability and it's Properties?
2. What are types of Random variables
3. What is the Probability of getting 53 Sundays in a leap year?
4. Write about Poisson distribution?
5. Write about the applications of Normal distribution
6. What are types of correlation
7. What are Principles of Least squares?
8. Explain differences between correlation, regression?

SECTION-B

Answer any THREE questions

3 x10=30M

9. Explain various methods of Probabilities
10. Write about Binomial distribution and its properties
11. Explain about Normal Distribution and its uses?

12. Calculate Rank Correlation for the given Data

X	20	14	36	29	5	11
Y	19	9	25	10	2	6

13. Fit a Straight line for the given data

X	1	2	3	4	5	6
Y	1	2	4	4	5	7

GOVERNMENT COLLEGE (A), RAJAMAHENDRAVARAM
II B.A. SEMESTER: IV 2023-24
PAPER IV- Statistical Inference
(Without mathematical derivations)

Time: 2 ½ Hrs

MODEL PAPER

Max Marks: 50

SECTION-A

Answer any FIVE questions

5 x 4= 20M

1. Explain Interval Estimation
2. Explain Null Hypothesis and Alternative Hypothesis
3. Explain Type I and Type II errors
4. Distinguish between large sample tests and small sample tests
5. Write short note on F-test
6. Write about Sign test for single sample
7. Write Short note on Chi-Square Goodness of fit
8. Discuss the advantages and disadvantages of Non parametric methods

SECTION-B

Answer any THREE questions

3 X10=30M

9. Explain the criteria of a good estimator
10. State and Prove NP-Lemma
11. Explain the large sample test for equality of two means
12. Explain chi-square test for independence of attributes.
13. Explain the difference between parametric tests, Non-parametric tests?

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CBCS SYLLABUS (Semester Wise) 2023-24

II B.A Statistics/Semester-IV

Applied Statistics

Paper -V

MODEL QUESTION PAPER (THEORY)

Time: 2 1/2hrs

Max Marks: 50

SECTION-A

Answer any **FIVE** questions.

5 x 4= 20M

- 1 Explain types of sampling
- 2 Census Vs Survey
- 3 Explain Allocation in Stratified Sampling
- 4 Define Index number and uses?
- 5 Explain sources of Vital Statistics
- 6 Explain about Cost of Living Index numbers?
- 7 Explain about Abridged Life table?
- 8 Calculate Semi-averages to the following Data

Year	2015	2016	2017	2018	2019	2020
Sales	10	15	40	25	30	15

SECTION-B

Answer any **THREE** questions

3x10=30M

9. Explain Principle steps of sample Survey
10. Explain SRSWR vs SRSWOR
11. Explain the various components of time series.
12. Explain the Problems involved of construction of Index numbers
13. Explain Types of Mortality rates

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CBCS SYLLABUS (Semester Wise) 2023-24
III B.A Statistics/Semester-V
Operations Research Paper –VI-A1

MODEL QUESTION PAPER (THEORY)

Time: 2 1/2 hrs

Max Marks: 50

SECTION-A

Answer any FIVE questions.

5 x 4 = 20M

1. Explain the formulation of LPP
2. Explain general LPP
3. Explain the standard form of LPP?
4. Define feasible solution in a Transportation problem
5. Define unbalanced Assignment problem
6. How do you obtain a sequence?
7. Explain Assignment problem as a special case of TP
8. Explain Travelling salesman problem

SECTION-B

Answer any THREE questions.

3 x 10 = 30M

9. Describe the definition and scope of Operation Research
10. Solve the following LPP by using Graphical method

$$\begin{aligned} \text{Maximize } Z &= 45X_1 + 80X_2 \\ \text{Subject to const: } & 5X_1 + 20X_2 \leq 400 \\ & 8X_1 + 15X_2 \leq 432 \\ & X_1, X_2 \geq 0 \end{aligned}$$

11. Explain Two person games and zero sum games with example
12. Solve the following Transportation Problem by using LCM.

