

8. Identify and explain information systems development process.
9. Identify security, regulatory/policy and ethical issues associated with the use of information technology.
10. Use a computer to prepare basic numerical, text, graphical and database information.

LEVEL OF ASSESSMENT

The examination will assess the learner's comprehension and application of business and information systems knowledge and skills.

EXAMINATIONS STRUCTURE

Paper 5(I)

There will be a three hour examination made up of sections A and B. Section A will comprise of four questions of 20 marks each, of which the candidate will be required to attempt any three. Section B will comprise of three questions of 20 marks each, of which the candidate will be required to attempt any two

Paper 5(II)

There will be a one hour and thirty minutes practical examination of 50 marks

DETAILED SYLLABUS

PART A: MANAGEMENT

A. THE BUSINESS ENVIRONMENT

1. PESTEL analysis:
 - (a) Political/ legal environment:
 - (i) Enforcement of laws and regulations
 - (ii) Self-regulation
 - (iii) Creation of economic conditions for business to operate (including taxation and public spending)
 - (b) Social environment:
 - (i) The demographic environment
 - (ii) Difference and changes in the composition and characteristics of society in terms of age, sex, marital status, family size, occupation, income, education, ethnic origin, geographical location
 - (iii) The values, attitudes and beliefs of society
 - (c) Technological environment:
 - (i) Major developments - impact on organisations and external effects



- (ii) Society and technology
 - (d) Economic environment:
 - (i) Inflation
 - (ii) Unemployment
 - (iii) Foreign exchange rates
 - (iv) Interest rates
 - (e) Environmental factors:
 - (i) Laws regarding pollution
 - (ii) Waste management
 - (iii) Energy consumption and conservation
 - (iv) Environmental activism
2. SWOT analysis:
- (a) Strengths and weaknesses
 - (b) Opportunities and threats
 - (c) Organisational response to threats and opportunities

A. OBJECTIVES OF BUSINESS

1. Primary objectives:
- (a) Wealth maximisation
 - (b) Growth
 - (c) Profit maximisation
 - (d) Survival
2. Secondary objectives:
- (a) Market standing and share
 - (b) Innovation, productivity, and added value
 - (c) Acquisition and application of physical resources and technology
 - (d) Profitability in terms of return on capital employed (ROCE)
 - (e) Employees and management
 - (f) Financial resources and social responsibility
3. Conflict of objectives:
- (a) Stakeholder analysis
 - (i) Meaning
 - (ii) Types
 - (iii) Needs and expectations
 - (b) Stakeholder mapping:



- (i) Levels of power and interest
- (ii) Dealing with stakeholder groups
- (iii) Stakeholder conflicts and how they arise
- (c) Stakeholder coalitions; how stakeholder groups can increase their power and influence

B. FUNCTIONS OF MANAGEMENT

1. Planning:

- (a) Meaning
- (b) Types:
 - (i) Strategic plans
 - (ii) Operational plans
 - (iii) Contingency plans
- (c) Management by objectives
- (d) Planning time horizons

2. Controlling:

- (a) Meaning of the term control
- (b) Steps in the traditional control process:
 - (i) Establishment of standards of performance
 - (ii) Measurement of actual performance
 - (iii) Comparison of actual performance with standards
 - (iv) Feedback
 - (v) Corrective action
- (c) Bureaucratic control versus decentralised control

3. Co-ordination:

- (a) Meaning
- (b) Structure of the organisation (functional, divisional, matrix)
- (c) Co-ordination: the need to keep departments working together

4. Leadership and delegation:

- (a) Meaning of 'leader' and 'leadership'
- (b) Types of leaders
- (c) Power:
 - (i) Meaning
 - (ii) Sources
- (d) Theories of leadership approaches:



