

# **VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**

## **M. Phil Computer Applications Course -I**

### **PAPER : M-I**

#### **Research Methodology**

Comparison of at least two Single user Operating Systems and of Multi user Operating Systems with respect to operating system parameters, Detailed study of new concepts in Single user Operating System's and Multi-user operating system's, Current trend in Information Technology.

**Course - 11 & 111 (Content Courses) : Any TWO papers -from the following paper list.**

### **PAPER :M-2**

Advanced concepts of Data Base Management System. Comparison of at least two current Data Base Management Systems packages and current Relational data base management system, Comparison of various File organization techniques. Advanced concepts in Parallel Database and Distributed Database, Recent concepts in Concurrency Control and Database Recovery. Recent Object Oriented data models, Query optimization strategies, Query decomposition.

### **PAPER : M-3**

Comparison of at least two Non-Procedural High level Languages. Recent concepts in Expert System, Comparison of various Heuristic searching methods, Fuzzy Logic, Issues & Solutions in Natural language Processing, Perception & Action,, Machine & Vision. Artificial Neural Networks.

**PAPER : M- 4**

Comparison of at least two object Oriented High level languages. Study of recent. object data Models. Concepts & implementation issue of Inheritance, Concepts & implementation issues of Virtual Functions & Polymorphism. Study of recent Procedure Oriented Development Tools, Issue and advanced concepts in object. oriented Analysis. Issue and advanced concepts in object oriented Design.

**PAPER : M-5**

Comparison of advanced Micro Processors, Instruction set of advanced Micro Processor. Advanced Computer Communication Systems and methods, Communication Protocol, Study & writing Device Drivers for Single User Operating Systems & Multi-user Operating Systems. Issues and trend in Real Time Programming, Direct interfacing of various System calls at low level,.

**PAPER : M-6**

Comparison of at least, two Graphic User Interface tools. Advanced concepts in Animation and Simulation. Study & implementation of advanced Graphics algorithm techniques, Fractals, Colour theory & Ray-tracing, Study & writing device drivers for graphical applications.

**Course IV :**

Course related to the topic of Dissertation,