LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc.** DEGREE EXAMINATION – **STATISTICS**

FIRST SEMESTER – NOVEMBER 2012

# MT 1101 - MATHEMATICS FOR STATISTICS

Date : 03/11/2012 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

**PART – A**

**Answer ALL questions (10 x 2 = 20)**

1. If *y*=log(2*x*+3) then find 
2. If with respect to , 
3. Define implicit function.
4. Find the value of.
5. Define Homogeneous function.
6. If then find .
7. Evaluate: 
8. Solve 
9. Write the two properties of definite integrals.
10. Evaluate: 

**PART – B**

**Answer any FIVE questions (5 x 8 = 40)**

1. Differentiate: .
2. If with respect to, find 
3. Examine whether the following functions are odd or even functions.
4. 
5. 
6. Show that , when *x* is positive.
7. State and prove Euler’s theorem.
8. Evaluate: 
9. Evaluate the rational algebraic function .
10. Evaluate: 

**PART – C**

**Answer any TWO questions (2 x 20 = 40)**

19. a). If  then find 

b). Differentiate. (10+10)

20. a). Find the limit of the function 

b). Determine the maxima and minima of the function 

(10+10)

21. a). Evaluate: 

b). Using by parts method find out the value of  (10+10)

22. a).Evaluate: 

b). Evaluate  using reduction formula. (10+10)

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