

**BARKATULLAH UNIVERSITY, BHOPAL**

**SIXTH SEMESTER**

- |                         |            |  |
|-------------------------|------------|--|
| 1. Course Code :        |            | 6. Maximum marks: <b>700</b>                 |
| 2. Course Name :        | <b>BCA</b> | 7. Minimum Passing percentage :<br><b>33</b> |
| 3. Total Subject :      | <b>5</b>   | 8. Project/Internship : <b>Y</b>             |
| 4. Compulsory Subject : | <b>5</b>   | 9. Project/Internship Passing : <b>33</b>    |
| 5. Optional Subject :   | <b>N</b>   |  |

Sub. code	Subject Name	Theory							Practical		Total	
		Paper			CCE		Total Marks					
		1	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
<b>COMPULSORY</b>												
<b>69</b>	<b>Foundation Course</b>											
	1. English Language and aspects of Development	85	85	28	15	05	100	33	0	0	150	50
	2. बैसिक ऑफ कम्प्यूटर तथा इन्फोरमेशन टेक्नालॉजी -II	25	25	08	10	04	40	33	15	5		
	Internet Technology & Security	85	85	28	15	05	85	28	0	0	100	33
	Software Engineering	85	85	28	15	05	85	28	0	0	100	33
	.Net Technology	85	85	28	15	05	85	28	0	0	100	33
	Java	85	85	28	15	05	85	28	0	0	100	33
	<b>Practical</b> Java & .Net	0	0	0	0	0	0	0	50	17	50	17
	Internship/Project (External Assessment)	0	0	0	0	0	0	0	0	0	100	33

**Department of Higher Education, Govt. of M.P.**  
**Semester wise syllabus for under Graduates**  
**As recommended by Central Board of Studies and**  
**Approved by HE the Governor of M.P.**  
**Session 2013-14**

<b>Class</b>	-	<b>B.A./B.Sc./B.Com/B.Sc. (Home Sci.)/ B.A. (Mgt.) BCA</b>
<b>Subject</b>	-	<b>Foundation Course</b>
<b>Paper Name</b>	-	<b>English Language and Aspects of Development</b>
<b>Paper</b>	-	<b>I</b>
<b>Semester</b>	-	<b>VI</b>

**Max. Marks : 85**

**PARTICULARS**

**UNIT-I**

1. William Wordsworth : “The World is Too Much With Us”
2. K. Aludiapillai : “Communication Education and Information Technology”
3. : “Democratic Decentralisation”
4. S. C. Dubey : “Basic Quality of Life”
5. Sister Nivedita : “The Judgment Seat of Vikramaditya”
6. Juliun Huxley : “War as a Biological Phenomenon”
7. Robert Frost : “Stopping by Woods on a Snowy Evening”
8. Ruskin Bond : “The Cherry Tree”

**UNIT-II** Short Essay of about 250-300 words.

**UNIT-III** Translation of a short passage from Hindi to English.

**UNIT-IV** Drafting CV, writing e-mail message for official purpose.

**UNIT-V** Language Skills  
One-word substitution, homonyms, homophones, words that confuse, Punctuation, Idioms

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**Class** - **B.A./B.Sc./B.Com/B.Sc. (Home Sci.)/  
B.A. (Mgt.) BCA**  
**Subject** - **Foundation Course**  
**Paper Name** - **Basic Computer Information Technology-II**  
**Paper** - **II**  
**Semester** - **VI**

**Max. Marks : 25**

**Unit-I Word Processing : Word**

- Introduction to word Processing.
- MS Word: features, Creating, Saving and Operating Multi document windows, Editing Text selecting, Inserting, deleting moving text.
- Previewing documents, Printing document to file page. Reduce the number of pages by one.
- Formatting Documents: paragraph formats, aligning Text and Paragraph, Borders and shading, Headers and Footers, Multiple Columns.

**Unit-II Introduction to Excel**

**Excel & Worksheet :**

- Worksheet basic.
- Creating worksheet, entering data into worksheet, heading information, data text, dates, alphanumeric, values, saving & quitting worksheet.
- Opening and moving around in an existing worksheet.

