

Syllabus for

Diploma in Computer Applications (DCA)

Semester: 1 - 11

Session: 2022-23



Directorate of Open & Distance Learning Guru Nanak Dev University

(ESTABLISHED UNDER STATE LEGISLATURE ACT NO. 21 OF 1969)

Accredited by National Assessment and Accreditation Council (NAAC) At 'A++' Grade (Highest Level) As Per Modified Criteria Notified On 27/07/2017 And Conferred 'University with Potential for Excellence' Status and 'Category-I University' As Per University Grants Commission (F. No. 1-8-2017/(CPP-II) Dated 12/02/2018)

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Eligibility:

+2 in any stream with at least 45% marks in aggregate (40% for SC/ST Candidates).

SEMESTER - I

Paper Code	Subject	Marks			Credits
		Internal Assessment	End Term	Total	
ODDCA - 101T	Information Technology & Operating System	20	80	100	4
ODDCA - 102T	PC Computing - I	20	80	100	4
ODDCA - 103P	Programming Laboratory - I	20	80	100	4
Total Marks & Credits		60	240	300	12

SEMESTER - II

Paper Code	Subject	Marks			Credits
		Internal Assessment	End Term	Total	
ODDCA - 201T	Database Management System	20	80	100	4
ODDCA - 202T	PC Computing - II	20	80	100	4
ODDCA - 203P	Programming Laboratory - II	20	80	100	4
Total Marks & Credits		60	240	300	12

ODDCA - 101T: Information Technology & Operating System

Time: 03 Hours

Max. Marks: 100 Marks

Internal Assessment: 20 Marks

End Term: 80 Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of Four sections.
2. Paper setter shall set Eight questions in all by selecting Two questions of equal marks from each section. However, a question may have sub-parts (not exceeding four sub-parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt Five questions in all, by at least selecting One question from each section and the 5th question may be attempted from any of the Four sections.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus.

Section-A

Information Concepts and Processing

- Evolution of Information Processing
- Data Information Language
- Communication and Network
- Client Server Systems
- Computer Networks
- LAN & WAN

Section - B

Internet

- Understanding the Internet
- E-mail Basics
- Browsing the Web
- Finding Stuff on the Web and Net

Elements of a Computer Processing System

Hardware - CPU

- Storage Devices and Media
- VDU
- Input - Output

Section – C

Data Communication Equipment
Software–System Software, Application Software

Programming Languages

- Classification
- Machine Code
- Assembly Language
- Higher Level Languages
- Fourth Generation languages

Section – D

Operating System

What is Operating System–Evolution of OS

Types of Operating System

- A) Single User Systems
- B) Multi User Systems : Unix, XENIX, VAX/VMS

Booting a System

References

1. V.K. Jain : Fundamentals of Information Technology
2. <http://swayam.gov.in>
3. <http://edx.org> formerly <http://mooc.org>
4. <http://epgp.inflibnet.ac.in/>

ODDCA - 102T: PC Computing - I

Time: 03 Hours

Max. Marks: 100 Marks

Internal Assessment: 20 Marks

End Term: 80 Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of **Four sections**.
2. Paper setter shall set **Eight questions** in all by selecting **Two questions** of equal marks from each section. However, a question may have sub-parts (not exceeding four sub-parts) and appropriate allocation of marks should be done for each sub-part.
3. Candidates shall attempt **Five questions** in all, by at least selecting **One question** from each section and the **5th** question may be attempted from any of the **Four sections**.
4. The question paper should be strictly according to the instructions mentioned above. In no case a question should be asked outside the syllabus.

Section-A

Introduction to windows

1.1 Origin of windows

a) Parts of Windows Screen (Definition)

- The Desktop, the taskbar
- Start Menu
- The windows
- Icons

b) Types of windows

- Application Windows
- Document Windows

c) Anatomy of a window

- The title bar
- Minimize and Maximize buttons
- The control box
- Scroll bars, scroll buttons and scroll boxes
- About my computer icon
- About the networking neighbourhood icon
- Recycle bin
- Folders – creation and definition
- Windows explorer (definition)
- Shortcut icons with creation and definition

Section-B

Introduction to MS-Office

Introduction to Word (Word for Windows)

1. Introduction to Word
2. Introduction to Parts of a Word Window (Title bar, Menu bar, Tool bar, the Ruler, Status area)
3. Creating new document
4. Opening an existing document
5. To insert a second document into an open document
6. Editing a document
7. Deleting text, replacing text, moving and copying text
8. Page setup
9. Margins and gutters
10. Changing fonts and front size
- II. To make text bold, italic or underline
12. Line spacing
13. Centering, right alignment and left alignment
14. Page breaks

