Hope Foundation's
International Institute of Information Technology,
Hinjawadi, Pune – 411057

Department of Engineering Sciences
(Academic Year 2020-21)

Date:29/04/2021

Report on Guest Lecture

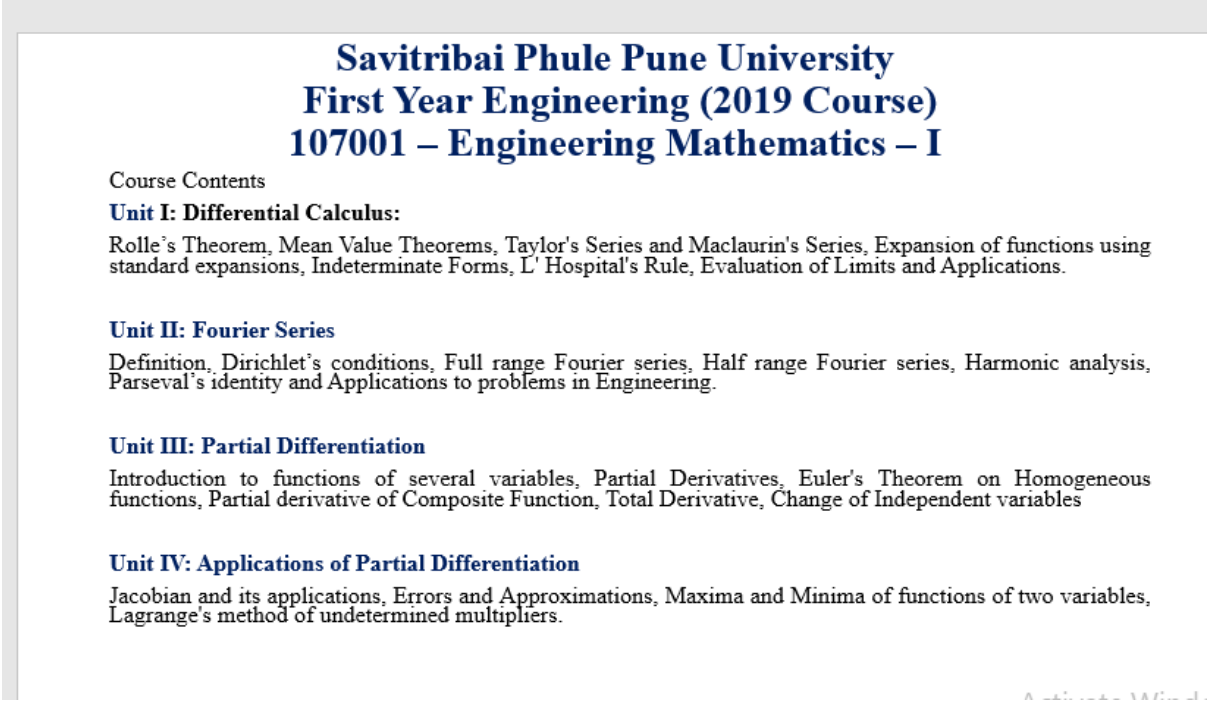
The Department of Engineerng Sciences has organized the Guest Lecture on dated 29th April 2020 at I²IT, Pune for FE students on "Concept and methods of partial differentiation of Engg.Maths-I". Total of 192 students has attended the guest lecture.

Due to the Covid-19 pandemic, the Guest Lecture was conducted through online mode (Google meet). The link is shared with all the students. The guest resource person was heartily welcomed by Prof. Mandar Datar, Head of the Department of Engg.Sciences. Prof.Bhagwat R.D. was the resource person for the Guest Lecture. He has a total of 21 years of academic and reserch experience. He is a mathematics expert professor completed his M.Phil in the fluid mechanics.In his talk he emphasized the importance of concept & methods of Partial Differentation with examples.The resource person has cleared all doubts/queries asked by the students. The event ended with a vote of thanks by Prof.Suvarna Bhagwat.

As per the feedback received from the students, it was a very good learning experience, the guest lecture helped them in their understanding of concept & methods of Partial Differentation. The students have requested to conduct more guest lectures with hands-on in the near future.

Prof. Suvarna Bhagwat
(Event Coordinator)

Event Photos:



Savitribai Phule Pune University
First Year Engineering (2019 Course)
107001 – Engineering Mathematics – I

Course Contents

Unit I: Differential Calculus:

Rolle's Theorem, Mean Value Theorems, Taylor's Series and Maclaurin's Series, Expansion of functions using standard expansions, Indeterminate Forms, L' Hospital's Rule, Evaluation of Limits and Applications.

