SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Mathematics)
Semester: IV
Syllabus with Effect from:November/December-2012

Paper Code: US04EMTH02	Total Credit: 2
Title Of Paper: Mathematical Methods - II	

Unit	Description in detail	Weighting (%)
I	Partial differential equations: Definition and Examples ; Solution of Partial differential equations by direct Integration ; Linear equations of First order and its solution .	
II	Non-linear equations of the ¯rst order and its solution ; Charpit's Method ; Homogeneous linear equations with constant coefficients .	
III	Rule of ¯nding complimentary function and particular integral Working procedure to solve homogeneous linear equations of any order ;Non-homogeneous linear equations ; Non-linear equations of second order ; Monge's Method .	
IV	Method of separation of variable ; Wave equation and its solution One dimensional heat flow equation and its solution ;Laplace equation and its solution .	

Basic Text & Reference Books:-

- B.S.Grewal,Higher Engineering Mathematics,Khanna Publishers,Delhi.
- E.Kreyszing ,Advanced Engineering Mathematics,Fifth edition,New Age International (p) Ltd.,New Delhi.
- K.R.Kachot,Higher Engineering Mathematics.
- M.E.Shimpi.V.R.Shah , R.B.Gandhi,S.R.Patel ,Advanced Engineering Mathematics,Nirav and Roople prakashan .