- Toolbars and Menus, keyboard shortcuts.
- Working with single and multiple workbook coping, renaming, moving, adding and deleting. coping entries and moving between workbooks.
- Working with formulas & cell referencing.
- Autosum.
- Coping formulas
- Absolute & Relative addressing.

### **Unit-III Introduction to Power Point**

- Features and various versions.
- Creating presentation using Slide master and template in various colour scheme.
- Working with slides make new slide move, copy, delete, duplicate, lay outing of slide, zoom in or out of a slide.
- Editing and formatting text: Alignment, editing, inserting, deleting, selecting, formatting of text, find and replace text.

### **Unit-IV Power Point- II**

- Bullets , footer, paragraph formatting, spell checking.
- Printing presentation Print slides, notes, handouts and outlines.
- Inserting objects Drawing and Inserting objects using Clip Arts picture and charts.
- Slide sorter, slide transition effect and animation effects. Presenting the show making stand alone presentation, Pack and go wizards.

**Unit V-** Evolution, Protocol, concept, Internet, Dial-up connectivity, leased line, VSAT, Broad band, URLs, Domain names, Portals. E-mail, Pop & web based Email. Basic of sending and receiving Emails, Email & Internet Ethics, Computer virus, Antivirus software wage, Web Browsers.

**Books Recommended-**

1. डॉ. एस. के. विजय, डॉ. पंकज सिंह : कम्प्यूटर विज्ञान एवं सूचना प्रौद्योगिकी, मध्यप्रदेश हिन्दी ग्रन्थ अकादमी, भोपाल
2. डॉ. पंकज सिंह कम्प्यूटर अध्ययन, राम प्रसाद एड्स संस

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<b>Class</b>	-	<b>B.A./B.Sc./B.Com/B.Sc. (Home Sci.)/ B.A. (Mgt.) BCA</b>
<b>Subject</b>	-	<b>Foundation Course</b>
<b>Paper Name</b>	-	<b>Basic Computer Information Technology-II</b>
<b>Paper</b>	-	<b>Practical</b>
<b>Semester</b>	-	<b>VI</b>

**Max. Marks : 15**

**Ms-Power Point:**

Creating new slide, formatting slide layout, slide show & sorter, Inserting new slide, slide no., date, time, chart, formatting slide, tool operation.

**List of suggested practical work:**

- Under standing of a dial up connection through modern.
- Configuring a computer for an e-mail and using outlook Express or Netscape Messenger.
- Registration an e-mail address.
- Understanding of e-mail drafting.
- Understanding of address book maintenance for e-mail.
- Understanding of different mail program tools.
- Send and receive functions of e-mail.

**Note-** Minimum laboratory timing of six hours in a week.

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<b>Class</b>	-	बी.ए./ बी.एस.सी./ बी.कॉम/ बी.एस.सी. होम साइंस/ बी.ए. मेनेजमेन्ट बी.सी.ए.
<b>Subject</b>	-	आधार पाठ्यक्रम
<b>Paper Title</b>	-	बेसिक ऑफ कम्प्यूटर तथा इन्फोरमेशन टेक्नॉलाजी- II
<b>Paper</b>	-	II
<b>Semester</b>	-	VI

**Max. Marks : 25**

**इकाई I –**

**वर्ड प्रोसेसिंग :**

**वर्ड प्रोसेसिंग का परिचय –**

एम.एस.वर्ड : फीचर्स, क्रीएटिंग, सविंग एवं ओपनिंग, मल्टी डॉक्यूमेंट विंडोस, एडिटिंग टेबस्ट सिलेविटिंग, इंसर्टिंग, डिलीटिंग टेबस्ट।