Unit II: Fourier Series

Definition, Dirichlet's conditions, Full range Fourier series, Half range Fourier series, Harmonic analysis, Parseval's identity and Applications to problems in Engineering.

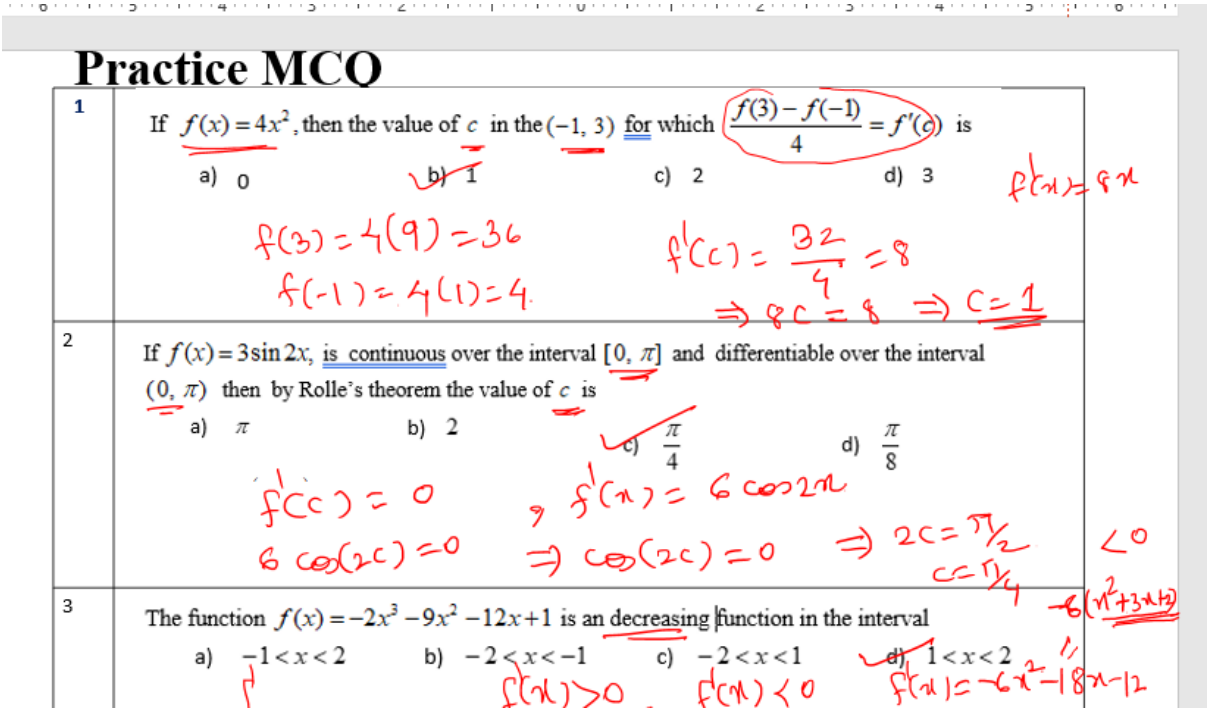
Unit III: Partial Differentiation

Introduction to functions of several variables, Partial Derivatives, Euler's Theorem on Homogeneous functions, Partial derivative of Composite Function, Total Derivative, Change of Independent variables

Unit IV: Applications of Partial Differentiation

Jacobian and its applications, Errors and Approximations, Maxima and Minima of functions of two variables, Lagrange's method of undetermined multipliers.

Photo 1: " A Guest Lecture on "Basic concept &methods of partial differentiation"



Practice MCQ

1. If $f(x)=4x^2$, then the value of c in the $(-1, 3)$ for which $\frac{f(3)-f(-1)}{4}=f'(c)$ is

   a) 0 b) 1 c) 2 d) 3

2. If $f(x)=3\sin 2x$, is continuous over the interval $[0, \pi]$ and differentiable over the interval $(0, \pi)$ then by Rolle's theorem the value of c is

   a) π b) 2 c) $\frac{\pi}{4}$ d) $\frac{\pi}{8}$

3. The function $f(x)=-2x^3-9x^2-12x+1$ is an decreasing function in the interval

   a) $-1<x<2$ b) $-2<x<-1$ c) $-2<x<1$ d) $1<x<2$

Photo 2: "A Guest Lecture on "Basic concept &methods of partial differentiation"