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**VEER NARMAD SOUTH GUJARAT UNIVERSITY**

University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.

**વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી**

યુનિવર્સિટી કેમ્પસ, ઉદ્ધના-મગદલ્લા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.

Tel : +91 - 261 - 2227141 to 2227146, Toll Free : 1800 2333 011, Fax : +91 - 261 - 2227312

E-mail : info@vnsgu.ac.in, Website : www.vnsgu.ac.in

**Employment Notice No.: Gen/GIA/EN/NT/31258/2025, Date: 10/12/2025 માં**

**દર્શાવેલ Computer Operator (D.C.A.) Detailed અભ્યાસક્રમની અગત્યની સૂચના**

## **DETAILED SYLLABUS OF EXAM**

### **PART: A**

**(1) તાર્કિક કસોટીઓ તથા Data Interpretation (30 Mark)**

- 1). Problems on Ages
- 2). Venn Diagram
- 3). Visual reasoning
- 4). Blood relation
- 5). Arithmetic reasoning
- 6). Data interpretation (Charts, graphs, tables)
- 7). Data sufficiency

**(2) ગાણિતિક કસોટીઓ (30 Mark)**

- 1). Number Systems
- 2). Simplification and Algebra
- 3). Arithmetic and Geometric Progression
- 4). Average
- 5). Percentage
- 6). Profit-loss
- 7). Ratio and Proportion
- 8). Partnership
- 9). Time and Work
- 10). Time, Speed and Distance
- 11). Work, Wages and chain rule

**(1) ભારતનું બંધારણ (10 Marks)**

- 1). Preamble of the Constitution
- 2). Fundamental rights
- 3). Directive principles of state policy
- 4). Fundamental Duty
- 5). Power, role and responsibility of President, vice President and governor
- 6). Parliamentary system
- 7). Amendment of India Constitution, emergency provision in India Constitution
- 8). Centre – State Government and their relation
- 9). Judicial System of Indian Constitution
- 10). Constitutional body

**(2) વર્તમાન પ્રવાહો (10 Marks)**

1. Current events of state, national and international importance including
  - 1). Politics
  - 2). Economy
  - 3). Art, Culture & Society
  - 4). Science, Technology & Environment
  - 5). History & Geography

**(2) ગુજરાતી અને અંગ્રેજી કોમ્પ્રીહેન્સન (10 Marks: ગુજરાતી (05) Marks and English (05) Marks)**

To assess comprehension, interpretation and inference skills 'A paragraph given with set of question on the basis of paragraph or statement and assertion type question can be asked' including following:

1. Tenses, Voices
2. Narration (Direct - Indirect)
3. Use of Articles and Determiners
4. Noun, Pronoun, Verbs, Adverbs
5. Use of Prepositions
6. Use of Phrasal verbs
7. Transformation of sentences
8. One word substitution
9. Synonyms/ Antonyms
10. Jumbled words and sentences
11. Translation from English to Gujarati
12. Question tag?
13. ગુજરાતી વ્યાકરણ

## PART-B

SYLLABUS FOR COMPUTER OPERATOR (D.C.A.)

(120 Marks)

The following subjects will be covered in the MCQ Exam.

Each question = **1 mark**

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MARK DISTRIBUTION (Revised for 120 Marks)

Topic No.	Subject Name	Questions	Marks
1	Computer Fundamentals	10	10
2	Operating System (Windows & Linux)	10	10
3	MS Office (Word, Excel, PowerPoint)	15	15
4	Computer Networking	10	10
5	Programming Fundamentals	10	10
6	DBMS & SQL	15	15
7	Web & Mobile Technologies	15	15
8	Advanced Computer Application Topics	05	05
9	Computer Troubleshooting & Maintenance	10	10
10	Digital Marketing Basics	5	5
11	Social Media & Online Platforms	5	5
12	Gujarat Government Portals & Application Information	10	10
<b>TOTAL</b>	<b>12 Topics</b>	<b>120 Questions</b>	<b>120 Marks</b>

## DETAILED SYLLABUS (TOPIC-WISE)

### 1. Computer Fundamentals – 10 Questions (10 Marks)

- Characteristics & Generations of Computers
  - Types of computers (Analog, Digital, Hybrid)
  - Hardware components (Motherboard, CPU, ALU, CU)
  - Software types (System, Application, Utility, Firmware)
  - Number systems & conversions (binary, octal, hex, decimal)
  - ASCII, Unicode
  - Input devices (scanner, OCR, barcode, biometric)
  - Output devices (printers, plotters, monitors)
  - Memory hierarchy & storage devices (SSD, HDD, Pen drive)
  - Booting: cold vs warm boot
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### 2. Operating System (Windows & Linux) – 10 Questions (10 Marks)