- (i) Trait theories
 - (ii) Action-centered approach
 - (iii) Contingency approach (Fiedler)
 - (iv) Transformational leadership
 - (e) Leadership styles:
 - (i) The Blake and Mouton's managerial grid; benefits and drawbacks of the grid
 - (ii) Autocratic versus democratic leaders; the leadership continuum (Tannenbaum & Schmidt)
 - (iii) Contingency approaches developing towards situational theory
5. Decision making:
- (a) Importance of effective decision making
 - (b) Types of decisions:
 - (i) Programmed
 - (ii) Non-programmed decisions
 - (c) Decision making models:
 - (i) Classical
 - (ii) Administrative
 - (d) Decision making steps:
 - (i) Recognition of decision requirement
 - (ii) Diagnosis and analysis of causes
 - (iii) Development of alternatives
 - (iv) Selection of desired alternative
 - (v) Implementation of chosen alternative
 - (vi) Evaluation and feedback
6. Communication:
- (a) Meaning and importance
 - (b) Forms
 - (c) The communication process
 - (d) Methods of communication
 - (e) Patterns of communication
 - (f) Effective communication:
 - (i) Attributes
 - (ii) Barriers and how to overcome them

C. FUNCTIONAL AREAS OF MANAGEMENT

1. Finance:



- (a) Areas of expertise:
 - (i) Reporting
 - (ii) Managing
 - (iii) Auditing
 - (iv) Advising on financial performance
 - (b) Types of accounting:
 - (i) Financial accounting
 - (ii) Management accounting
 - (iii) Auditing
 - (iv) Specialist accounting (consultancy)
 - (c) Analysis of financial statements:
 - (i) Trends and ratios
 - (ii) Comparison of financial performance between companies
2. Marketing:
- (a) Meaning
 - (b) Managing the marketing mix:
 - (i) Product: the product life cycle, the need for new product development
 - (ii) Price: competitors' prices, customer expectations
 - (iii) Place: chain of distribution
 - (iv) Promotion: advertising, sales promotions, public relations, direct selling
3. Operations management:
- (a) Purchasing and inbound logistics
 - (b) Manufacturing process
 - (c) Distribution and outbound logistics
4. Human resource management:
- (a) Stages in the selection and recruitment process:
 - (i) Job description and person specification
 - (ii) Induction
 - (iii) Training
 - (iv) Development
 - (b) Motivation:
 - (i) Maslow's hierarchy of needs
 - (ii) Herzberg's motivation (hygiene) theory
 - (iii) McGregor's (X/Y) theory



- (iv) Victor Vroom's Valence (expectancy) theory
- (c) Rewards and incentives:
 - (i) Rewards versus incentives
 - (ii) Types of rewards and incentive schemes
 - (iii) Objectives of a successful reward system

PART B: INFORMATION SYSTEMS

A. COMPUTER BASICS

1. Introduction:
 - (a) History of computers
 - (b) The future of computers
 - (c) Computer generations and classification
2. Computer system:
 - (a) Meaning
 - (b) Types of computers
 - (c) Types of data/ Information processing
 - (d) Caring for computers
 - (e) Data and computer security and risks
 - (f) Ergonomics (physical health and mental health)
 - (g) Computer ethics
3. Information technology:
 - (a) Meaning
 - (b) Manual versus computerised systems
 - (c) Limitations of using computers
 - (d) Applications
 - (e) Social impact of computers and information technology

B. HARDWARE COMPONENTS OF A COMPUTER

1. Introduction:
 - (a) Meaning of hardware
 - (b) Hardware parts of the computer
2. Input devices:
 - (a) Meaning and associated characteristics
 - (b) Types and examples of input devices for example: - keyboard, mouse, light pen,



recorders, bar code reader, etc.

- (c) Utility of input devices in business solutions
- (d) Maintenance and security of input devices
- (e) Input device specifications, characteristics and capabilities

3. Output devices:

- (a) Meaning
- (b) Types and examples of output devices
- (c) Utility of output devices in business solutions
- (d) Maintenance and security of output devices
- (e) Output device specifications, characteristics and capabilities

4. Storage devices:

- (a) Meaning and characteristics of computer storage
- (b) Primary storage devices
- (c) Secondary storage devices
- (d) Storage device selection
- (e) Purpose and role of computer hardware

5. Processing devices (CPU)

6. Uninterrupted power supply

7. Ports and cables

C. SOFTWARE COMPONENTS OF A COMPUTER

1. Computer software:

- (a) Meaning
- (b) Characteristics and applicability of computer software to businesses
- (c) Types
- (d) Application packages and suites

