OMEGA PG COLLEGE -MCA

Approved by AICTE, AFFILIATED TO OSMANIA UNIVERSITY,HYD
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Paper Code – PCC 105
Course: PROBABILITY & STATISTICS (P & S)

UNIT WISE MODEL QUESTIONS FOR MCA I SEMESTER

UNIT – 1: VECTOR SPACES (1 THEORY & 1 PRACTICAL PROBLEM)

1. Define the terms:

i) Null space, ii) column space   iii) linear Transformation, iv) Independent set.

2. One compulsory Practical Problem on Vector spaces

UNIT-2: PROBABILITY & DISTRIBUTIONS (1 THEORY & 1 PRACTICAL PROBLEM)

ESSAY ANSWER TYPE (15 MARKS)

1. Define Probability. And explain about additive, multiplicative Baye's and conditional theorems of probability with examples.

2. What is Probability Distribution? Explain the application of Binomial Poisson's Distribution.

3. Briefly explain the properties and applications of normal distribution.

4. Define Probability Distribution. Write briefly about discrete and Continuous Distribution

5. **One compulsory Practical Problem on Probability and Baye's Theorem.**

6. **One Compulsory Practical Problem on Binomial, Poison and Normal Distribution.**

UNIT-3: SAMPLING AND ESTIMATIONS

(1 THEORY & 1 OR 2 PRACTICAL PROBLEMS)

1. What is sampling. Briefly explain various techniques of sampling.

2. Standard error of estimate and State the properties of a good estimator
3. What is small sample test? Explain t-distribution along with its properties and applications
4. **One or Two Practical Problems on t- distribution – (Single Mean , Difference Mean, Paired – t- test)**
5. **One problem on Point and Interval Estimation-(Point estimation, sample size and C.I)**

UNIT-4 LARGE SAMPLE TEST (1 THEORY & 1 OR 2 PRACTICAL PROBLEMS)

1. What is Hypothesis? Explain the procedure of testing the hypothesis.

2. What do you understand by Type-I and Type-II errors?

3. What are one – tailed and two – tailed tests.

4. One or Two Practical Problems on Z- Distribution – (Single Mean, Difference Mean , Single Proportion and Difference Proportion)

UNIT-5:CHI-SQUARE, ANALYSIS OF VARIANCE, CORRELATION & REGRESSION

(1 THEORY & 1 OR 2 PRACTICAL PROBLEMS)

ESSAY ANSWER TYPE (15 MARKS)

1. What is Correlation and Regression Analysis explain the different types of Regression. State its applications and limitations
2. What is ANOVA? What are its assumptions and applications?
3. What is Chi-Square? Explain its applications and assumptions
4. **One compulsory Practical problem on Karl Pearson's co-efficient of Correlation And Spearmen's Rank Correlation**

                                                  (OR)
5. **One compulsory Practical Problem on Regression Analysis**

                                                  (OR)
6. **One or Two Practical Problem on F-Distribution- (One way classification, Two way Classification) & Chi-square Distribution- (Goodness of fit & Independent of Attributes)**

Note
Important questions provided are not guess paper. The questions cover whole syllabus which include important questions in essay questions. These questions can be expected or cannot be expected in the External Question paper…….

*****ALL THE BEST*****

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