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शिवाजी विद्यापीठ, कोल्हापूर - ४१६ ००४.

दुरध्वनी : (ईपीएबीएक्स) २६०९००० (अभ्यास मंडळे विभाग- २६०९०९४) तार : युनिशिवाजी

फॅक्स : ००९१-०२३१-२६९१५३३ व २६९२३३३. Email bos@unishivaji.ac.in

एस.यु./अ.म./विज्ञान विद्याशाखा/4018

दि. 03.09.2011

प्रति,

अधिविभागप्रमुख/समन्वयक,

संगणकशास्त्र अधिविभाग,

शिवाजी विद्यापीठ, कोल्हापूर.

विषय:- शैक्षणिक वर्ष 2011-12 पासून सुधारित करण्यात आलेल्या Diploma in Computer Programming (DCP) या विषयाच्या सुधारित अभ्यासक्रम, प्रश्नपत्रिकेचे स्वरूप व समकक्षतेबाबत.

महोदय,

उपरोक्त विषयसंदर्भात विद्यापीठ अधिकार मंडळाच्या निर्णयास अनुसरून आपणास आदेशान्वये कळविण्यात येते की, विज्ञान विद्याशाखेतर्गत Diploma in Computer Programming (DCP) या विषयाच्या सुधारित अभ्यासक्रमास, प्रश्नपत्रिकेचे स्वरूप व समकक्षतेस विद्यापीठ अधिकार मंडळाने मान्यता दिली असून सोबत त्याची सी.डी. (सॉफ्ट कॉपी) जोडली आहे. तसेच सदर अभ्यासक्रम विद्यापीठाच्या www.unishivaji.ac.in या संकेतस्थळावर उपलब्ध करण्यात आला आहे.

उपरोक्त अभ्यासक्रम शैक्षणिक वर्ष 2011-12 पासून लागू करण्यात येत असून अनुत्तीर्ण विद्यार्थ्यांसाठी जून्या अभ्यासक्रमानुसार परीक्षा देण्यासाठी (मार्च/एप्रिल, 2012 व मार्च/एप्रिल, 2013) अशा दोन संधी उपलब्ध करून देण्यात आलेल्या आहेत.

तेंव्हा सदर बाब सर्व संबंधित विद्यार्थी व शिक्षक यांचे निदर्शनास आणावी.

कळावे,

आपला विश्वासू,

उपकुलसचिव

सोबत:- वरीलप्रमाणे

प्रत:-

1. अधिष्ठाता, विज्ञान विद्याशाखा
2. अध्यक्ष, संगणकशास्त्र अस्थायी मंडळ
3. बी.एससी./एम.एससी. विभाग
4. परीक्षक नियुक्ती विभाग
5. संगणक केंद्र

SHIVAJI UNIVERSITY, KOLHAPUR.



B
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Syllabus For
DIPLOMA IN COMPUTER PROGRAMMING
(DCP)

(Subject to the modifications to be made from time to time)

Syllabus to be implemented from June -2011 onwards.

Proposed Structure of the Course and Standard of passing And Eligibility

The following table gives the structure regarding the weekly teaching provisions and scheme of examination at DCP. A five character code is given to each paper.

The first digit following DCP is '0' or '1', according as the course is theory or Practical.

- The course duration is of one year with Annual Evaluation pattern.

Paper no	Section code	Title of paper	T	P	In	Unit	Total marks
1	DCP01	Financial Accounting with Tally	2	2	20	80	100
2	DCP02	Visual Programming	2	2	20	80	100
3	DCP03	RDBMS with oracles	2	2	20	80	100
4	DCP04	Programming in C,C++	2	2	20	80	100
5	DCP11	Practical	-	-	20	80	100
6	DCP12	Project and viva	-	2	20	80	100
TOTAL			8	10	120	480	600

Each theory paper will be of EIGHTY MARKS and of THREE hours duration.

- No of weeks/year = 30
- No of Hrs/Subject = $2 \times 30 = 60$ Hrs (T) /paper
- No of Hrs/Subject = $2 \times 30 = 60$ Hrs (P) /paper

Pattern of Question paper :

There will be SEVEN questions each carrying SIXTEEN marks. A student has to attempt any FIVE. Each question will contain at least TWO sub question of which at least one will be based upon a problem.

The assessment of the practical (examination): -

- 1) Every practical a student performs day to day in the laboratory shall be of two hours durations. A student will have to carry out practical assignments in Lab.

- 2) There will be no external examination for the practical. These examinations will be internally conducted. In the academic year there will be two practical examinations each carrying 40 marks. Internal 20 marks of practical's are for tutorials and assignments. (The distribution of 20 marks is: 5 marks for each theory subject)

The assessment of the project and viva: -

For the assessment of the project, specialization wise panel of expert will be appointed.