प्रीव्यूविंग डॉक्यूमेंटस, प्रिंटिंग डॉक्यूमेंट फ्राम दि स्टेण्डर्ड टूलबार, प्रिंट डॉक्यूमेंट फ्राम दि स्टेण्डर्ड टूलबार, डॉक्यूमेंटस को मीनू द्वारा प्रिंट करना, शिफ्टिंग ए डॉक्यूमेंट इन ए फाइल पेज, पेजों को कम करना।

फॉरमेटिंग डॉक्यूमेंट्स : पैराग्राफ फारमेट, अलाइनिंग टेबस्ट एंड पैराग्राफ, बार्डर एवं हेडर्स एवं फुटर्स, मल्टीपल कॉलम्स।

**इकाई II –**

**एक्सेल का परिचय –**

**एक्सेल एंड वर्कशीट**

वर्कशीट का आधार, वर्कशील बनाना, वर्कशीट में डाटा एन्टर करना, हेडिंग इन्फॉर्मेशन, डाटा, टेबस्ट डेट, अल्फान्यूमेरिक, वेल्यूज, सेविंग और वर्कशीट छोड़ना।

पहले बनी हुई वर्कशीट को खोलना तथा चलाना।

टूलबार, मीनू और कीबोर्ड के शॉर्टकट।

एक एवं अनेक वर्कशीट पर काम करना, कॉपी, रिनेमिंग, मूविंग, एडिंग एंड डिलीटिंग, एन्ट्रीज को कॉपी तथा विभिन्न वर्कशीट में ले जाना।

फॉर्मूला एवं सेल रिफ्रेसिंग के साथ काम करना।

ऑटोसम, फॉर्मूला को कॉपी करना, एक्सल्यूट एंड रिलेटिव एड्रेसिंग।

### इकाई III –

#### पावर पाइंट का परिचय – 1

फीचर्स एंड विभिन्न वर्जन्स

प्रेजेंटेशन तैयार करना स्लाइड मास्टर एवं टेम्प्लेट इन वेरियस कलर स्कीम।

- पाँवर पाइंट के भिन्न व्यूस के साथ काम करना एवं पाँवर पाइंट के मेन्यू।
- स्लाइड्स के साथ काम करना, नये स्लाइड तैयार करना एवं मूव करना, कॉपी करना, डिलीट करना, डुपलीकेट स्लाइड तैयार करना, ले-आउटिंग करना, जूम इन और आउट करना।
- एडिटिंग एवं फॉरमेटिंग टेबल : अलाइनमेंट, एडिबिंग, इनसर्टिंग, डिलीटिंग, सिलेक्टिंग, फॉरमेटिंग ऑफ टेबल, फाईल एवं रिप्लेस टेबल।

### इकाई IV –

#### पावर पाइंट का परिचय – 2

- बुलेट्स, फुटर, पेराग्राफ फॉरमेटिंग, स्पेल चेकिंग।
- प्रिंटिंग प्रेजेंटेशन, प्रिंट स्लाइड्स, नोट्स, हेण्डआउट एवं आउटलाईस।
- इंसर्टिंग ऑब्जेक्ट्स, ड्राइंग एवं इंसर्टिंग ऑब्जेक्ट्स विलप आर्ट पिक्चर्स एवं चार्ट्स का प्रयोग करना।
- स्लाइड्स सोर्टर, स्लाइड ट्रांसिशन के प्रभाव एवं अन्य ऐनिमेशन प्रभाव।

प्रेजेंटिंग शो मेकिंग स्टेण्ड अलोन प्रेजेंटेशन, पेक एवं गो विजार्ड।

### इकाई V –

#### इंटरनेट का परिचय :

इवोल्यूशन, प्रोटोकॉल, विचारधारा, इंटरनेट, इंट्रावेट, डायल अप कनेक्टिविटी, लीज़्ड लाइन, वीएसटी, ब्रोड बेण्ड, यू.आर.एल्स., डोमेन नेम्स, पोसटल्स, ई-मेल, पॉप एवं वेब बेस्ट ई-मेल, बेसिक्स ऑफ सेंडिंग एवं रिसीविंग, ईमेल्स, ई-मेल एवं इंटरनेट एथिक्स, कम्प्यूटर वायरस, एंटीवायरस सॉफ्टवेयर, वेब ब्राउसर।

