



**SCHEME OF STUDIES & EXAMINATIONS**  
Department: Bachelor of Computer Applications – 6<sup>th</sup> Semester

Sr. No	Course No.	Course Title	Teaching Schedule			Marks of class work	Examination Marks		Total	Credit	Exam Duration
			L	T	P		Theory	practical			
1	BCA-302 B	E-Business	3	1	-	25	75	-	100	4	3
2	BCA-304 B	Java Programming	3	1	-	25	75	-	100	4	3
3	BCA-306 B	System Administration	3	1	-	25	75	-	100	4	3
4	BCA-308 B	Project	-	-	8	25	-	75	100	4	3
5	BCA-324 B	Software Lab. – X (BASED ON BCA-304)	-	-	2	20	-	30	50	1	3
6	BCA-326 B	Software Lab. – XI (BASED ON BCA-306)	-	-	2	20	-	30	50	1	3
Total			9	3	12	140	225	135	500	18	



SYLLABUS: BCA

Department: Bachelor of Computer Applications – 6th Semester

Subject: E-Business (Theory)

Subject Code: BCA-302B

Detailed Content

Unit No.1 E-Commerce

- Topic No.1 : Electronic Commerce: Definition,Aims,Process
- Topic No.2 : Various types of electronic commerce
- Topic No.3 : Internet as promoter of E-Commerce
- Topic No.4 : Hardware & Software requirements for opening your own online business
- Topic No.5 : Basic challenges to E-Commerce
- Topic No.6 : Technological
- Topic No.7 : Legal & regulators heads aspects of E-Commerce

Unit No.2 EDI

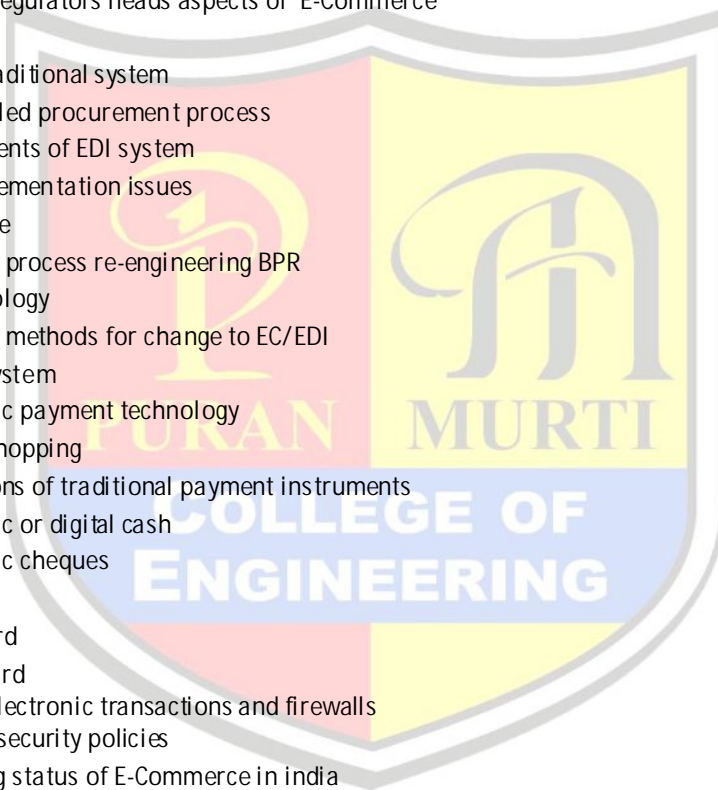
- Topic No.8 : EDI vs traditional system
- Topic No.9 : EDI enabled procurement process
- Topic No.10: Components of EDI system
- Topic No.11: EDI implementation issues

Unit No.3 Engineering for change

- Topic No.12: business process re-engineering BPR
- Topic No.13: Methodology
- Topic No.14: Planning methods for change to EC/EDI

Unit No.4 Electronic payment system

- Topic No.15: Electronic payment technology
- Topic No.16: Online shopping
- Topic No.17: Limitations of traditional payment instruments
- Topic No.18: Electronic or digital cash
- Topic No.19: Electronic cheques
- Topic No.20: E-wallet
- Topic No.21: Debit card
- Topic No.22: Credit card
- Topic No.23: Secure electronic transactions and firewalls
- Topic No.24: Firewall security policies
- Topic No.25: Emerging status of E-Commerce in india



Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3hrs	100

TEXT/REFERENCE BOOKS:

1. Kamlesh K. Bajaj,Debjani Nag, "E – Commerce – The Cutting Edge of Business" Tata McGraw-Hill Education
2. P.T. Joseph (2006), "E-Commerce, An Indian Perspective", 2nd Edition, PHI Learning Pvt. Ltd, New Delhi.
3. Schneider, Gary. (2011), "E-Commerce", 9th Edition, Cengage Learning, New Delhi.

