

**UNIVERSITY OF KERALA  
SCHOOL OF DISTANCE EDUCATION**

**Assignment and Case Analysis Topics for Semester-5**

**OPEN COURSE Offered by Mathematics Department**

**BUSINESS MATHEMATICS    course code : MM1551.2**

**ASSIGNMENT QUESTIONS**

1. Find the nominal rate p.a convertible quarterly corresponding to an effective rate of 8%p.a
2. Find the accumulated value at the end of 12 years of an amount of RS 750 invested at 9% p.a for the first 6 years and thereafter at 10% convertible half yearly.
3. A monopolist has a demand curve  $x=106-2p$  and average cost curve  $A.C = 5+x/50$  where  $p$  is the price per unit output and  $x$  is the number of units of output.
4. If  $y = (5x+1)(x^2-4)$ , find  $\frac{dy}{dx}$
5. Differentiate

$$5x^4+3x^3-7x^2+9x-100=20x^3+9x^2-14x+9$$