#### Books Recommended-

1. डॉ. एस. के. विजय, डॉ. प्रकज सिंह : कम्प्यूटर विज्ञान एवं सूचना प्रौद्योगिकी, मध्यप्रदेश हिन्दी ग्रंथ अकादमी, भोपाल
2. डॉ. पंकज सिंह कम्प्यूटर अध्ययन, राम प्रसाद एंड संस



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**Semester – Wise Scheme**  
**Session 2013-14 onwards**  
**BCA**  
**Semester VI**

<b>Code No.</b>	<b>Paper</b>	<b>Marks (Theory + CCE)</b>
<b>BCA601</b>	<b>Internet Technology &amp; Security</b>	<b>85 + 15</b>
<b>BCA602</b>	<b>Software Engineering</b>	<b>85 + 15</b>
<b>BCA603</b>	<b>.Net Technology</b>	<b>85 + 15</b>
<b>BCA604</b>	<b>Java</b>	<b>85 + 15</b>
<b>Practical</b>		
<b>BCA605</b>	<b>Java &amp; .Net</b>	<b>50</b>
<b>Project (External Assessment)</b>		<b>100</b>

**BARKATULLAH UNIVERSITY BHOPAL  
SEMESTER – WISE SCHEME FOR BCA  
SESSION 2013-14**

**Class** - **BCA**  
**Paper Title** - **Internet Technology & Security**  
**Paper** - **I**  
**Semester** - **VI**

**Max. Marks : 85**

**Unit-I** Conventional Encryption –Convention Encryption:  
Conventional Encryption Model, Steganography, Classical  
Encryption Techniques, Simplified DES, Block Cipher  
Principles, The data Encryption Standard, The strength of  
ES, Differential and Linear Cryptanalysis, Block Cipher  
Design Principles, Block Cipher Modes of Operation,  
Conventional Encryption algorithms

**Unit-II** public key encryption and hash functions –public key  
cryptography, principles of public key cryptosystems, The  
RSA algorithm, key management, Difie Hellman Key  
Exchange, Elliptic Curve Cryptography Message  
Authentication and Hash Functions Authentication  
Requirements, Authentication Functions, Message  
Authentication Codes, Hash Functions, Security of Hash  
Functions

**Unit-III** Hash And Mac Algorithms

**Unit-IV** Authentication Applications, IP Security, Web Security

**Unit-V** Intruders, Veruses and Worms Intruders, Viruses and  
Related Threats Firewalls Firewall Design Principles,  
Trusted Systems

**BARKATULLAH UNIVERSITY BHOPAL**  
**SEMESTER – WISE SCHEME FOR BCA**  
**SESSION 2013-14**

**Class** - **BCA**  
**Paper Title** - **Software Engineering**  
**Paper** - **II**  
**Semester** - **VI**

**Max. Marks : 85**

**Unit-I** The Software problem, Software Engineering problem, Software Engineering approach – phased development process, project management and matrices. Software processes–Processes, Projects, Components, Characteristics. Software Development process–process step specification, waterfall model, prototyping, iterative enhancement, spiral model.

**Unit-II** Software Requirement Analysis and Specification–Software Requirements, Problem Analysis, Requirement Specification, Validation, Metrics.

**Unit-III** Planning a Software project – Cost Estimation, Project Scheduling, Staffing and personnel planning, Software Configuration management plans, Quality Assurance plans, Project Monitoring Plans, Risk Management.

**Unit-IV** Software Design– Design Principles, Module level concepts, Design Notation and Specification, Structured Design Methodology, Verification. Coding - Programming Practice, Verification and Metrics.

**Unit- V** Software Testing–Testing fundamentals, Functional testing, Structural testing, Testing process.

Software Quality Assurance (SQA): Software Reviews, Software Quality factors, SQA activities, Formal Technical Reviews, SQA Approach. Software Configuration Management–Configuration Identification, Change Control, Status Accounting and Auditing.

