# SantGadgeBabaAmravatiuniversity,Amravati
## Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)
## Programme: B.com. II (Information System Management ) Semester - IV

Compulsory English
B.Com.IISem.IV
Titleofthebook-**Pristine**

| Code of the Course/Subject | Title of the Course/Subject | TotalnumberofPeriods |
|---|---|---|
| **BC41** | **English** | **36** |

**Unit1-Prose-**
1)India'sMessagetotheWorld-SwamiVivekanand
2)OnForgetting–RobertLynd
3)IndraNooyi:ACorporateGiant
**Unit2-Poetry-**
1)theSoul'sPrayer–SarojiniNaidu
2)TheMountainandtheSquirrel-R.W.Emerson
3)Nature-W.H.Longfellow
**Unit3-CommunicationandSoftSkills**
1)Group Discussion
2)Advertisements
3)CreativeWriting:SituationalDialogues

| Unit | Content | NumberofPeriods |
|---|---|---|
| 1 | **Prose**<br><br>1)India's Message to the World- Swami Vivekanand<br><br>2)OnForgetting–RobertLynd<br><br>3)IndraNooyi:ACorporateGiant | **14** |
| 2 | **Poetry**<br><br>1)TheSoul'sPrayer–SarojiniNaidu<br><br>2)The Mountain and the Squirrel- R.W. Emerson<br><br>3)Nature-W.H.Longfellow | **10** |
| 3 | **CommunicationandSoftSkills**<br><br>1)GroupDiscussion<br>2)Advertisements<br>3)CreativeWriting:SituationalDialogues | **12** |

**QuestionwiseDistributionofMarks**

Prose-Q.1)A) Solve any One long questions out of Two.                -5Marks h- 6 Marks

Poetry-Q.2)
A) SolveanyOnelongquestionoutofTwo.                - 5Marks
B) SolveanyTwoshortquestionsoutofThree.                -4Marks

MCQ- Q.3) Attempt all multiple choice questions based on prose and poetry- 10 Marks Communication and

Soft Skills-
   **Q.4)**SolveanyTwoquestionsoutofThree.                -10Marks

**InternalAssessment**

1)Assignment                - 5Marks

2)ClassTest                - 5Mark

**Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)**

**Programme: B.com. II (Information System Management ) Semester - IV**

| Programme: Bachelor of Commerce | | Semester: IV |
|---|---|---|
| Code of the Subject | Title of the Course\Subject | Total Number of Periods |
| BC-42 | Marathi | 36 |

अभ्यासपत्रिकेची निष्पती (COs) :

१. नेमलेल्या साहित्यातून जीवनदर्शन, समकालीन व्यवहार जाणीवा यांची माहिती होईल.

२. वैचारिक, ललित, कविता या विविध वाड्.मय प्रकाराचे ज्ञान होईल. या वाड्.मय प्रकाराचे वेगळेपण जाणूनघेतील तथा यामधील साम्यभेदाचे आकलन होईल.

३. वैचारिक गद्यातून भाषेच्या सर्जनशीलरूपाचे विद्यार्थ्यांना आकलन होईल. तसेच चारित्र्यविषय असलेल्या थोर व्यक्तींच्या जीवनकार्यातून विद्यार्थ्यांना प्रेरणा मिळेल आणि संकटावर मात करून जीवनात यशस्वीहोतायेते हा विचार त्यांच्या मनी रूजेल.

४. ललित कलाकृतींच्या वाचनातून आनंद, बोध, ज्ञान इत्यादींची प्राप्ती होऊन विद्यार्थ्यांच्या जीवनविषयक जाणिवा समृद्ध होतील.

५. वैचारिकता, तात्विकता, काव्यात्मकता, भावनात्मकता, सामान्य गोष्टीतील असामान्यत्वाचे दर्शन यातून विद्यार्थ्यांचा दृष्टीकोण संपन्न होईल.

६ विविध प्रकारच्या साहित्याचे आकलन, वर्णन, आस्वादन, विश्लेषण आणि मूल्यमापन करण्याची क्षमता वाढून विद्यार्थ्यांची अभिरूची विकसित होईल.

७. या वाड्.मय प्रकारातून विविध प्रकारचे नीतिमूल्ये, जीवनमूल्ये, यांची शिकवण विद्यार्थ्यांना मिळेल, त्याचा उपयोग उत्तमरीतीने जिवन जगण्यासाठी होईल.

८ .'उपयोजित' घटकाच्या माध्यमातून विविध प्रकारची कौशल्ये त्यांच्यात निर्माण होतील व ते रोजगारक्षम होतील.