Nature of the internal examination:-

- For every theory paper there will be two internal examination(s) carrying 10 marks each. The total of the marks scored in these two examinations will be taken for the final score out of 20.
- The nature of this examination will be as follows.
There will be 10 questions of objective type only in the Internal examination.

Standard of passing :

- A) There is no separate passing in the internal examination and internal marks once obtained will be carried forward as and when required .
- B) No student will be allowed to take reexamination if he/she remains absent unless the reason is genuine. The decision regarding such cases will be taken in a department committee meeting.
- C) There are SIX different heads of passing ,four theory papers, Practical, project and viva work, to pass a head a student has to secure FORTY percent marks in the concerned head at University Examination.
- D) If student fails in a head of passing ,he has to appear to the university examination and internal marks will be carried further.
- E) A candidate will be awarded a class or distinction as per the university Rules.

Eligibility:

- ❖ 12th standard passed or any Diploma passed of Statutory Board.
- ❖ A candidate perusing any degree is eligible for admission to DCP course.

Admission Criteria :

Candidate to the course will be selected based on 12th standard marks or aggregate marks at diploma course or aggregate marks at degree course and performance in the personal interview .

DCP01: Financial Accounting with Tally

Unit 1 :

Financial Accounting :

Need for Accounting, Internal and External uses of Accounting Information, Accounting Concepts and conventions. Accounting process and system : Nature of accounting transactions, Journal entries and posting to ledger, Subsidiary books, Cash Book, Bank Reconciliation Statement. (15 Hrs)

Unit 2:

Final Account :

Depreciation : Concept, Depreciation Methods – Straight Line, Written Down, Sum of digits method, Double Declining Method.

Preparation of Trial Balance, Final Accounts for Proprietor and Partnership. (15 Hrs)

Unit 3 :

Introduction to Tally :

Introduction, Creation of Company, Introduction to Gateway of Tally, Menu, Company Info menu. Accounts Configuration & Classification : Features & Configuration options for company maintaining accounts, Planning about organization of Chart of Accounts, Group and Ledgers. (15 Hrs)

Unit 4 :

Account Masters and Vouchers :

Working with Account Masters, viz, Group, Ledger, Cost Centre and Category, Currency, Entry of Accounts Vouchers with Examples of Bill wise, Interest Computation, Printing of Vouchers, Creation and Alteration of Vouchers types and Vouchers Classes. Viewing Balance Sheet, P& L Account, Trial Balance. (15 Hrs)

References:

- 1 Advance Accountancy : M. C. SHUKLA . & T.S. GREWAL .
- 2 Advance accountancy : S.C. JAIN & K. L. NARANG.
- 3 Advance Accountancy : S. M. SHUKLA
- 4 Implementing Tally 6.3 by A.K.Nadhani, K.K.Nadhani, BPB Pub.
5. Theory and Practice of Computer Accounting - Rajan Chougule.
6. Accounting by Tally (Illustrated) by L.B.Singh & V.P.Singh, Asian Pub.

DCP02 : Visual Programming

Unit – 1:

INTRODUCTION TO VISUAL BASIC:

Introduction of GUI, Difference between Procedure Oriented Programming and Event Driven Programming, events, properties and methods.

Understanding VB IDE: Project Explorer, Properties Window, Toolbox, Form, Layout window, Code Window, Naming Conventions, Variables & Data Types: Byte, Boolean, Integer, Long, Single, Double, Currency, Decimal, Date, Object, String variable & fixed length, Variant with numbers and characters, Scope of variables-Global, Local, Static, Constants.

(15 Hrs)

Unit – 2:

CONTROLS AND MENU:

Label, Textbox, Command Button, Frame, Checkbox and Option button, List box and Combo box, Drive list box, Directory list box, File list box, Timer, Message Box, Input box, Common Dialog box controls, Formatting controls, Control Arrays, Tab order.

MENU: Creating menus, selecting fonts from menu, Adding code to menus, Adding Shortcut keys to menu.

(15 Hrs)

Unit – 3:

CONTROL STATEMENTS & FUNCTIONS:

If---else, select case, Do Statements, For next, While, FUNCTIONS: functions and procedures, String, Mathematical, Date, Data type conversion functions with examples, Graphics functions: line, circle with examples.

(15 Hrs)

Unit – 4:

LINKING WITH DATABASES & REPORTS:

Concept of record sets, DAO, Data form wizard, Add-Ins, Data control, Data grid control, DB-combo box, ADO, Data Report.