NOTE:Eight questions will be set by the examiners taking at least two questions from each unit. Students will be required to attempt five questions in all taking at least one question from each unit.



SYLLABUS: BCA

Department: Bachelor of Computer Applications – 6th Semester

Subject: Java Programming (Theory)

Subject Code: BCA-304B

Detailed Content

Unit No.1 Java language Basics

- Topic No.1 : Java's history
- Topic No.2 : Creation of Java
- Topic No.3 : Importance of Java for the internet
- Topic No.4 : Java's magic: Bytecode,Its features with Java virtual machine concept
- Topic No.5 : Primitive data type and variables
- Topic No.6 : Java operators
- Topic No.7 : Expressions
- Topic No.8 : Statements & Arrays
- Topic No.9 : Object-Oriented concepts: Classes & objects,Class fundamental,Creating objects,Assigning object reference variables
- Topic No.10: Introducing methods
- Topic No.11: Static methods
- Topic No.12: Constructors
- Topic No.13: Overloading constructors
- Topic No.14: this keyword
- Topic No.15: Using objects as parameters
- Topic No.16: Arguments passing
- Topic No.17: Returning objects
- Topic No.18: Method overloading

Unit No.2 Inheritance & Polymorphism

- Topic No.19: Inheritance basic
- Topic No.20: Access control
- Topic No.21: Multilevel Inheritance
- Topic No.22: Method overriding
- Topic No.23: Abstract classes
- Topic No.24: Polymorphism
- Topic No.25: final keyword
- Topic No.26: Packages : Defining package,CLASSPATH,Package naming,Accessibility of packages,Using package members

Unit No.3 Interfaces

- Topic No.27: Implementing Interfaces
- Topic No.28: Interface and abstract classes
- Topic No.29: Extends & implements together
- Topic No.30: Exception handling: Exception,Handling of Exception ,Using try catch,Catching multiple exceptions,Using finally clause,Types of exceptions,Throwing exceptions

Unit No.4 Multithreading programming

- Topic No.31: The Java thread model
- Topic No.32: Understanding threads
- Topic No.33: The main thread
- Topic No.34: Creating a thread



Topic No.35: Creating multiple threads

Topic No.36: Thread priorities

Topic No.37: Creating Applets in Java: Applet basics, Applet Architecture, Applet life cycle, Simple applet display methods, The HTML Applet tag passing parameters to Applets

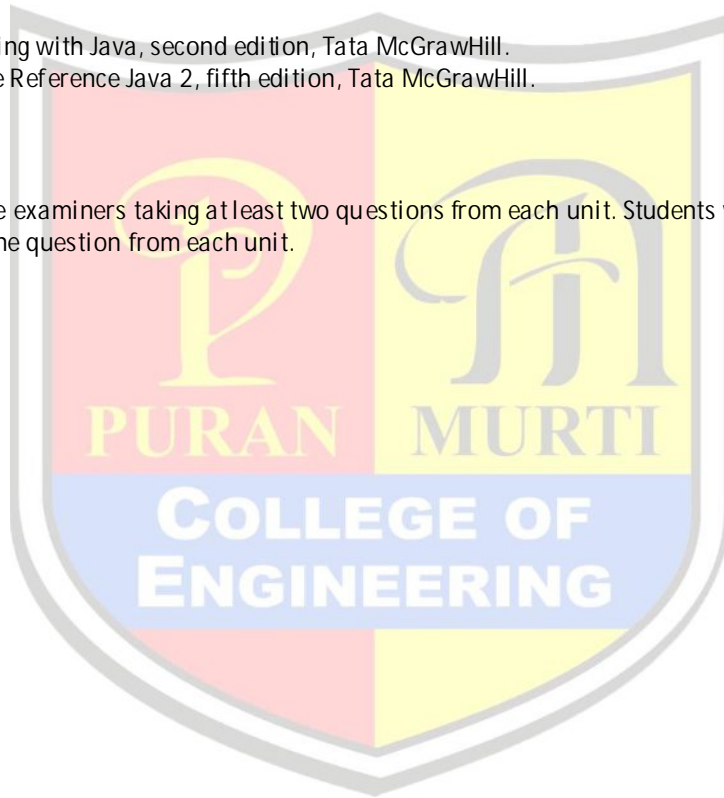
Study Scheme				Evaluation Scheme			Total Marks
L	T	P	Credits	Internal Assessment	External Assessment (Examination)		
				Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

#### TEXT/REFERENCE BOOKS:

1. E. Balaguruswami, Programming with Java, second edition, Tata McGrawHill.
2. Herbert Schildt, The Complete Reference Java 2, fifth edition, Tata McGrawHill.

