

Syllabus and Scheme(Revised)

DC01: Information Technology

(Theory: 30 Hrs.)

1. Introduction to IT

Data and Information; Data processing; Functional units of a computer; Computer as a data processor; Characteristics of computers; Generations of computers; Types of data – Number, Text, Date, Time, Image, Audio, Video.

2. Computer System Organization

Components of computer – Hardware, Software, Live ware; Hardware components – Processor, Motherboard, Ports, SMPS, Memory (Measuring units, Primary – RAM, ROM, Cache, Secondary – Hard disk, SSD, Optical disks, Semi conductor memories), Peripheral devices.

3. Input – Output devices

Input devices – Keyboard, Mouse, Scanner (OCR s/w), Light pen, Touch pad, Touch screen, Graphic tablet, Joy stick, Bar code /QR code Reader, OMR, MICR, Digital camera, Microphone, Biometric sensor, Smart card reader; Output devices – VDU (LCD, LED, OLED, LCD projector), Printers (Dot matrix, Inkjet, Laser, Thermal, 3D), Plotter, Audio output devices; E-waste and disposal methods.

4. Computer Software

Classification of s/w; System software – OS (Functions, Examples); Language processors – Computer languages, Types of language processors (Assembler, Compiler, Interpreter); Utility programs – Compression, Disk defragmenter, Back up, Antivirus; Application software – Word processing s/w, Spreadsheet s/w, Presentation s/w, Database s/w, Multimedia s/w, Customized s/w.

5. Applications of ICT

e-Governance – Types of interactions, Benefits and challenges; e-Business – e-Commerce, EPS, e-Banking, Benefits and challenges; e-Learning (Academic, Evaluation) – Tools, Benefits and challenges.

DC02: PC and its Operations

(Theory: 15 Hrs. + Practical: 20 Hrs.)

1. Personal Computers

Types of PCs – Desk tops, Laptops, Tablets (Standard configuration of each type); Smart devices

2. Windows OS

Installation, (*Areas covered in the current module based on Windows 10*), Maintaining computer s/w (Disk burning, Antivirus, Cookies, Backup, Browsers, System tools – Disk Clean up, Disk Defragmenter), Updating s/w.

3. Malayalam Computing

Current module is to be incorporated. Keyboard based (One to one mapping, Transliteration), Voice recognition and Handwriting.

DC03: Office Automation

(Theory: 25 Hrs. + Practical: 35 Hrs.)

1. Automated Office

Basics of office automation – Infrastructure, Hardware requirements, Software requirements; Office packages, Internet, File handling – Conversions (jpeg – pdf, docs – pdf, spreadsheets – pdf, presentation – pdf), Resizing, Compression; Concept of Office 365 and Google packages.

2. **MS Word** (Concepts in the existing syllabus are illustrated using Microsoft Word 2010)
3. **MS Excel** (Concepts in the existing syllabus are illustrated using Microsoft Excel 2010)
4. **MS PowerPoint** (Concepts in the existing syllabus are illustrated using Microsoft PowerPoint 2010)
5. **DBMS** (Concepts in the existing syllabus are illustrated using Microsoft Access 2010)

DC04: Linux based Office

(Theory: 25 Hrs. + Practical: 30 Hrs.)

1. Linux OS

Concepts of Proprietary software and Free software (Free Software Foundation, Types of freedom, Free and Open source software); Freeware v/s Shareware; Linux users and permissions; Linux installation; Other software installations.

2. **LibreOffice Writer** (Concepts in the existing syllabus are illustrated using Ubuntu Linux 18.04)
3. **LibreOffice Calc** (Concepts in the existing syllabus are illustrated using Ubuntu Linux 18.04)
4. **LibreOffice Impress** (Concepts in the existing syllabus are illustrated using Ubuntu Linux 18.04)

DC05: Internet

(Theory: 25 Hrs. + Practical: 35 Hrs.)

