

ALAGAPPA UNIVERSITY STUDY CENTRE TUTICORIN

5TH SEM ASSIGNMENT QUESTION

INTERNAL MARK: 25 / PER SUBJECT

BSC MATHS

11351 MODERN ALGEBRA

1. Write the following sets by listing elements enclosed in brackets { }:
 - (i) A is the set whose elements are first five letters of the alphabet.
 - (ii) B is the set of all odd integers.
 - (iii) X is the set of all two digit positive numbers which are divisible by 15.
2. Discuss briefly the maximal and prime ideals giving examples.
3. Define the ring homomorphism giving appropriate examples.
4. Discuss briefly about the Gauss's lemma
5. Theorem Bessel's Inequality

11352 OPERATIONS RESEARCH

1. Explain the various types of operations research techniques.
2. How is operations research useful to management?
3. Explain The Complementary Slackness Theorem
4. State the duality theorem
5. Explain phase I of two-phase method with appropriate example ?

11353 NUMERICAL ANALYSIS

1. Lagrange and Newton interpolations
2. Jacobi & Gauss Seidel iterative methods
3. Central differences Interpolation formulae - Gauss formulae
4. Predictor-Corrector methods-Milne's
5. Numerical solutions of ordinary differential equations: Taylor's series method

11354 TRANSFORM TECHNIQUES

1. Discuss briefly the Laplace transform
2. Analyze the convolution theorem
3. Discuss briefly the inverse Laplace transform with help of example
4. Explain the inversion formula for the cosine transform
5. Describe briefly the inverse Z-transform