GOVERNMENT COLLEGE (A) RAJAMAHENDRAVARAM
FIRST SEMESTER END EXAMINATION 2021-22
I BA – STATISTICS (SEMESTER-I)
PAPER I- QUANTITATIVE STATISTICS

Time: 2 ½ hrs.   **Max Marks-50**

MODEL PAPER

SECTION-A

Answer any FIVE questions   **5x4=20M**

1. Obtain the roots of the quadratic equation $ax^2 + bx + c = 0$
2. Explain permutation and combination with examples.
3. Write short notes on Arithmetic progression
4. Define finite set, infinite set with their examples
5. $n_{c3} = n_{c5}$ find n
6. Define matrix and its properties
7. Explain Different types of functions
8. Explain Venn Diagram

SECTION-B

Answer any THREE Questions   **3x10=30M**

9 If A= $\{1,2,3,4,5,6,7,8,9\}$ B=$\{3,5,7\}$ and C= $\{2,4,6\}$

   Prove the following equation $AU(BUC) = (AUB)UC$

10 Find the sum and product of the roots of the equation $x^2+4x+3 = 0$

11 Find sum of 'n' terms of the series 7+77+777+……….

12 Explain types of Matrices

13 Solve the following equations by Cramer method

$$2x - y = 5, \quad 3x + 2y = -3$$

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II B.A. SEMESTER: III -2022-23
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. **Write short note on Probability**

2. **Define Poisson Distribution and its properties**

3. **Correlation vs Regression**

4. **Give the applications of Normal distribution**

5. **What are types of correlation**

6. **What are method of least Squares**

7. **What are types of Random variables**

8. **Explain tied ranks**

SECTION-B

Answer any THREE questions   **3 x10=30M**

9. **Explain types of Probabilities**

10. **Write about Binomial distribution and its properties**

11. **Derive the equation of regression lines of X on Y and Y on X.**

12. **Explain Additional and multiplication theorem by using Expectation**

13. **Problem on Curve Fitting**

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III B.A.   SEMESTER: IV 2022-23
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) 2022-23
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 <u>FIVE</u> questions.   5 x 4= 20M

1 Explain Total Fertility Rate and Age Specific Fertility Rate

2 Explain Abridged life tables

3 Explain the determination of trend by Semi averages method

4. Explain types of sampling

5 Explain CENSUS vs SAMPLING

6 Explain Cost of living Index Numbers

7 Explain Life Table

8 Types of Allocations in Sampling

SECTION-B

Answer any <u>THREE</u> questions   3x10=30M

9. Explain Principle steps of sample Survey

10. Explain SRSWR with 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

GOVERNMENT COLLEGE (A+) , RAJAHMAHENDRAVARM
IIIB.A.   SEMESTER:V CBCS-2022-23
Official Statistics and Design of Experiments
Paper-VII-A2

Time; 2 1/2hrs   MODEL PAPER   Max Marks: 50

SECTION-A

Answer any <u>FIVE</u> 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 2^2-experiments**

8. **Define Treatment and experiment with Examples**

SECTION-B

Answer Any <u>THREE</u> 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) *2022-23*
III B.A. Statistics/Semester-VI
(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)2022-23
III B.A Statistics/Semester-VI
Paper - VII - DEMOGRAPHY
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) 2021-22
III B.A. Statistics(SemesterV)
Quality & Reliability
MODEL QUESTION PAPER (THEORY)

Time: 2 1/2hrs.   **Max Marks: 50**

SECTION-A

Answer any FIVE questions.   **5 x 4 =20M**

1. What are 3 sigma limits? Give their importance in S.Q.C

2. Discuss about Process control and Product control

3. Explain the construction of C chart

4. Explain about Acceptance Sampling.

5. Explain Producer's Risk and Consumer's Risk.

6. Explain Bath Tub Curve

7. Explain Hazard function.

8. Explain Reliability function

SECTION-B

Answer THREE questions   **3x 10=30M**

9. Define SQC? Explain its usage in industry.

10. Explain the construction of X and R charts.

11. Explain the construction of p and np charts.

12. What are SSP and DSP? Write their merits demerits

13. Explain the method of system reliability in series configuration

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CBCS SYLLABUS (Semester Wise) 2022-23
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 <u>FIVE</u> 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 <u>THREE</u> 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.