- OS types (batch, multiuser, real-time, embedded)
  - Windows OS settings, control panel, task manager
  - Linux directory structure
  - Windows CMD commands (dir, copy, taskkill, ping)
  - Linux commands (ls, cd, mkdir, rm, chmod, chown, ps)
  - Processes, threads, scheduling
  - File permissions, access control
  - System utilities, registry basics
  - Disk management, partitioning
  - User/group management
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### 3. MS Office (Word, Excel, PowerPoint) – 15 Questions (15 Marks)

#### MS Word

- Formatting, styles, page layout
- Header/footer, page numbers
- Mail merge (labels, forms)
- Tables & charts in Word
- Review tools: comments, track changes

#### Excel

- Basic & advanced formulas (SUMIF, IF, VLOOKUP, HLOOKUP)
- Pivot tables, pivot charts
- Data validation, filtering, sorting
- Conditional formatting
- Charts (bar, pie, line)

#### PowerPoint

- Slide master
- Animations & transitions

- Hyperlinks & audio/video
  - Design themes
  - Printing formats (notes, outline)
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#### 4. Computer Networking – 10 Questions (10 Marks)

- Networking devices (hub, switch, router, access point,ftp)
  - IP Address (IPv4/IPv6), Public vs Private
  - Subnetting basics
  - OSI model layers & functions
  - TCP/IP suite
  - DNS, DHCP
  - Wi-Fi standards, Bluetooth basics
  - Network topologies
  - Cyber threats (DoS, spoofing)
  - Network troubleshooting commands (ping, tracert, ipconfig)
  - Networking Tools ( Remote desktop,TeamViewer,AnyDesk)
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#### 5. Programming Fundamentals – 10 Questions (10 Marks)

- Variables, constants, data types
  - Operators (arithmetic, relational, logical)
  - Type casting
  - Control statements (if, switch, loops)
  - Arrays & strings
  - Functions & parameters
  - Introduction to OOP (class, object, constructor etc.)
  - File handling basics
  - Debugging concept
  - Pseudocode & flowcharts
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#### 6. Database Management System (DBMS & SQL) – 15 Questions (15 Marks)

- DBMS vs RDBMS
  - Entity, Attributes, Relationships
  - ER Model
  - Keys (Primary, Foreign, Unique, Composite)
  - Normalization (1NF, 2NF, 3NF)
  - SQL DDL/DML (CREATE, SELECT, INSERT, DELETE, UPDATE)
  - Joins (INNER, LEFT, RIGHT)
  - Views, Indexes
  - ACID properties
  - Backup & restore basics
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#### 7. Web & Mobile Technologies – 15 Questions (15 Marks)

- HTML tags, forms, attributes
- CSS selectors, classes, inline vs external CSS

- JavaScript basics (variables, functions, events)
  - Client-server model
  - HTTP methods (GET, POST)
  - Web domain, hosting, DNS records
  - Basics of PHP/ASP.NET
  - Responsive design basics
  - Mobile operating systems (Android/iOS)
  - API basics
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#### 8. Advanced Computer Application Topics – 5 Questions (05 Marks)

- Cloud models (IaaS, PaaS, SaaS)
  - Virtual machines, containers
  - Cyber security threats (malware, ransomware, phishing)
  - Encryption types
  - AI basics (ML, deep learning)
  - Chatbots basics
  - SDLC phases (waterfall, agile)
  - Version control (Git basics)
  - IoT fundamentals
  - E-commerce basics
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#### 9. Computer Troubleshooting & Maintenance – 10 Questions (10 Marks)

- System boot errors & solutions
  - Device drivers installation
  - Printer troubleshooting
  - BIOS/UEFI basics
  - Antivirus/firewall configuration
  - Backup & restore
  - Network troubleshooting tools
  - Disk cleanup, defragment
  - UPS types & maintenance
  - Application crash troubleshooting
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#### 10. Digital Marketing Basics – 5 Questions (5 Marks)

- SEO on-page & off-page
- Google ranking factors
- SEM / Google Ads bidding
- PPC model
- Email marketing workflow
- Funnels & landing pages
- Web traffic analytics
- Content marketing basics
- CTR, CPC, CPM metrics
- Affiliate marketing basics
- Effective Google search filters

- Online verification of documents
  - Browser settings, extensions
  - Download/upload rules
  - Safe browsing practices
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#### 11. Social Media & Online Platforms – 05 Questions (05 Marks)

- Facebook/Instagram page setup
  - Social media post formats
  - Email management
  - Hashtag strategy
  - Reels & Shorts basics
  - Social media algorithms
  - Engagement rate
  - Organic vs Paid Ads
  - Social media insights/analytics
  - Safety, reporting, privacy
  - WhatsApp Business features
  - Digital India components
  - Aadhaar authentication
  - DigiLocker system
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#### 12. Gujarat Government Portals & Applications – 10 Questions (10 Marks)

- Digital Gujarat: services, certificates
- GSWAN basics
- e-Gram services
- IFMS, Treasury Portal
- RTO Parivahan services
- AnyRoR land records
- TeCHO+ App (health)
- Ayushman Bharat
- Online application tracking
- Government mobile apps (mParivahan, UMANG)