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SECTION :- B

DEPARTMENT :- CIVIL ENGINEERING

ASSIGNMENT :- DIFFERENTIAL EQUATION (2)

SUBMITTED TO :- MAAM SHUMAILA

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SUBJECT NAME :- DIFFERENTIAL EQUATION

Question No :- 01

Application of partial differential equation in Engineering.

- To solve the functions with variables. One variable is kept constant and differential Co-efficient of other variable is found with to variable.

e.g :-

1- Time of Oscillation, $t = 2\pi\sqrt{l/g}$
i.e. $t = f(l, g)$

2- Torque $T \propto l \alpha$
i.e. $T = f(l, \alpha)$

3 Pressure of an ideal gas,
 $P = nRT/V$
i.e. $P = f(T, V)$

The differential Coefficient is obtained by partial differential.

\Rightarrow PDEs are used to solve the waves equations.

Wave equation is differential expressing the properties of motion in waves.