	D ₁	D ₂	D ₃	Supply
O ₁	32	30	220	1
O ₂	90	45	170	3
O ₃	400	200	32	5
Demand	5	2	2	9

13. Give an algorithm for n job-2 machines problem

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IIB.A. SEMESTER:V CBCS-2023-24
Official Statistics and Design of Experiments
Paper-VII-A2

Time; 2 1/2hrs

MODEL PAPER

Max Marks: 50

SECTION-A

Answer any FIVE of the following questions.

5 x 4 = 20M

1. Explain Uses of National Income
2. Explain Agricultural statistics
3. Explain Yield statistics
4. Write about Design of Experiments.
5. Write Short note On ANOVA
6. Write short note on Missing Plot Technique
7. Explain 2²-experiments
8. Define Treatment and experiment with Examples

SECTION-B

Answer Any THREE questions:

3x10=30M

9. Discuss the problems involved in measuring National Income.
10. Explain the functions of C.S.O
11. Explain principle of Design of Experiments
12. Explain ANOVA Two way classification
13. Explain LSD

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CBCS SYLLABUS (Semester Wise) 2023-24
III B.A. Statistics/Semester-V
(Non-Mathematics Combination
Actuarial Statistics Paper –VI-B1

Time; 2 1/2hrs

MODEL PAPER

Max Marks: 50

SECTION-A

Answer any FIVE questions:

5 x4 = 20M

1. Explain about life year and other rate intervals?
2. Explain about Select Rates?
3. Explain the Graphic Method?
4. Explain Age Sex Pyramid?
5. Describe about English Life tables?
6. Explain about Mortality?
7. Explain the need of Actuarial Statistics?
8. Explain about Risk Aggregate Rates?

SECTION-B

Answer any THREE questions:

3x10=30M

9. Explain about Rates and Ratio's in Mortality?
10. Explain about life year and other rate intervals?
11. Explain Multiple Decrement Tables
12. What is the role of Multiple Decrement Tables in Actuarial Statistics?
13. Explain the Principles and Purposes of Graduation?

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CBCS SYLLABUS (Semester Wise) 2023-24

III B.A Statistics/Semester-V

Paper - VII - DEMOGRAPHY-B2
MODEL QUESTION PAPER (THEORY)

Time: 2 1/2 hrs

Max Marks: 50

SECTION-A

Answer Any FIVE questions.

5 x 4 = 20M

- 1. What are the errors that occur in the census and registration data**
- 2. Explain about population composition**
- 3. Distinguish between Stationary and Stable population**
- 4. Mention the uses of life tables**
- 5. Explain Crude rate of natural increase**
- 6. What are the uses of vital statistics**
- 7. What are the assumptions of life table**
- 8. Explain Demography**

SECTION-B

Answer Any THREE question

3x 10= 30M

- 9. Explain the sources of collecting data in Vital Statistics**
- 10. Explain the Various Mortality Rates**
- 11. Explain measures of population growth**
- 12. Describe the Description and Construction of life tables**
- 13. Describe any types of Migration**

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CBCS SYLLABUS (Semester Wise) 2023-24

III B.A. Statistics/Semester-V

Statistical Computer Applications Paper –VII-c2

MODEL QUESTION PAPER (THEORY)

Time: 2 1/2 hrs

Max Marks: 50

SECTION-A

Answer any FIVE of the following questions. :

5 x4=20M

1. Define Operating System and its types?
2. What are the generations of Computer?
3. Write about Headers and Footers?
4. Explain following terms
URL,WWW,HTML,HTTP
5. Write Mathematical tools in MS-Excel?
6. Write tools in MS-PowerPoint?
7. Write about commands in MS-Word?
8. Write about UNDO and REDO

SECTION-B

Answer any THREE of the following questions.

3 x 10 = 30M

9. Write any 10 short cut keys in MS Word?
10. Write about Search Engines?
11. Write about the internet its basics?
12. Write briefly about concept of MACRO
13. Explain the concept of Operating system through Diagram.