

ALAGAPPA UNIVERSTIY STUDY CENTRE TUTICORIN

3rd SEM ASSIGNMENT QUESTION

INTERNAL MARK: 25 / PER SUBJECT

MSC MATHS

31131 DIFFERENTIAL GEOMETRY

1. Enumerate the normal property of geodesics.
2. Find the surface of revolution which is isometric with the region helicoids
3. Enumerate the polar developable
4. State and prove Gauss-Bonnet theorem.
5. State and prove Serret-Frenet Formulae

31132 OPTIMIZATION TECHNIQUES

1. Write down the Maximal Flow Algorithm.
2. What are the total and free floats of a critical activity?
3. Explain bounded variable Algorithm
4. Explain the solution of mixed strategy
5. Explain Jacobian method

31133 ANALYTIC NUMBER THEORY

1. State and prove Selberg's identity
2. State and prove Chinese Remainder theorem.
3. State and prove Euler's criterion.
4. State and prove Euclidean algorithm
5. State and prove Gauss lemma

31134 STOCHASTIC PROCESSES

1. Derive the Chapman – Kolmogorov equation
2. Obtain the expected waiting time in the system for M/M/S model.
3. Find the waiting time density and expected waiting time for M/M (1, b)/1 model.
4.
 1. What do you meant by residual time?
 2. Define diffusion process.
 3. Is the Wiener process, a covariance stationary? Justify
5.
 1. Define Queuing time.
 2. Write the Erlaug's formula.