



Structure for B.C.A. – CBCS Programme

Semester-VI (TY)

COURSE NO.	COURSE TYPE	SUBJECT	CREDIT
BCA-EC-601	ELECTIVE		02
BCA-FC-602	FOUNDATION		02
BCA-CC-603	CORE	Network Security	03
BCA-CC-604	CORE	Core Java	03
BCA-CC-605	CORE	RDBMS Using Oracle -II	03
BCA-CC-606	CORE	Project Work	03
BCA-CC-607	CORE	Practical (Based on BCA-CC-604 & BCA-CC-605)	12
TOTAL			28

Internal Continuous Evaluation:

1. There will be Internal Continuous Evaluation in Theory papers of Core Course.
2. There will be 30 marks for Assignments in Course No: BCA-CC-603, BCA-CC-604, BCA-CC-605

**MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY****NAAC Accreditation Grade "B"
(With effect from Academic Year: 2017-18)**

B.C.A.	Course: Network Security	Course No: BCA-CC-603	
Semester: 06	Type of Course : Core Course		
Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100			
Credits: 03	Theory Sessions per Week: 03	Teaching Hours: 45 Hours	
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
Unit-1	Network Security Fundamental.	09	14
	<ul style="list-style-type: none">- Concept of Computer Security, Challenges of Computer Security.- The OSI Security Architecture.- Types of Security Attacks: Active Attacks and Passive attacks- Security Services: Authentication, Access Control, Data Confidentiality, and Data Integrity.- A Model for Network Security.		
Unit-2	Cryptography	09	14
	<ul style="list-style-type: none">- Concept of Cryptography.- Basic terms: Cryptography, Plaintext, Cipher text, Cipher, Key, Encryption and Decryption.- Cryptography Keys: Public Key and Private Key- Types of Cryptography: Symmetric key, Asymmetric key Cryptography.- Symmetric Cryptography: Substitutional and Transposition Cipher.		
Unit-3	Network Device Securities	09	14
	<ul style="list-style-type: none">- Switch.- Router.- Network Management System.- Administrative Practice.- Centralize Account Management.		
Unit-4	E-Mail and IP Security	09	14
	<ul style="list-style-type: none">- E-mail Security: S/MIME.- IP Security Overview.- IP Security Architecture.- Application and Benefits of IP Security.- IP Security Services.		
Unit-5	Firewall and IP Security	09	14
	<ul style="list-style-type: none">- Firewall: Introduction, Need for Firewall, Characteristics.- Types of Firewall.- Introduction to Virtual Private Network.- VPN Protocol.- Introduction to Wireless Network Security.		
Reference Books			
1. Cryptography and Network Security, - William Stallings Person – Printice Hall Publication			
2. Data Communication and Networking, - Author – Behrouz Forouzan, Tata McGraw Hill Publication			



B.C.A.	Course: Core Java	Course No: BCA-CC-604	
Semester: 06	Type of Course : Core Course		
Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100			
Credits: 03	Theory Sessions per Week: 03	Teaching Hours: 45 Hours	
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
Unit-1	Introduction to Java	09	14
	<ul style="list-style-type: none">- History of Java, Features of Java, Applications of Java, Java Virtual Machine (JVM) and Byte Code, Buzz Words.- Basics Concept of OOP: Abstraction and Encapsulation, Inheritance and Polymorphism- Comparison Between C++ and Java.- Data types, Operators.- Control Statement, Array, and command line argument.- Structure of Java Programming.		
Unit-2	Programming in Java	09	14
	<ul style="list-style-type: none">- Classes, Objects and Methods.- Polymorphism: Method Overloading.- Constructor: Concept of Constructor, Types of Constructor, Constructor Overloading.- Garbage Collection, Finalize() Method.- The 'this' keyword.- 'static' and 'final' keyword.- Access Control: Public, Private, Protected, Default.		
Unit-3	Inheritance	09	14
	<ul style="list-style-type: none">- Inheritance Basic, Types of Inheritance.- Uses of 'super' keyword.- Method Overriding.- Run Time Polymorphism: Dynamic Method Dispatch.- Abstract Method and Class.- 'final' Keyword with Inheritance.		
Unit-4	Packages and Interface	09	14
	<ul style="list-style-type: none">- Defining Package, Understanding of CLASSPATH.- Importing Packages.- Access Protection- Interfaces: Defining Interface, Implementing Interface.- Implementation of Multiple and Hybrid Inheritance using Interface.- Extending Interface.		
Unit-5	Exception Handling and Multi Threading Programming	09	14
	<ul style="list-style-type: none">- Exception Handling Fundamentals, Types of Exceptions.- Try...catch Keyword, Multiple Catch Statements.- Throw, Throws, Finally Keywords.- Concept of Multi Threading, Thread Life Cycle.- The main Thread.- Creating Thread, Multiple Thread- Thread Priorities.		



