7/6/2021

Mathematics - 2

Internal Exam

B.E (chemical) 1st Year | B.E (chemical) + MBA IFT 1st Year

Total marks: 25

Solve any 5 Questions

1. Form the partial differential equations
$f(x^2+y^2, z-xy) = 0$ —— (5)

2. Solve this equations.
$$\frac{\partial^2 z}{\partial x \partial y} = \frac{x}{y} + a$$ —— (5)

3. Solve this equation $p+q = pq$ —— (5)

4. Find the fourier series of the following function:-
$$f(x) = \begin{cases} x^2, & 0 \le x \le \pi \\ -x^2, & -\pi \le x \le 0 \end{cases}$$ —— (5)

5. Find the fourier series of $f(x) = \begin{cases} x, & 0<x<1 \\ 1-x, & 1<x<2 \end{cases}$
—— (5)

6. Find the complex form of the fourier series of this periodic functions:-
$f(x) = e^{ax}, \; -l < x < l$ —— (5)