#### NOTE:

Eight questions will be set by the examiners taking at least two questions from each unit. Students will be required to attempt five questions in all taking at least one question from each unit.





SYLLABUS: BCA

Department: Bachelor of Computer Applications – 6th Semester

Subject: System Administration (Theory)

Subject Code: BCA-306B

Detailed Content

Unit No.1 Operating System

Topic No.1 : Introduction to Operating System

Topic No.2 : its needs & services

Topic No.3 : Simple batch systems

Topic No.4 : Multi programmed batched systems

Topic No.5 : Time sharing systems

Topic No.6 : Parallel systems

Topic No.7 : Distributed systems & Real-time systems

Topic No.8 : Overview of UNIX: History, Features of UNIX, Comparison between UNIX and windows, Structure of UNIX kernel, Shell, Command execution

Unit No.2 UNIX directory system

Topic No.9 : UNIX commands: User Access & User ID commands, Directory commands, Editors commands, File manipulation commands, Security & Protection commands, Inter-User & Inter-Machine communication, Process management commands

Topic No.10: I/O redirection & piping commands

Topic No.11: Shell commands & shell programming

Topic No.12: System administration commands

Topic No.13: Vi editors

Topic No.14: File handling commands and grep

Unit No.3 Administering UNIX system

Topic No.15: Introduction to system administration

Topic No.16: Functional activities to system administration: Starting up the system, Maintaining the super user login, Shutting down the system, Recovering from system crash, Taking back-up, Managing disk space

Topic No.17: Mounting & unmounting file system

Topic No.18: Adding & removing users

Topic No.19: Changing groups and passwords

Topic No.20: Maintaining security

Topic No.21: Monitoring system activity

Topic No.22: Accounting of system usage and billing

Topic No.23: Setting-up remote communication

Topic No.24: Installing printers and peripheral devices

Unit No.4 Shell Programming

Topic No.25: Executing a shell program

Topic No.26: Study of shell programming as a language

Topic No.27: Wildcard characters

Topic No.28: Type of statements & reserved words

Topic No.29: Special shell parameters

Topic No.30: UNIX networking: Setting of DNS, Mail, WWW servers under UNIX



# PM

## COLLEGE OF ENGINEERING

A Unit of Puran Murti Educational Society  
Approved by AICTE, Ministry of HRD, Govt. of India,  
Affiliated to Deenbandhu Chhotu Ram University of Science & Technology

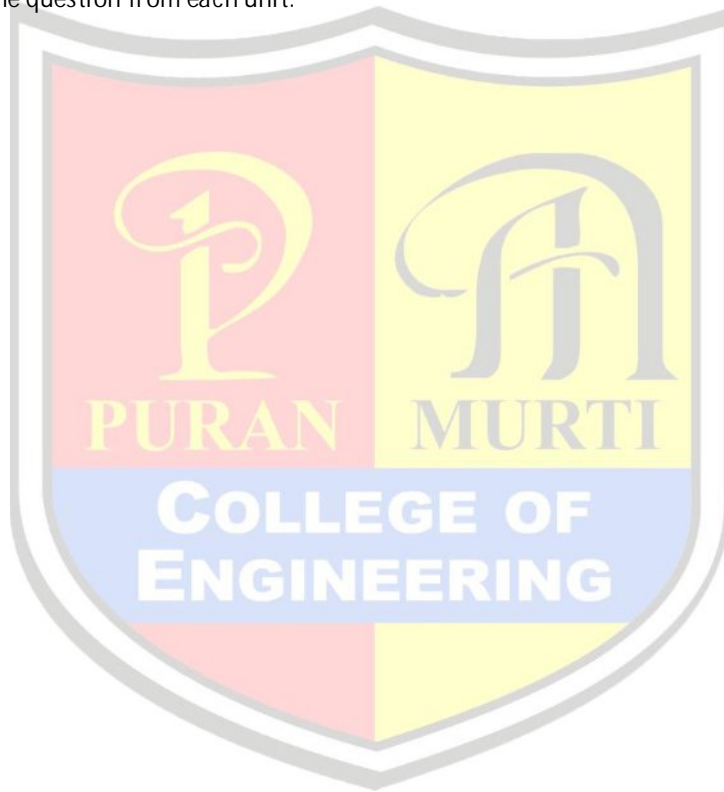
Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

#### TEXT/REFERENCE BOOKS:

1. Srirengan, K. : Understanding UNIX, Prentice-Hall of India, 1999.
2. Kernighan, B.W. & Rob Pike : The UNIX Programming Environment, Prentice-Hall of India, 1997.

#### NOTE:

Eight questions will be set by the examiners taking at least two questions from each unit. Students will be required to attempt five questions in all taking at least one question from each unit.