Section - C

Introduction to Word (Word for Windows)

1. Headers and footers
2. Putting page numbers in headers and footers
3. Saving documents
 1. naming word document
 2. saving in different formats
 3. saving on different disks
4. Spell checker
5. Printing
6. Creating a table using the table menu
 1. entering and editing text in tables
 2. selecting in tables
 3. adding rows
 4. changing row heights
 5. deleting rows
 6. inserting columns
 7. changing columns and cell width
7. Borders and shading
8. Templates and wizards
9. Working the graphics
10. Drawing objects
- II. Using frames, position objects
12. Mail merge
13. Using word and word documents with other applications

Section - D

MS-POWER POINT

1. Introduction to Ms Power Point
2. Power Point Elements
 - a. Templates
 - b. Wizards
 - c. Views
 - d. Color Schemes
3. Exploring Power Point Menu
 - a. Opening and Closing Menus
 - b. Working with Dialog Boxes
4. Adding text, adding title, moving text area, resizing text boxes, adding art.
5. Starting a new slide
6. Starting a Slide show
7. Saving Presentation
8. Printing Slides
9. Views
 - i. Slide View, Slide sorter view, notes view, outline view
10. Formatting and enhancing text formatting
 - a) Formatting
 - a. Changing format with a new layout
 - b. Using a pick look wizards to change format
 - c. Alignment of Text
 - d. Working with text spacing
 - b) Enhancing
 - a. Using Bullets
 - b. Changing text font and size
 - c. Selecting text style, effect and color
 - d. Picking up and applying styles
- II. Creating Graphs
12. Displaying slide show and adding multi-media

References

<http://swayam.gov.in>
<http://edx.org> formerly <http://mooc.org>
<http://epgp.inflibnet.ac.in/>

ODDCA - I03P: Programming Laboratory - I

Time: 03 Hours

Max. Marks: 100 Marks

Internal Assessment: 20 Marks

End Term: 80 Marks

Practical will be based on Subject Code ODDCA-I01T & ODDCA-I02T

ODDCA - 201T: Database Management System

Time: 03 Hours

Max. Marks: 100 Marks

Internal Assessment: 20 Marks

End Term: 80 Marks

Instructions for the Paper-Setter/examiner:

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3. Candidates shall attempt Five questions in all, by at least selecting One question from each section and the 5th question may be attempted from any of the Four sections.
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Section - A

Introduction to Database Management System, Components of DBMS, E.R. Diagrams, Data Models, Hierarchical Model, Network Model and Relational Model.

Section - B

Concept of Database Security, Protection, Integrity, Recovery, Concurrency. Idea of Distributed Databases, Knowledge Base/Expert Systems

ORACLE 10g:

SQL *PLUS

- Introduction to Oracle 10g
- SQL – DQL, DML, DCL

Section - C

ORACLE 10g:

SQL *PLUS

- Join methods & Sub query, Union, Intersection, Minus, Tree Walking
- Built in Functions, Views, Security amongst users, Sequences, Indexing Object
- Oriented Features of Oracle 10g

Section - D

PL/SQL

- Introduction to PL/SQL
- Cursors – Implicit & Explicit
- Procedures, Functions & Packages
- Database Triggers

References

1. C.J. Date : Data Base Management Systems.
2. <http://swayam.gov.in>
3. <http://edx.org> formerly <http://mooc.org>
4. <http://epgp.inflibnet.ac.in/>

ODDCA - 202T: PC Computing - II

Time: 03 Hours

Max. Marks: 100 Marks

Internal Assessment: 20 Marks

End Term: 80 Marks

Instructions for the Paper-Setter/examiner:

1. Question paper shall consist of Four sections.
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3. Candidates shall attempt Five questions in all, by at least selecting One question from each section and the 5th question may be attempted from any of the Four sections.
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Section - A

MS-EXCEL

- a) Introduction to Worksheet/Spreadsheets
- b) Creating a simple Worksheet
- c) Computations in a Worksheet

Section - B

MS-EXCEL

- a) Printing the Worksheet
- b) Graphs
- c) What if Analysis (Data Sort, Fill, Query, Filter)

Section - C

MS Access

Introduction, Understanding Databases, Creating Tables, Queries.

Section - D

MS Access

Forms Reports, Adding graphs to your report.

References

1. <http://swayam.gov.in>
2. <http://edx.org> formerly <http://mooc.org>
3. <http://epgp.inflibnet.ac.in/>

ODDCA - 203P: Programming Laboratory - II

Time: 03 Hours

Max. Marks: 100 Marks

Internal Assessment: 20 Marks

End Term: 80 Marks

Practical will be based on Subject Code ODDCA - 201T & ODDCA - 202T