Reference Book

1. Complete Reference Java by Herbert Schildt Publisher:TMH
2. Programming in JAVA by E-Balaguruswami
3. Java Programming Reference by Grant Palmer.



B.C.A.	Course: RDBMS using Oracle-II	Course No: BCA-CC-605	
Semester: 06	Type of Course : Core Course		
Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100			
Credits: 03	Theory Sessions per Week: 03	Teaching Hours: 45 Hours	
Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
UNIT-1	Basic PL/SQL Programming	09	14
	<ul style="list-style-type: none">- PL/SQL Block Structure- Control Structure- Implicit Cursor Programming- Explicit Cursor Programming- Parameterize Cursor and Cursor For loop		
UNIT-2	Advance PL/SQL Programming	09	14
	<ul style="list-style-type: none">- Exception Handling- Stored Procedure and Function- Trigger- Data Concurrency and locking- Package		
UNIT-3	INTRODUCTION TO DBA	09	
	<ul style="list-style-type: none">- Role of DBA.- Users: Creating a new user, grant command, deleting user.- Privileges: System privileges, object privileges, Assigning object privileges to a user, Viewing User & privileges, revoking a system & an object privileges.- Role: Creating a role, Granting privileges & roles to a role, granting role to a user, viewing the role of a user.		
UNIT-4	DBA Activity	09	14
	<ul style="list-style-type: none">- Database Backup and Recovery- Types of Failure- Data structure used for Database recovery- Import and export		
UNIT-5	Datawarehousing and Data Mining	09	14
	<ul style="list-style-type: none">- Data ware housing Definition, usage and trends- DBMS vs. data warehouse, Data marts, Metadata- Data warehouse architecture- Design and construction of data warhouse- Introduction to data mining- Classification and Applications of data mining system		
REFERENCE BOOKS			
	<ol style="list-style-type: none">1. Data Warehousing, Data Miniing and OLTP; Alex Berson, 1997, McGraw Hill.2. Learn Oracle 8i. By Jose A. Ramalho. Published by:BPB3. SQL in 21-Days - Techmedia4. PL/SQL in 21 Days - Techmedia5. SQL, PL/SQL:THE PROGRAMMING LANGUAGE OF ORACLE By Evan Bayross		



B.C.A. Semester: 06 Marking Scheme: External Examination: 70 + Internal Examination: 30 = 100 Credits: 03	Course: Project Work Type of Course : Core Course	Course No: BCA-CC-606
Detailed Syllabus		
<p>The objectives of the project is to help the student develop the ability to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and small business solution.</p> <p>Internal Evaluation scheme: 30 Marks Submission of project proposal Progress Report every month (3 Progress Report) Term End Evaluation 70 Marks: PROJECT REPORT EVALUATION – 30 MARKS ACTUAL PROJECT EVALUATION AND VIVA – 40 MARKS</p>		
Preparing project report Student have to prepare project report according given suggestive structure of project report.		
<p>Title page Certificate of work Acknowledgment Table of content Table of Figures</p> <p>Chapter-1 (Introduction) Background, Objective, purpose , scope , applicability</p> <p>Chapter-2 (Requirement And Analysis) Problem definition, Requirement specification, Hardware Software Requirement. Planning and Scheduling</p> <p>Chapter-3 System design Over all System design using designing Tools Data Dictionary Input /Output Design</p> <p>Chapter -4 Testing and implementation Testing Approach used Test cases Implementation Approaches</p> <p>Chapter-5 Conclusion Limitation of system Future Scope of system Bibliography</p>		
Student have to prepare 2 – copies of report , 1 st copy has to submit in college for evaluation (must be in hard binding) and 2 nd copy for personal reference.		



MAHARAJA KRISHNAKUMARSINHJI BHAVNAGAR UNIVERSITY

NAAC Accreditation Grade "B"
(With effect from Academic Year: 2017-18)

B.C.A.	Course: Practical	Course No: BCA-CC-607
Semester: 06	Type of Course: Core Course	
Marking Scheme: External Examination: 100 + Internal Examination: 00 = 100 Marks		
Credits: 12	Practical Sessions per Week: 12	Teaching Hours: 180 Hours

Unit	Detailed Syllabus	Teaching Hours	Marks/Weight
Unit-1	Practical Based on 602	90	50
Unit-2	Practical Based on 603	90	50