९ विचारवंत, लेखक, कवी होण्यासाठी हे अध्ययन प्रेरक ठरेल, सहाय्यभूत ठरेल. यातून विद्यार्थी भाषेचा सर्जनशील वापर कसा करावा हे समजून घेतील व विविध प्रकारातील साहित्य निर्मिती करतील. तसेच व्यावहारिक उपयोजन करून रोजगारक्षम होतील.

| अ.क्र.<br>Sr.No. | घटक<br>Topic | | अध्यापन तासिका<br>(Teaching Hours) | श्रेयांक<br>Credit |
|---|---|---|---|---|
| विभाग अ | **वैचारिक** | | १० | |
| १) | तरूणांनो! निर्भय बना, शूर बना - स्वामी विवेकानंद | | | |
| २) | गाडगे महाराज एका आगळ्या संतत्वाचा धनी-अण्णासाहेब वैद्य | | | |
| ३) | 'आलेम्बिक' उद्योगसमूह एक प्रेरणा - अनंत मराठे | | | |
| विभाग ब | **ललित** | | १० | |
| १) | जोती: जीवनात आणि कवितेत - अरुणा ढेरे | | | |
| २) | मोयी - सतीश तराळ | | | |
| ३) | कष्टाची भाकरी - सचिन वसंत पाटील | | | |
| विभाग क | **कविता** | | १० | २.० |
| १) | डोईचा पदर आला खांद्यावरी - जनाबाई | | | |
| २) | वनसुधा - वामन पंडित | | | |
| ३) | दणकट दंडस्नायू जैसे- बा. सी. मर्दकर | | | |
| ४) | सण - वा. ना. आंधळे | | | |
| ५) | मीच कवितेचा बाप झालो - लक्ष्मण महाडिक | | | |
| ६) | फगवा - गजानन देशमुख | | | |
| विभाग ड | **उपयोजित मराठी (Skill Enhancement Module)** | | ०६ | |
| | | १) टिपणी लेखन | | |
| | | २) प्रसारमाध्यमांसाठी लेखन | | |
| | | | 36 | २.० |

पसंतीवर आधारित श्रेयांक पद्धती (CBCS) अभ्यासक्रम २०२३-२४

| बी. कॉम. भाग- २ मराठी (द्वितीय भाषा) |
|---|
| सत्र ४ थे |

## गुण विभागणी

| एकूण गुण ५० |
|---|
| लेखी परीक्षा गुण ४० |
| वेळ २ तास |
| कौशल्य विकासावर आधारित अंतर्गत मूल्यमापन -१० |

**अभ्यासक्रमासाठी नेगलेले पाठ्यपुस्तक-**

'**अक्षरलेणी** भाग-२ (सत्र-३ व सत्र-४) (संपादित)

प्रकाशकाचे नावः राघव पब्लिशर्स ॲण्ड डिस्ट्रीब्युटर्स, नागपूर

(विभाग 'अ', 'ब' आणि 'क' साठी)

'**उपयोजित मराठी**- संपादक डॉ. केतकी मोडक, संतोष शेणई, सुजाता शेणई पद्द्मगंधा प्रकाशन, पुणे या

पुस्तकातील

(विभाग 'ड' साठी)

प्रकरण १४ वे - टिपणी लेखन- डॉ. लतिका जाधव

प्रकरण १७ वे -प्रसारमाध्यमांसाठी लेखन - संतोष शेणई

| विभाग अ | वैचारिक | - | १२ गुण |
|---|---|---|---|
| विभाग ब | ललित | - | १० गुण |
| विभाग क | कविता | - | ०९ गुण |
| विभाग ड | उपयोजित मराठी | - | ०९ गुण |

**प्रश्ननिहाय गुणविभागणी:-** ३० गुण

| प्रश्न १ | वैचारिक विभाग | दीघोत्तरी एक प्रश्न | ०६ गुण |
|---|---|---|---|
| प्रश्न २ | वैचारिक विभाग | लघुत्तरी एक प्रश्न | ०३ गुण |
| प्रश्न ३ | ललित विभाग | दीर्घोत्तरी एक प्रश्न | ०५ गुण |
| प्रश्न ४. | ललित विभाग | लघुत्तरी एक प्रश्न | ०२ गुण |
| प्रश्न ५ | कविता विभाग | दीर्घोत्तरी एक प्रश्न | ०५ गुण |
| प्रश्न ६ | कविता विभाग | लघुत्तरी एक प्रश्न | ०२ गुण |
| प्रश्न ७ | उपयोजित मराठी | दीघोत्तरी एक प्रश्न | ०५ गुण |
| प्रश्न ८ | उपयोजित मराठी | लघुत्तरी एक प्रश्न | ०२ गुण |

(वरील सर्व प्रश्नांना अंतर्गत पर्याय राहतील.)

**वस्तुनिष्ठ प्रश्न -**                                                                                    **१० गुण**

उपरोक्त अभ्यासक्रमातील विभाग अ व ब यावर प्रत्येकी ०३ प्रश्न आणि विभाग 'क' व 'ड' यावर प्रत्येकी ०२ प्रश्न वस्तुनिष्ठ स्वरुपाचे असे एकूण १० बहुपर्यायी प्रश्न विचारले जातील, प्रत्येक प्रश्नास ०१ गुण याप्रमाणे हा प्रश्न १० गुणांचा असेल

**विभाग 'ड'**साठी संदर्भ ग्रंथ म्हणून उपयोजित मराठी संपादक डॉ. केतकी मोडक, संतोष शेणई, सुजाता शेणई - पद्मगंधा प्रकाशन, पुणे या पुस्तकातील **प्रकरण १४ वे** टिपणी लेखन व **प्रकरण १७ वे** प्रसारमाध्यमांसाठी लेखन या प्रकरणावर ०४ गुणांचा ०१ दीर्घोत्तरी व ०३ गुणांचा ०१ लघुत्तरी प्रश्न विचारल्या जाईल.

