

**THEORY PORTION — 30 Marks**

**(A)ELEMENTS OF A COMPUTER**

- Characteristics of Computer

Hardware:

(a)Computer components viz., definitions of Processor, RAM, ROM, HDD, Flash/USB Drive

(b)Parts of Computer: Keyboards, Mouse, Printer, MFD

Software:

(a) System Software -: Definition, type, usage

(b)Application Software: Definition, Application software being used in the department viz. viz. Tulip, Dolphin, New Compilation System, System, Defence Travel System, Nidhi, SIFA, Bhawan and their area of utility, Pension Software (Sparsh).

- Definition of information difference between data and information
- Big data, Data analysis, Data mining, Data warehousing- Basic concepts only
- Centralized and Decentralized System: definition, difference, example of such system in the department
- Basic knowledge of Artificial Intelligence (AI)

**(B)COMPUTER AND COMMUNICATION**

(i)Need for data transmission over distance

(ii) Networking:

(a) Type of Networking-LAN WAN/MAN

(b) Networking components: Switches, Routers, Firewall- their definition and usage

Internet and Intranet — definition usage, difference between the two

Client Server Networks

Social media: Facebook, Twitter, You-tube and department present in them

(C) OPERATING SYSTEM: Operating system concepts: Definition, type and tasks of OS

(D) IT SECURITY:

(i) Concept of IT security: Privacy, Protection. Authorization, Multifactor authentication

(ii) Security risks: Virus, Trojans, Malware, spyware

(iii) Preventive Measures

(iv) Cyber Security & Password policies circulated by HQrs office

(E) DATABASE MANAGEMENT:

(i) RDBMS & DB MS - definition and difference, examples

(ii) Structured Query Language (sql): Select, Insert, Update, Delete

(iii) Conditional Queries: basic Condition — Linking of more than one table

(iv) Data Encryption! Types of data encryption

(v) Difference: Server side scripting and Client Side Scripting

**PRACTICAL PORTION — 70 Marks**

A) Operating Skills in Word Processing package (40%)

B) Operating Skills in Spread Sheet package (30%)

C) Operating Skills in presentation package (30%)