Q1. Conversion of Cartesian coordinates to polar coordinates:

Transform the equation  into polar co-ordinates**.**

Q2. Evaluate 

Q3. Evaluate 

Q4. If then show that 

Q5. If z is a function of x and y and u and v be two other variables, such that u = lx + my, v = ly – mx, show that = (*l*2 + m2) ().

Q6. Find n, if for  & .

Q7. If , then prove that .

Q8. If , then find

1.  (ii) 

Q9. State and Prove Euler’s Theorem.

Q10. Find the degree of f(x,y) = logy – logx.

Q11. If 

Q12. If , then Prove that .

Q13. , then show that at x=y=z, 