SYLLABUS: BCA

Department: Bachelor of Computer Applications – 6th Semester

Subject: Project

Subject Code: BCA-308B

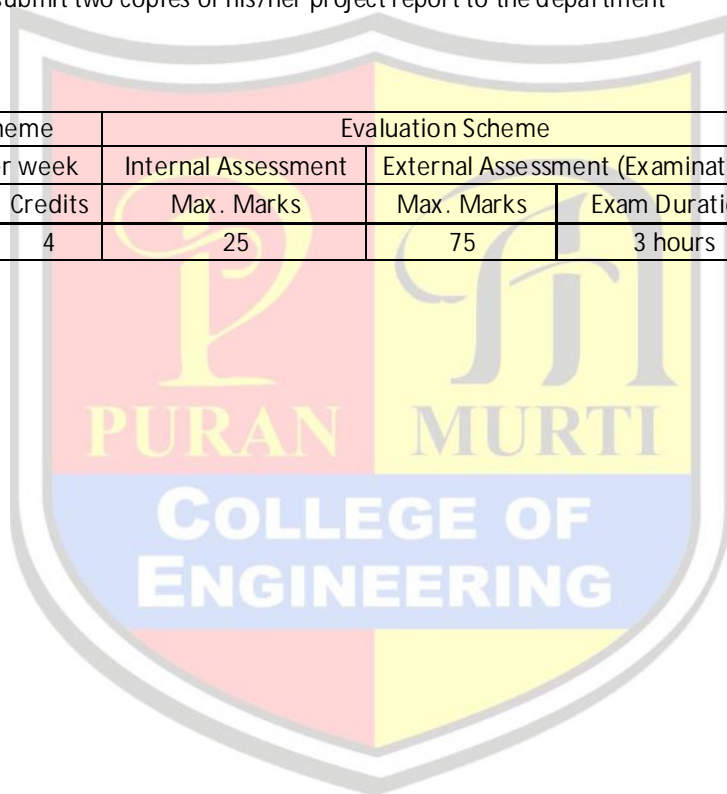
Detailed Content

Students will be required to complete an independent software project using their programming skills.

The primary objective of this course is to develop in students the professional quality of synthesis employing technical knowledge obtained in the field of Technology through a project work involving design, analysis augmented with creativity, innovation and ingenuity.

The student will be required to submit two copies of his/her project report to the department

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	8	4	25	75	3 hours	100





SYLLABUS: BCA

Department: Bachelor of Computer Applications – 6<sup>th</sup> Semester

Subject: Java Programming LAB

Subject Code: BCA-324B

Detailed Content

List of Programs:

1. Write a program to print "Hello World"
2. Write a program to use data types of Java
3. Write a program to use conditional & Iterative statements in Java
4. Write a program to use Java operators
5. Write a program to use Arrays in Java
6. Write a program to use object-oriented concepts in Java
7. Write a program to use Inheritance with its types in Java
8. Write a program to create and use Package
9. Write a program to use Multithreading in Java
10. Write a program to use Final & This Keyword
11. Write a program to use Exception handling in Java
12. Write a program to use Applets in java
13. Write a program to use polymorphism with its types in Java
14. Write a program to use Interfaces in Java
15. Write a program to show difference between classes & Interface

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Internal Assessment		External Assessment (Examination)			
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
		2	1	20	30	3 hours	50

NOTE:

Students are required to attempt at least 10 exercises based on the syllabi of subject BCA-304. The exercises should be relating with the experiments based on Java Programming.





SYLLABUS: BCA

Department: Bachelor of Computer Applications – 6<sup>th</sup> Semester

Subject: System Administration LAB

Subject Code: BCA-326B

Detailed Content

List of Programs:

1. Write first program of UNIX
2. Write a program to use User Access & User ID commands
3. Write a program to use Directory commands of UNIX
4. Write a program to use Editors commands of UNIX
5. Write a program to use File Manipulation commands of UNIX
6. Write a program to use Security & Protection commands of UNIX
7. Write a program to use Process management commands of UNIX
8. Write a program to use I/O Redirection & Piping commands of UNIX
9. Write a program to use Shell commands of UNIX
10. Write a program to use Vi editor & File handling commands
11. Write a program to use following:
  - Starting up the system
  - Maintaining the Super User Login
  - Shutting down the system
  - Recovering from system crash
  - Taking backups
  - Adding & removing users
  - Changing groups & password
  - Monitoring system activity
  - Installing printers & peripheral devices
12. Write a program to create and execute shell programming
13. Write a program to use reserved words in shell programming
14. Use the following in Lab:
  - Setting up of DNS
  - Mail
  - WWW servers under UNIX



Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
		2	1	20	30	3 hours	50

NOTE:

Students are required to attempt at least 10 exercises based on the syllabi of subject BCA-306. The exercises should be relating with the experiments based on System Administrationspecifically using Linux