1. Computer Network

Computer network; Need; Types of network (PAN, LAN, MAN, WAN); Connectivity devices – NIC, Switch, Repeater, Bridge, Router, Gateway, Modem, Firewall; Topology – Bus, Star, Ring, Mesh; Protocol – TCP/IP, HTTP, FTP, DNS; Identifying computers in network (IP address, MAC address).

2. Internet

History of Internet; Basic requirements; Types of connectivity - Wired (DSL, FTTH), Wireless (Mobile broadband, Satellite); Services on Internet – WWW (Web browser, URL), Search engines, E-mail, Social media, Google Apps (Drive, Maps, Form).

3. **HTML** (Restructured with better html documents)

4. Trends and Issues in ICT

Cloud computing; Big data analytics; IoT; Cyber crimes – against individuals, government, property; Hacking, Phishing, Ransomware; Cyber laws; IT Act, Cyber Forensics; Infomania

According to the revised syllabus, the content of the papers in the examination is also modified and guidelines are prepared for the course-end evaluation as follows. Evaluation process consists of both theory examination and practical examination.

Theory Examination Guidelines

DC01: Information Technology

Duration : 3 Hours

Total score : 100

Weight to content:

1. Introduction to IT : 20 score
2. Computer System Organization : 25 score
3. Input – Output devices : 25 score
4. Computer Software : 20 score
5. Applications of ICT : 10 score

Type of Questions and Marks distribution:

Type of Questions	Score	No. of Qns.	No. of Mandatory Qns.	Total Score
Objective	1	11	10	10
Very short answer	2	12	10	20
Short answer	3	10	8	24
Descriptive	5	8	6	30
Essay	8	3	2	16
Total		44	36	100

DC02: PC and its Operations

Duration : 2 Hours

Total score : 50

Weight to content:

1. Personal Computers : 20 score

- 2. Windows OS : 20 score
- 3. Malayalam Computing : 10 score

DC03: Office Automation

Duration : 2 Hours

Total score : 50

Weight to content:

- 1. Automated Office : 14 score
- 2. MS Word : 12 score
- 3. MS Excel : 12 score
- 4. MS PowerPoint : 12 score

DC04: Linux based Office

Duration : 2 Hours

Total score : 50

Weight to content:

- 1. Linux OS : 20 score
- 2. LibreOffice Writer : 10 score
- 3. LibreOffice Calc : 10 score
- 4. LibreOffice Impress : 10 score

DC05: Internet

Duration : 2 Hours

Total score : 50

Weight to content:

- 1. Computer Network : 14 score
- 2. Internet : 14 score
- 3. HTML : 10 score
- 4. Trends and Issues in ICT : 12 score

Type of Questions for DC02, DC03, DC04 & DC05 and Marks distribution:

Type of Questions	Score	No. of Qns.	No. of Mandatory Qns.	Total Score
Objective	1	6	5	5
Very short answer	2	10	8	16
Short answer	3	10	8	24
Essay	5	2	1	5
Total		28	22	50

Practical Examination Guidelines

There will be two units for practical evaluation. Unit 1 consists of office packages from DC03 and DC04. Unit 2 consists of Malayalam computing from DC02 and Web designing from DC05.

Unit	Part	Topic	Procedure	Score
I	A	Document preparation (3 exercises) (MS Word & Writer)	Any two marked questions from any of these two parts are to be attempted. One using MS Office suite and the other using LibreOffice.	100
	B	Worksheet creation (3 Exercises) (MS Excel & Calc)		
	C	Presentation (2 Exercises) (MS PowerPoint & Impress)		
II	A	Malayalam Computing (2 Exercises)	One marked question from each part is to be attempted.	100
	B	HTML coding (3 documents)		

Score distribution

Unit	Qn.	Procedure	Output	Record Book	Viva	Total
I	1	20	20	10	10	100
	2	20	20			
II	1	20	20	10	10	100
	2	20	20			