2. Operating systems:

- (a) Meaning and characteristics
- (b) Functions
- (c) Types and examples

3. Utility programs:

- (a) The role of utility programs as common computing requirements
- (b) Characteristics and examples
- (c) Commonly used utility programs



4. Programming languages:

- (a) Meaning and characteristics
- (b) Generation languages (machine code to artificial intelligence)

D. DATA COMMUNICATION DEVICES

1. Data transmission:

- (a) Data communication for business
- (b) Transmission and control of business data
- (c) Components of data communication

2. Types of networks:

- (a) Meaning of computer network and applicability
- (b) Characteristics and types of networks
- (c) The Internet

3. Network topologies:

- (a) Meaning, interconnection of elements and characteristics of network topologies
- (b) Basic types of network topologies and connectivity
- (c) Selection of network topology

4. Network models:

Meaning, characteristics and applications of:

- (a) Client-server system
- (b) Peer-to-peer

E. CARE AND SECURITY OF COMPUTER SYSTEMS AND NETWORKS

1. Meaning and characteristics of computer virus
2. Meaning of software and data security
3. Dangers to computer software and information systems
4. Precautions and safeguards against data/file loss
5. Characteristics of antivirus software

F. GENERAL INFORMATION SYSTEMS CONCEPTS

1. Nature and types of information systems
2. Information systems architecture



3. Control and feedback in information systems
4. Nature, types, value and role of information
5. Office automation.
6. Data and information: definition, distinction and characteristics, data processing cycle and value of information
7. Models of data processing (real-time/online, batch processing, distributed and centralised processing)

G. HARDWARE AND SOFTWARE CONSIDERATIONS

1. Acquisition issues: identifying business requirements and recommending business solutions
2. Classical systems development life cycle/ process:
 - (a) Stages of the systems development life cycle pertaining to development of a business system
 - (b) Relating failures or shortcomings with inappropriate/ inconsistent conduct/ omissions in the development cycle

H. TERMINOLOGIES OF BASIC END-USER PACKAGES

1. Understanding how to use a computer; booting the computer
2. User interface:
 - (a) Types
 - (b) Windows environment
3. Desktop components:
 - (a) Quick launch toolbar
 - (b) Taskbar
 - (c) Icons
 - (d) Start button and menu
 - (e) My computer
 - (f) Task manager
 - (g) Recycle bin
4. File management:
 - (a) Files and folders; creating a new folder
 - (b) Copy/ move files from one folder to another
 - (c) Drag and drop files



- (d) Create different file types with varying extensions
- (e) Create shortcuts to frequently used files or applications
- (f) Use of hard drive and other drives for file management
- (g) Renaming/ deleting folders or files
- (h) Using the recycle bin
- (i) Storage options:
 - (i) Internal drives
 - (ii) Flash drives
 - (iii) CDs/ DVDs
- (j) My computer
- (k) Save As, Save and Exit without changes

I. SPREADSHEETS

1. Characteristics of spreadsheet application
2. Application of spreadsheet software for day-to-day business operations
3. Spreadsheet applications hands-on
4. Spreadsheet application functions: - inputting data, formatting, saving, and renaming
5. Spreadsheet data manipulation
6. Relative referencing and nested functions
7. Spreadsheet output

J. DATABASES

1. Characteristics of a database application/system
2. Types of databases
3. Application of database system software for day-to-day business operations
4. Database applications hands-on
5. Character, field, record, table, database
6. Database objects: tables, queries, forms and reports
7. Entity and attributes
8. Data types, primary key, foreign key, index
9. Data input, manipulation, reporting and saving

K. WORD PROCESSING



1. Characteristics of a word processing application
2. Application of word processing software for day-to-day business operations
3. Word processing application hands-on
4. Application commands and functions: creation of a document, inputting data, formatting, saving, printing and retrieval
5. Tables and graphs
6. Data formatting and text manipulation
7. Mail-merge

L. BASIC PRESENTATION

1. The fundamentals of presentation
2. Presentation basics
3. Formatting a presentation
4. Working with objects
5. Working with tables
6. Working with charts and smart art
7. Applying transition and animation effects
8. Finalising a presentation

