FAST – National University of Computer & Emerging Sciences



Computer Science Department (Karachi Campus)

**RE-FINAL EXAM**

Course Code: MT115 CALCULUS-II Date: June 2016

Time Allowed: 180 minutes Spring 2016 Maximum Marks: 100

Instructions: Attempt all questions in ascending order. Write neatly, illegible answers will

be assumed to be incorrect. All question having 10 marks.

Q1.Find the Taylor’s polynomial of degree n of the function about .

Q2.Determine whether the series converges and if so find its sum.

Q3. Use appropriate form of chain rule , Compute and

Q4. Find all critical points and locate all relative maxima, relative minima and saddle points,

Q5.Evaluate , where R is the region bounded by and

**OR** Evaluate

Q6. Find area that lies outside the cardiod

Q7. Find the arc length of ) from (0,0) to (1,.

Q8. Given

1. Find the area of the triangle *PQR*.
2. Find the volume of the parallelepiped whose edges are .

Q9. a) Convert from rectangular to spherical.

b) Convert from cylindrical to rectangular .

Q10. Consider , Find |z| and Principal value of z

**OR** Check the symmetry and draw the graph for