



PART - D

28. Find the inverse of the matrix $A = \begin{bmatrix} 1 & 2 & 8 \\ 7 & 5 & 4 \\ 3 & 1 & 2 \end{bmatrix}$.
29. For any three events A, B and C prove that $P(A \cup B/C) = P(A/C) + P(B/C) - P(A \cap B/C)$.
30. The mean of samples of 1000 and 2000 are 67.5 and 68.2 respectively. Can the samples be regarded as drawn from the same population with SD 2.5?
31. Explain in detail various stages in the testing of a hypothesis. (2×13=26)



Reg. No. :

Name :

I Semester M.A./M.Sc./M.Com. Degree (Reg./Sup./Imp.)
Examination, November 2014
(2010 - 2013 Admn.)
ECONOMICS

Paper - III : Quantitative Methods for Economic Analysis

Time : 3 Hours

Max. Marks : 80

- Instructions :** Part - A : Answer **all** questions. **Each** question carries **one** mark.
Part - B : Answer **any eight** questions. **Each** question carries **3** marks.
Part - C : Answer **any four** questions. **Each** question carries **five** marks.
Part - D : Answer **any two** questions. **Each** question carries **13** marks.

PART - A

- To multiply a matrix A by a scalar λ , we multiply
 - Each element of the matrix by λ
 - Biggest element only by λ
 - Smallest element only by λ
 - None of these
- The transpose of a transposed matrix is

a) A unit matrix	b) Diagonal matrix
c) Original matrix	d) Square of original matrix
- If $AB = BA$, then

a) A is an identity matrix	b) B is an identity matrix
c) Both are identity matrix	d) $(AB)^2 = BA/2$



4. The outcome of tossing a coin is a
- Simple event
 - Complementary event
 - Mutually exclusive event
 - Compound event
5. The probability of all possible outcomes of a random experiment is always equal to
- Infinity
 - One
 - Zero
 - None of the above
6. If X is a random variable with mean μ , then $E(X - \mu)^r$ is called
- Variance
 - r^{th} raw moment
 - r^{th} central moment
 - Standard deviation
7. A family of parametric distributions in which mean is equal to variance is
- Binomial distribution
 - Log normal distribution
 - Poisson distribution
 - Gamma distribution
8. The degrees of freedom for students t distribution based on a random sample size n is
- $n - 1$
 - n
 - $n - 2$
 - $n - 5$
9. Least square theory was propounded by
- Gauss
 - Markov
 - Fisher
 - Rao
10. A wrong decision about H_0 leads to
- One kind of error
 - Two kinds of errors
 - Three kinds of errors
 - Four kinds of errors
- (1×10=10)



PART - B

11. What is a null matrix ?
12. What is transpose of a matrix ?
13. State Cramer's rule.
14. Define standard deviation.
15. State the mean and standard deviation of Binomial distribution.
16. Write a note on F test.
17. Define the property of linearity.
18. Define the power of a test.
19. What is Type II error ?
20. Explain the applications of ANOVA.
21. Explain the characteristics of qualitative variables. (3×8=24)

PART - C

22. Find the probability of getting a total of 8 or 10 in a single throw with two dice.
23. State the central limit theorem.
24. Explain the properties of normal distribution.
25. Write a note on Poisson distribution.

26. Given $A = \begin{bmatrix} 3 & 4 & 7 \\ 8 & 6 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 6 & 2 \end{bmatrix}$ find AB .

27. Explain the properties of determinants of a matrix. (4×5=20)