PAPER 5 (II)

A. SPREADSHEETS (MS-EXCEL)

1. Getting started with Excel:
 - (a) Starting Excel
 - (b) Excel working environment
 - (c) Using the ribbon as the Excel user interface
 - (d) Navigating within the worksheet/ workbook
 - (e) Selecting a cell or range of cells
 - (f) Entering data
 - (g) Cutting, copying, and pasting cell values
 - (h) Copy and paste special



- (i) Saving and opening a workbook
- 2. Managing rows and columns:
 - (a) Inserting, moving and deleting cells
 - (b) Managing columns and rows
 - (c) Hiding and unhiding rows/ columns
 - (d) Formatting column widths and row heights
- 3. Managing worksheets:
 - (a) Formatting worksheet tabs
 - (b) Inserting and deleting worksheets
 - (c) Moving and copying worksheets
 - (d) Hiding and unhiding worksheets
- 4. Formatting cells:
 - (a) Number and date formatting
 - (b) Finding and replacing text
 - (c) Working with styles
- 5. Working with formulas and functions:
 - (a) Entering formulas
 - (b) Arithmetic operators and order of operations
 - (c) Using auto-fill options
 - (d) Using commonly used functions e.g VLookup, Sum, IF, Max and Min, Sumif, Countif, And, Or, Left, Right and Concatenate, Round, Proper, Now
- 6. Organising worksheet and table data:
 - (a) Creating and modifying tables
 - (b) Sorting and filtering data in tables
 - (c) Summarising information in tables
- 7. Working with charts:
 - (a) Summarising data visually using charts
 - (b) Customising chart data
 - (c) Formatting chart legend and titles
 - (d) Changing chart bodies
 - (e) Saving charts as templates
 - (f) Creating pie-charts
- 8. Managing workbooks:



- (a) Linking worksheets
- (b) Printing worksheets
- (c) Setting page setup options
- (d) Setting page breaks

B. WORD PROCESSING (MS WORD)

1. Familiarising with the MS Word interface:

- (a) The Quick access toolbar
- (b) The Title bar
- (c) The Ribbon
- (d) The Ruler: the text area, the vertical and horizontal scroll bars
- (e) The Status bar
 - (a) Understanding document views: minimise, maximise, close and resize buttons
 - (b) Understanding non-printing characters
 - (c) Executing commands with keyboard shortcuts
- (f) Zoom slider
- (g) Starting a new paragraph
- (h) Help

2. Creating a basic document:

- (a) Creating a blank document
- (b) Customising the word environment
- (c) Entering text
- (d) Saving files and exiting word

3. Editing a document:

- (a) Navigating and selecting text in a document
- (b) Inserting, deleting, or rearranging text
- (c) Undoing changes
- (d) Searching and replacing text
- (e) Cutting and pasting
- (f) Copying and pasting
- (g) Using the clipboard



- (h) Finding and replacing
- (i) Checking spelling, grammar and word count
- (j) Enhancing textual meaning using the thesaurus
- (k) Customising autocorrect options
- (l) Previewing and printing documents

4. Formatting text and paragraphs:

- (a) Changing font appearance
- (b) Highlighting text
- (c) Adding bullets and numbers
- (d) Setting tabs to align text
- (e) Paragraph layout
- (f) Borders and shading
- (g) Applying styles
- (h) Creating lists
- (i) Managing formatting
- (j) Adding spaces before or after paragraphs
- (k) Changing line spacing
- (l) Creating first-line indents
- (m) Indenting paragraphs
- (n) Aligning paragraphs
- (o) Creating hanging indent

5. Tables:

- (a) Creating
- (b) Modifying
- (c) Formatting
- (d) Converting text to tables or tables to text

6. Inserting graphic objects:



- (a) Adding visual effects using symbols and special characters
 - (b) Inserting illustrations, clip art
7. Managing page appearance:
- (a) Page layout
 - (b) Borders and colours
 - (c) Watermarks
 - (d) Headers and footers
 - (e) Page numbering
 - (f) Orientation
 - (g) Page size
 - (h) Margins
 - (i) Page and section breaks

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