

# VEER NARMAD SOUTH GUJARAT UNIVERSITY,

**M.Phil**

**Faculty of Science.**

**Mathematics**

**In force from June 2006**

Compulsory Paper : One

Paper : I : Problem solving Methodology ( 200 marks )

[ 100 marks theory + 100 marks practical - 3 hours each ]

Practical using mathematical software - eg. matlab, mathematica, ODE PDE solver, Fuzzy explorer ... etc

- 1) Problems based on Algebra and Topology (25%)
- 2) Problems based on Analysis (25%)
- 3) Problems based on Differential Equations and Numerical techniques (25%)
- 4) Problems based on Mechanics and Fluid Dynamics (25%)

**Note :** All the above problems will be selected on the basis of coverage of these topics at M.Sc. Mathematics programme of V.N.S.G.U

Optional Papers : Two

Paper II : Elective - I : 100 marks

Paper III : Elective - II : 100 marks

One paper from each of the following two groups I & II

Group (I) :

1. Partial Differential Equations
2. Advanced fluid Dynamics
3. Fuzzy sets and Fuzzy logic
4. Non-linear Analysis

Group (II)

1. Numerical Solution of PDE
2. Computational Fluid Dynamics
3. Scientific and soft Computing
4. Wavelet Analysis

## **Structure**

| <b>Paper</b> | <b>Periods/Week</b> | <b>Total Marks</b> | <b>Exam duration</b> |
|--------------|---------------------|--------------------|----------------------|
| Paper - I    | 4 (Theory) hr.      | 100                | 3 hours              |
|              | 3 (Practical) hr.   | 100                | 3 hours              |
| Paper - II   | 4 hours             | 100                | 3 hours              |
| Paper - III  | 4 hours             | 100                | 3 hours              |
| Viva Voce    | -                   | 100                | -                    |

# **VEER NARMAD SOUTH GUJARAT UNIVERSITY,**

## **M.Phil**

### **Faculty of Science.**

#### **Mathematics**

**M.Phil (Final)**

**Total Marks      500**

Passing the M.Phil (Previous) examination with minimum 50% candidates shall be allowed for the dissertation work.

#### **Structure :**

- (1) Evaluation of the dissertation by an external examiner is compulsory.
- (2) The dissertations work carries 300 marks.
- (3) The viva-voce examination carries 200 marks.
- (4) In each head (Dissertation / viva voce) the standard of passing is 50% marks.

A copy of the detailed syllabus will be submitted in due course.