

Teaching and Examination scheme for
B.A. Part-I Vocational Computer Application

Examination 2017

| Paper Name(Theory) | | Lec./ week | Tuto/ week | Exam Hours | Max Marks |
|--------------------|-------------------------------------|--|---------------|------------------------|--------------|
| Paper I | Computer Fundamentals & PC Software | 3 | 1 | 3 | 65 |
| Paper II | Database Management System | 3 | 1 | 3 | 65 |
| | | | | Total of Theory | 130 |
| | | Paper Name (Practical) | | | |
| Practical | | | | 3 | 70 |
| | | Total of Practical | | | 70 |
| | | Grand Total(Theory + Practical) | | | 200 |

Note:

- Ten questions will be set in all papers taking two questions from each unit. Students will have to attempt one question from each unit.
- At least 3 classes of theory, 3 classes for practical should be assigned to the students per week for each paper.
- Each practical exam is to be conducted by two examiners one External and one Internal Examiner. External examiner should be senior lecturer from jurisdiction of MGS University. Question paper of Practical Examination will be prepared by External; Students have to perform exercise on computer. Exercise must be written in answer books in proper documentation. Marks distribution for Practical of 75 marks is as under

| | |
|--|----------|
| a) Four Exercise of 10 marks each | 40 Marks |
| (Logic 04, Execution 03, Documentation 03) | |
| b) Viva-Voce | 20 Marks |
| c) Laboratory Exercise File | 10 Marks |

Examination 2017
Paper – I
COMPUTER FUNDAMENTALS & PC SOFTWARE

Unit – I

Historical Evolution of Computers, Characteristics of computer, Classification of Computer, Modern Computer & its Application; Block diagram and Components of Computer System, Central Processing Unit, Memory Unit, Microprocessor; Interconnecting the Units of a Computer, Inside a Computer Cabinet; Functions and Characteristics of Various commonly used Input/Output Devices; Start-up Process (Booting), Specification of a Desktop and Laptop currently available in the market (Processor, motherboard, memory, interface & capacity of HDD & DVD drives, I/O ports etc).

Unit – II

Need & Types of Software: System & Application software; Programming Languages: Machine, Assembly, High Level, 4GLs, Assemblers, Compilers and Interpreter; Objectives of Operating System, Concept of CUI & GUI; Installation of Windows Operating System, Installation of Printer and Other Software Packages such as Ms Office etc; Backup and Restore Operations. Features of Windows; Various versions of Windows, Desktop, Explorer, Searching, Recycle Bin, Setting common devices using Control Panel, System Tools, Disk cleanup, defragmentation, scanning for virus, Windows Accessories.

Unit – III

Features of Word Processor: Create, edit, store, print documents, Navigation of documents, cut, copy & paste, Find & replace, Different Page Views and layouts, Alignment, formatting features, Tabs & Indents, Inserting tables, pictures, hyperlinks, Spell checking, Macros, Mail merge, Template, Wizards, Overview of Index and Tables. Importing and exporting to and from various formats.

Unit – IV

Features of Spreadsheet: Creating, saving, editing, moving around a worksheet, workbook; Inserting, deleting navigation in worksheets, Working with Formula, Cell reference, Functions (Financial, Database, Maths, Trigonometric, Statistical etc); Creating, editing, selecting and naming range. Format Feature, Changing alignment, Character styles, Date Format, Border & Colors etc. Previewing & Printing a worksheet, Goal Seek, Pivot Table, Creating Charts & Graphs. Database in worksheet, Data organization- what-if analysis, Macro, Linking and embedding.

Unit – V

Power Point Presentation Package: Creating Presentation, Different presentation templates, Setting backgrounds, layouts, Customizing, Formatting a presentation, Adding Graphics and effects to the presentation, Printing Handouts, Generating standalone presentation viewer.

Reference Books:

1. Computer Fundamental By P.K. Sinha (BPB Publications)
2. Upgrading and Repairing PCs By Scott and Mueller, Techmedia, New Delhi
3. Rapidex MS Office By Vikas Gupta (Pustak Mahal)
4. Absolute Beginners Guide to Computer Basics By Miller M, Pearson Education,
5. Fundamentals of Computers By Balagurusamy E, Tata McGraw-Hill

Examination 2017
Paper II
Database Management System

Unit I

Data, Data Processing, Merits and demerits of file organisation. Database Overview, Purpose of the Database system, File systems Vs. Database Systems, View of Data: Data Abstraction, Instances, Schema, Data Models: Overview of Network, Hierarchical, and Relational Model, Database Architecture and Administrators, Codd's Rules.

Unit II

ER Model: Basic Terminology, Entity, Entity sets, attributes and keys, Relation and Relationship sets, Entity-Relationship Diagram, Weak and Strong entity types, Features of E-R Model, Specialization, Generalization Aggregation, Creating table from ER diagram. Basic Concept of Normalization up to BCNF.

Unit III

Implement Database concepts using Access, Creating Tables, Data Types, Entering Data, Table Design, Indexing, Importing Data, Operators and expressions, expression builder, various functions of Access, Import and Export Table, Creating Queries, Setting Relationship between Tables, Creating Forms, Controls and components of form, Master table and transaction table. Join property, various join options available in access, Creating & Printing Reports.

Unit IV

Query Languages: DDL, DML, DCL, Introduction to SQL, Data Types, Basic SQL commands like Create, Alter, Drop, Truncate, Insert, Update, Delete etc, Basic SQL Queries, Union, Intersect and Except, Nested Queries.

Unit V

Transaction management and Concurrency control, Transaction management: ACID properties, serializability and concurrency control, Lock based concurrency control (2PL, Deadlocks), Time stamping methods, optimistic methods, database recovery management.

References Books

1. Database Management System By A. Silberschatz, Henry F.Korth, S. Sudershan (McGraw-Hill)
2. An Introduction to Database System By C.J. Date (Addision Wesley)
3. Fundamentals of DBMS By Gupta, Dhillon, Magho, Sharma (Lakhanpal Publishers)
4. Teach yourself Access. Sieglel, BPB
5. Introduction to Computer Data Processing and System Analysis By V K Kapoor (Sultan Chand and Sons)