**References:-**

Khurana Rohit Software Engineering, IE, Vikas

Pressonan – Software Engg.- MGH

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**Class** - **BCA**  
**Paper Title** - **.Net Technology**  
**Paper** - **III**  
**Semester** - **VI**

**Max. Marks : 85**

**UNIT – I** What is .NET, overview of .NET framework and platform, Common Language Runtime, XML as the .NET "Meta Language", overview of Visual Studio IDE, New Object capabilities in Visual Basic, Modern Language capabilities added to Visual Basic, fitting Visual Basic into framework.

**UNIT-II** Overview of ASP.NET framework, Understanding ASP.NET Controls, Applications Web servers, installation of IIS. Web forms, web form controls –server controls, client controls, web forms & HTML, Adding controls to a web form, Buttons, Text Box, Labels, Checkbox, Radio Buttons, List Box, etc. Running a web Application, creating a multiform web project. Form Validation: Client side validation, server Side validation, Validation Controls: Required Field Comparison Range. Calendar control, Ad rotator Control, Internet Explorer Control. State management- View state, Session state, Application state.

**UNIT-III** Architecture of ADO.NET, Connected and Disconnected Database, Create Connection using ADO.NET Object Model, Connection Class, Command Class, Data Adapter Class, Dataset Class. Display data on data bound Controls and Data Grid. Database Accessing on web applications: Data Binding concept with web, creating data grid, Binding

standard web server controls. Display data on web form using Data bound controls.

**UNIT-IV** Writing datasets to XML, Reading datasets with XML. Web services: Introduction, remote method call using XML, SOAP, web service description language, building & consuming a web service, Web Application deployment.

**UNIT-V** Overview of C#, C# and .NET, similarities & differences from JAVA, Structure of C# program. Language features: Type system, boxing and unboxing, flow controls, classes, interfaces, Serialization, Delegates, Reflection.

## **REFERENCES**

Pankaj Agrawal – Principal of .Net Framwork – Vaya  
Kogent - .NET Programming Black Book – Wiley  
VB.NET Black Book by Steven Holzner –Dreamtech  
VB.NET –Wrox Publication  
ASP.NET Unleashed  
C# programming – Wrox Publication  
C# programming Black Book by Matt Telles

**BARKATULLAH UNIVERSITY BHOPAL**  
**SEMESTER – WISE SCHEME FOR BCA**  
**SESSION 2013-14**

**Class** - **BCA**  
**Paper Title** - **Java**  
**Paper** - **IV**  
**Semester** - **VI**

**Max. Marks : 85**

**Unit-I** Primitive data type-integer, Short, byte, float, double, Unicode character set, Boolean, their ranges default initial values, wrapping of integer arithmetic, casing comments identifiers and reserved words. Local variables operators, precedence, Examples and Exercises.

**Unit-II** Statements Simple and compound, Uses of control do, for, while, switch, break case of continue label, class type Data; String, Arrays. Examples and Exercises.

**Unit-III** Definition and naming conventions for the member of Java classes. Instances, fields and methods initialization by constructors. Creation of Objects, access methods. Example and Exercise.

**Unit-IV** Inheritance, Super class, Subclass, Method overloading, Interface, Thread, Multithreading example, Synchronized, Exception (Try- Catch-Final blocks examples). Java Virtual Machine concepts, java platform overview, Programming examples to clarify use of objects, threads exception and Packages For I/O, file String handling. Examples and Exercise.



**Unit-V** Local and Remote Applets Vs Applications, Writing Applets, Applets Life Cycle, Creating an Executable Applet, Designing a Web page, Applet Tag, Adding Applet to HTML file, Running the Applet, Passing Parameters to Applets, Aligning the Display, HTML Tags & Applets, Getting Input from the User.

**REFERENCE:-**

Schildt java Complete Reference TMH

Das Rashmi kanta Core Java, IE, Vikas

Bansal Nitin, Ajit Kumar, A Simplified approach to Java

Programming , KALYANI