

INDIRA PRIYADARSHINI COLLEGE, CHHINDWARA (M.P.)

CONSPECTUS

CLASS- **B.C.A. IV Sem.**

SUBJECT- **Numerical Analysis**

Date	Unit	Proposed Contents	Remark
01 Feb 14 - 06 Feb.14	I	Errors in Numerical calculations. Numbers and their accuracy,	
07 Feb 14 - 13 Feb.14		Errors , and error formula. Error in Series approximation.	
14 Feb 14 - 20 Feb.14		Solution of Algebraic and transcendental equations Bisection	
		method	
21 Feb 14 - 28 Feb.14		Iteration, False position method, Newton Raphson method.	
01 Mar 14 - 06 Mar.14		Root squaring method. Non linear equation Newton's	
		iteration	
		Method Newton Raphson method.	
07 Mar 14 - 13 Mar.14	II	Interpolation- Finite difference, Newton's formula for	
		interpolation,	
14 Mar 14 - 24 Mar.14		Central Difference interpolation formulae, Interpolation with	
		unevenly	
25 Mar 14 - 30 Mar.14		Spaced points, Divided difference formula,	
01 Apr 14 - 06 Apr.14		Interpolation by interaction, Inverse interpolation.	
07 Apr 14 - 14 Apr.14	III	Curve fitting, least square procedures,	
15 Apr 14 - 25 Apr.14		Weighted least square linear and nonlinear.	
25 Apr 14 - 31 Apr.14		Numerical differentiation numerical	
01 May 14 - 06 May.14		Integration Trapezoidal rule, Simpson's 1/3 rule, 3/8 rule,	
		Numerical evaluation.	
07 May 14 - 14 May.14	IV	Matrices and Linear system of equations,	
15 May 14 - 21 May.14		metric operation, solution of linear system - direct method,	
22 May 14 - 30 May.14		iterative method.	

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CLASS- B.C.A. IV Sem.

SUBJECT- System Analysis and Design

Date	Unit	Proposed Contents	Remark
01 Feb 14 - 06 Feb.14	I	System concept, definition, characteristics, organisation,	
07 Feb 14 - 13 Feb.14		interaction elements of system physical and abstract system,	
14 Feb 14 - 20 Feb.14		open and closed system development life cycle recognition	
		of need, feasibility study analysis, design implementation	
		system	
21 Feb 14 - 28 Feb.14		Planning and control for system success.	
01 Mar 14 - 06 Mar.14	II	System planning and Initial Investigation base for planning	
		system	
07 Mar 14 - 13 Mar.14		Dimensions of planning in determining users requirement fact	
		finding,	
14 Mar 14 - 24 Mar.14		Determination of feasibility tools of structured analysis,	
	Logical and physical models, context diagrams, DFD		
25 Mar 14 - 30 Mar.14		Data dictionary, data structure diagrams, system structured	
		charts system model.	
01 Apr 14 - 06 Apr.14	III	Feasibility study, system, system performance constraints	
07 Apr 14 - 14 Apr.14		System objectives, feasibility report. Costs benefit analysis,	
15 Apr 14 - 25 Apr.14		data analysis, and system proposal	
25 Apr 14 - 31 Apr.14	IV	Systems design – logical and physical design,	
		design methods, IPO and HPO charts audit consideration,	
01 May 14 - 06 May.14		Processing controls data validation.	
07 May 14 - 14 May.14		System testing & implementation-introduction & need of	
15 May 14 - 21 May.14		Testing , types of testing, implementation: introduction	
22 May 14 - 30 May.14		post implementation review, maintenance, Document writing	

