

MATHEMATICS
EXTENSION LECTURE
REGISTER

G.D.C. BELLAMPALLY



విద్య అనే విత్తనం - చెడుగా ఉన్న చాల్సి ఫలాలు తీసి

DEPARTMENT OF MATHEMATICS

EXTENSION LECTURE

Delivered by Madhava Krishna D

Partial Differential Equations



EXTENSION LECTURE 3

Lecture given by : Sri D. Madhava Krishna, GDC Kagaz Nagar

Lecture given to the class : BSc (MPC/MPCS) - I year

Topic of the Lecture : Partial Differentiation
and Its applications

Topic Synopsis :

Partial Derivative :-

A partial derivative of a function of several variables is its derivative with respect to one of those variables, with the others held constant.

The process of determining the partial derivatives of a function of more than one independent variables is known as a partial differentiation. It is denoted by symbols like

$$\frac{\partial}{\partial x}, \frac{\partial}{\partial y}, \frac{\partial}{\partial z}, \frac{\partial}{\partial t} \dots \text{etc}$$

Function of Several Variables :-

A function which contains more than one variable is called a function of several variables.

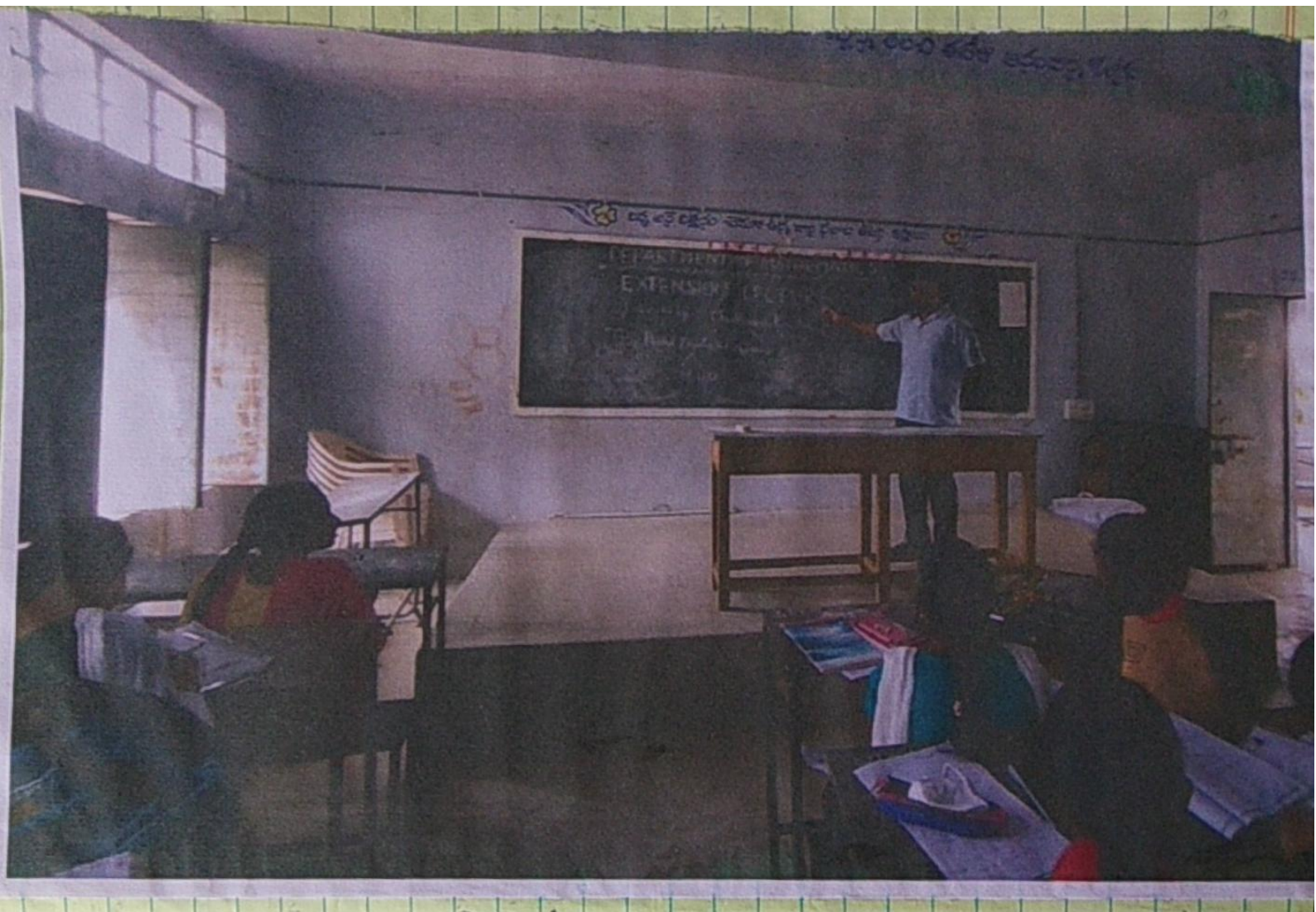
Function of Two Variables :- A function which contains two variables

It is of the form $z = f(x, y)$, ex: $z = x^2 + y^2$

Function of Three variables :-

A function which contains three variables.

$$z = x^2 + y^2 + z^2$$



Differential Equations are two types. These are 1) An ordinary Differential Equation (ODE) (2) Partial Differential Equation (PDE).

No. of students attended : 22

- | | |
|----------------------------|------------------------------|
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| 2) N. Manasa - MPC | (15) K. Bhavani - MPCs |
| 3) V. Ravi Teja - MPC | (16) S. Anirudh - MPCs |
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| 11) M. Satyanarayana - MPC | Satyan |
| 12) P. Sai Teja - MPC | Sai Teja |
| 13) T. Sravanthi - MPC | Sravanthi |

Sign of the Incharge

Sign of the Principal

Govt. Degree College
Bellampally-504 251
Dist. Mancherial (T.S.)