

Name :- Mian Zeeshanullah.

ID :- 7906

Section :- A.

Subject :- Differential equation

Assignment :- 03

Teacher :- Mam - Shomarla.

18 June 2020

①

Topic

Application Of Partial

Differential Equation

PDES (partial differential equation) has many fields. The equation involving partial derivatives are known as (PDES)

Application:-

* In daily life:-

→ partial derivatives are used in the basic laws of physics for example
Newton's laws of linear motion
Maxwell's equations of electromagnetism
and Einstein equation in General Relativity

① In Economics Field:-

(2)

In the field of economics we use partial differential equation to check what happen to other variable while keeping one variable constant.

→ In the field of Civil Engineering

Differential equation are the true essence of the physical world. They are used to describe the physical phenomena which is encountered at microscope as well as macroscope level.

→ Differential equation are extensively involved in engineering

→ As Civil Engineering mostly concerned with building structures and Geometrical shapes. So any curve revolved around

(3)

modeling using differential equations if you have any complicated geometries which most realistic problems have. You will likely to use the said differential equation in an approximation framework like that of finite difference, volume element) to approximately figure out a solution to a problem you care about.

→ In the field of Mechanical engineering

→ There are different order of partial derivative describing the rate of change of a function representing real physical quantities

→