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SECTION # "B"

SUBJECT # CALCULS

ASSIGNMENT # 01

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APPLICATION OF DERIVATIVES AND INTEGRATION

IN ENGINEERING :-

RATES OF CHANGE :-

In this section

we review the main application/
interpretation of derivatives from the
previous chapter that we will be
using in many of the application.

CRITICAL POINTS :-

In this section we

give the definition of critical points.

Critical points will show up in
most of the sections in this chapter,

so it will be important to understand
them and how to find them. we
will work a number of example.

MINIMUM AND MAXIMUM VALUES:

In this

Section we define absolute (or global)

minimum and maximum values of a function

and relative (or local) minimum and

maximum values of a function. It is

important to understand the difference

b/w the two types of minimum and

maximum.

FINDING ABSOLUTE EXTREMA:-

In this section

we discuss how to find the absolute

minimum and maximum value of a function.

In other words, we will be finding the

largest and smallest values that a

function will have.

THE SHAPE OF A GRAPH PART-IIn this

Section we will discuss what the first derivative of a function can tell us about the graph of a function.

The first derivative will allow us to identify the relative or local minimum and maximum values of a function and where a function will be increasing & decreasing.

THE MEAN VALUE THEOREM:-In this section

we will give Rolle's Theorem and the Mean Value Theorem. With the Mean Value Theorem we will prove a couple of very nice facts, one of which will be very useful in the next chapter.

NEWTON'S METHOD :-

In this disucssSection

we will discuss the newton method.

Newton method is an application of

derivative we allow us to approximate

solution to an equation.

INTEGRATION APPLICATIONS:-

- > Area b/w Curves
- > Distance, velocity acceleration
- > Volume
- > Average value of function.
- > Work
- > center of Mass
- > Kinetic Energy, improper integration
- > probability.