(15 Hrs)

References:

- 1) H M Deital, P J Deital, Visual Basic 6, Pearson publication
- 2) Mastering in VB 6.0 by Ivan Patrouses
- 3) Visual Basic 6 Complete BPB publication
- 4) Visual Basic 6.0 Black book

DCP03: RDBMS with Oracle

Unit – 1:

RDBMS:

Concept of RDBMS, Difference between DBMS and RDBMS, Features of RDBMS, RDBMS Terminology-Relation, Tuple, Cardinality, Attribute, Degree, Primary Key, Domain, Codd's Rules, Data Relational Model, , Functional Dependencies, Normal Forms, Boyce-Codd Normal Form. Role & responsibilities of DBA,s

(15 Hrs)

Unit –2:

INTRODUCTION TO SQL:

Features of SQL, Data types, Classification of SQL Commands. SQL table creation, Integrity Constraints, Insertion of Records, Select statement, Alter Commands, Drop Table, SQL Operators-relational, Logical, Like, Between, IN operator, Clauses-Order by, Group by, Where Clause, Having Clause. SQL Functions- Arithmetic functions.

(15 Hrs)

Unit – 3:

JOIN AND SUB QUERIES:

Join- Equi Join, Simple Two Table Join, Outer Joins, Self Join, Set operators. Sub queries, Nesting of sub queries, sub queries in DML commands, Correlated queries, comparison operators. Indexes, Sequences. Views-Create View, Drop View and Advantages.

(15 Hrs)

Unit – 4:

INTRODUCTION TO PL/SQL:

SQL Difference between SQL and PL/SQL, Block definition Structure, Block Functions- % type, % Row type, % record type, IF ELSE statement, FOR loop, While loop, GOTO Statement. Functions- MAX, MIN, SORT, COUNT, AVERAGE.CONCEPT OF CURSORS AND TRIGGERS: Types-Implicit, Explicit open, Close cursor with examples. Introduction to Triggers-Block level, Field level triggers.

(15 Hrs)

References:

- 1) Commercial Application Development using Developer2000 by Ivan Bayross.
- 2) Structured Query Language by Osbome
- 3) SQL by Scott Urman.
- 4)SQL & PL/SQL Black Book for Oracle by Dr,P.S.Deshpande.
- 5) Fundamentals of DBMS Mark L Gillenson

DCP04 : Programming in C and C++

Unit – 1 :

Programming development

ALGORITHM: Definition ,properties, **FLOWCHARTS:** Principles of flowcharting, symbols, converting algorithms to flowcharts. **Introduction to C:** History, Character set, Identifiers: variables, constants, symbolic constants, keywords. Data types, Operators: Arithmetic, relational, logical, assignment.

(15 Hrs)

Unit – 2 :

Control Structures Arrays and Functions :

Conditional : If-else, switch statement. loops: while, for, do..while loop, Unconditional: Break, continue, exit statements, goto .**Array:** Meaning and definition, Declaration, Initialization and processing, Single dimensional **Function:** Definition, Declaration Prototype, types of functions, recursive function, scope rules, local and global variables, **Pointers :** introduction to pointers, pointer notations.

(15 Hrs)

Unit – 3 :

File handling

Basics, file opening modes, closing file, and different file functions: fopen, fgetc, fputc, fscanf, fprintf, fread, fwrite, getw, putw, fclose.

Introduction to Object oriented programming through C++:

Introduction to OOPs Concepts, What is C++, Applications of C++,

Functions : Main function, prototype, inline function, function overloading, friend and virtual function. **Classes and object:** Definition ,simple C++ program, Defining member functions ,memory allocation for objects.

(15 Hrs)

Unit –4 :

Object oriented programming through C++

Constructors and destructors: Definition, Types, copy constructors

Inheritance: Definition, Types of inheritance, Virtual base class, abstract class. **Polymorphism:** Definition,, Dynamic binding, Operator overloading, This pointer, Introduction to Exception Handling.

(15 Hrs)

References :

1. Let's C --- Yashwant Kanetkar
- 2.The C++ Programming Language --- Bjarne Stroustrup
3. Object Oriented Programming with C++ --- E Balagurusamy
4. Programming with C++ --- D Ravichandran

Equivalence Subjects for DCP Old syllabus subject

Sr.No	Section Code	Old Paper	Section Code	Equivalent Paper
1	DCP 01	Fundamental of computers	DCP 01	No Equivalence Two more chances to be given
2	DCP 02	Programming in C++ and JAVA	DCP 02	No Equivalence Two more chances to be given
3	DCP 03	Windows & Visual Basic	DCP 03	Visual Programming
4	DCP 04	Business Data Processing & RDBMS	DCP 04	RDBMS with Oracles