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CONSPECTUS

CLASS- **B.C.A. IV Sem.**

SUBJECT- **Object Oriented Programming**

Date	Unit	Proposed Contents	Remark
01 Feb 14 - 06 Feb.14	I	Introduction to OOPS and C++, C++ program, variables.	
07 Feb 14 - 13 Feb.14		Manipulators, operators, FOR loop, WHILE, DO, If,	
14 Feb 14 - 20 Feb.14		Break and Continue statement. Ternary & Logical operator,	
21 Feb 14 - 28 Feb.14		Structure and enumerated data types, Numeric and string	
01 Mar 14 - 06 Mar.14		Arrays. 2D array.	
07 Mar 14 - 13 Mar.14	II	Functions, passing of parameters argument and address,	
14 Mar 14 - 24 Mar.14		Overloaded and inline functions, friend functions,	
25 Mar 14 - 30 Mar.14		static functions, function argument. Storage class.	
01 Apr 14 - 06 Apr.14		Object and class constructor. stack class, string as a class,	
		Random number generator.	
07 Apr 14 - 14 Apr.14	III	Overloaded operators, binary operations on class data.	
		Joining strings, overloaded relational operator,	
15 Apr 14 - 25 Apr.14		Type conversion-class to basic, basic to class, class to class.	
25 Apr 14 - 31 Apr.14		Inheritance multiple inheritance, pointers and arrays,	
01 May 14 - 06 May.14		Passing by pointer sorting using pointers in string handling,	
		pointers to objects, linked list.	
07 May 14 - 14 May.14	IV	File handling, string handling, set and put functions,	
		Disk files file handling with multiple objects,	
15 May 14 - 21 May.14		Pointers disk manipulators redirection graphics, text	
22 May 14 - 30 May.14		Processing, functions, colors shapes, Animated shapes texts in	
		graphics mode virtual function,	

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CONSPECTUS

CLASS- B.C.A. IV Sem.

SUBJECT- Visual Programming

Date	Unit	Proposed Contents	Remark	
01 Feb 14 - 06 Feb.14	I	Introduction of Visual Basic-Features of VB , IDE,		
07 Feb 14 - 13 Feb.14		Toolbox controls, Object Naming Conventions,		
14 Feb 14 - 20 Feb.14		Events, methods and properties, Data Types in VB,		
21 Feb 14 - 28 Feb.14		Variables, constants Operators,		
01 Mar 14 - 06 Mar.14		Manipulating forms: loading, showing and Hiding forms form Event.		
07 Mar 14 - 13 Mar.14	II	Visual Basic Control Structures: Selection constructs/Decision		
14 Mar 14 - 24 Mar.14		Structures-If, select-case, Looping Structures-For, do while, do...loop while, for Each...Next, While...Wend,		
25 Mar 14 - 30 Mar.14		Nesting loops, Exiting from loops, with. end with, Arrays, Dynamic Arrays. Procedures- Types of procedures,		
01 Apr 14 - 06 Apr.14		Passing parameters to procedures, Exiting from procedures, Code Modules- Form modules, Standard		
07 Apr 14 - 14 Apr.14		Modules, Class Modules, Scope and lifetime of Variables.		
15 Apr 14 - 25 Apr.14	III	Library Functions-String functions, Numeric Functions, Date & Time functions, Miscellaneous functions,		
25 Apr 14 - 31 Apr.14		VB Interface Styles- SDI, MDI. VB Menues, Status bar, Tool bar, Tree View, List View, Rich text box control,		
01 May 14 - 06 May.14		MS Flex Grid, DT Picker, Database Programming- Data controls, ADO data control, OLE DB.		
07 May 14 - 14 May.14		IV	Accessing Database Using ADO DC- Extracting Selected Data, Navigating the Record set,	
15 May 14 - 21 May.14			Modifying Database through Record set, DSN, Providers Data Environment, Data Report, Error Handling in Visual Basic-	
22 May 14 - 30 May.14	Types of Error Handling Errors, Debugging Tools in VB, Package & deployment Wizard.			

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SUBJECT- **Optimation Methods**

Date	Unit	Proposed Contents	Remark
01 Feb 14 - 06 Feb.14	I	Scope of operations research, Formulation of Simple Linear	
07 Feb 14 - 13 Feb.14		programming problems,	
14 Feb 14 - 20 Feb.14		Graphical Method, Simplex Method,	
21 Feb 14 - 28 Feb.14		Two Phase Method.	
01 Mar 14 - 06 Mar.14	II	Primal and Dual LPPs	
07 Mar 14 - 13 Mar.14		Dual Simplex Method,	
14 Mar 14 - 24 Mar.14		Assignments Problems,	
25 Mar 14 - 30 Mar.14		Transportation Problem, Transportation with Transshipment.	
01 Apr 14 - 06 Apr.14	III	Sequencing Problems: Problems of n Jobs and 2 machines,	
07 Apr 14 - 14 Apr.14		Two jobs on ordered m machines.	
15 Apr 14 - 25 Apr.14		Network Analysis: Minimal Spanning Tree,	
25 Apr 14 - 31 Apr.14		Shortest Path Problem,	
01 May 14 - 06 May.14	IV	Integer programming,	
07 May 14 - 14 May.14		Dynamic programming,	
15 May 14 - 21 May.14		Non linear programming: Quadratic programming,	
22 May 14 - 30 May.14		Separable programming.	