**कौशल्य विकासावर आधारित अंतर्गत मूल्यमापन :-**                                          **१० गुण**

गुण विभागणी

१) घटक चाचणी (Class Test)- ०१                    -        ०५ गुण

२) स्वाध्याय (Home Assignment)                    -        ०५ गुण

सूचना :-(१) महाविद्यालयातील सांस्कृतिक कार्यक्रमाची वृत्तपत्र, आकाशवाणी, दूरचित्रवाणीसाठी बातमी तयार करा

**Programme: B.com. II (Information System Management ) Semester - IV**

| Code of Subject | Title of Subject | Total no. of Period |
|---|---|---|
| BCI : 43 | (DSC)Management Accounting | 60 |

**Course outcomes:**

After the completion of the course, Student will:
1. Recognize the significance and extent of Management Accounting, particularly its influence on organizational decision-making.
2. Utilize variance analysis methods to interpret deviations from standard costs and propose appropriate corrective measures.
3. Calculate safety margins and identify critical factors to effectively manage risk and uncertainty in business operations.
4. Differentiate between fixed and flexible budgets and exhibit competence in crafting cash budgets and master budgets.
5. Apply various reconciliation techniques to ensure precision and alignment between cost and financial accounts.

| Units | Contents | No. of Periods |
|---|---|---|
| Unit – I | **Basics of Management Accounting:** <br> Meaning and definition of Management Accounting, Evolution of Management Accounting, Nature and Scope of Management Accounting ,Relationship of Management Accounting with Other Branches of Accounting. | 12 |
| Unit - II | **Standard costing** <br> Meaning, Concepts and Objectives, Merits and Demerits of Standard costing, Prerequisite for establishment of standard costing, Efficiency and Activity Ratios, Variance Analysis and Control. | 12 |
| Unit - III | **Marginal costing** <br> Definition, Assumptions and Uses, Marginal Costing Vs. Absorption Costing, CVP /BEP Analysis, Key factors and Safety Margin, Managerial Decision Making Areas – Product Mix, Make or Buy, Pricing Decisions. | 12 |
| Unit - IV | **Budgetary Control** <br> Concepts and Objectives, Merits and Demerits of Budgetary Control, Fixed and Flexible Budget, Cash Budget and master Budget, Zero based Budgeting. | 12 |
| Unit – V | **Reconciliation of Cost and Financial Accounts** <br> Need of reconciliation, Remodelling Financial Records, Reconciliation of Profits, Methods of Reconciliation. | 12 |

Books Recommended:

1. Khan M.Y. and Jain P.K.: Management Accounting: Tata Mc-graw-Hill Publishing Co. Ltd., New Delhi.
2. Kaplan R.S. and Atkison A.A, Advanced Management Accounting: Prentice India International.
3. Gupta S.P.: Management Accounting, Sahitya Bhawan, Agra
4. Goyal Manmohan: Principles of Management Accounting, Sahitya Bhawan, Agra.
5. Singhavi N.P., Dr. Tated R.M., Dr. Chandak S.S. & Dahake R.R.: Management Accounting, Himalaya Publishing House, New Delhi.
6. Kishore Ravi M.: Cost & Management Accounting, Tax Mann's Publications (P) Ltd., New Delhi 7. M. C. Shukla, Dr. T.C. Grewal & M. P. Gupta: Cost Accounting, Sultan Chand & Sons, New Delhi
8. Prof. M. L. Agrawal & Dr. K. L. Gupta: Cost Accounting: By Sahitya Bhawan Publication, Agra

# Part - B    BCI : 44

### Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)

### Programme: B.com. II (Information System Management ) Semester - IV

| Code of Subject | Title of Subject | Total no. of Period |
|---|---|---|
| BCI : 44 | (DSC)COMMUNICATION AND DOCUMENTATION IN BUSINESS | 60 |

## Learning Outcomes:

After completion of the course, learners will be able to:

1. Realize the significance of effective communication in business;

2. Learn business vocabulary and understand varied ways/methods to present business plans;

3. Gain knowledge on drafting of official letters and documents;

4. Develop appropriate skills for report writing and different ways of documentation;

5. Explain the role of information technology for enabling business communication and documentation.

| Units | Contents | No. of Periods |
|---|---|---|
| Unit - I | **Communication Roles and Flows in Organisations** Meaning, importance (costs & rewards) and process of communication (with reference to Mintzberg's managerial roles) and documentation in business | 12 |
| Unit - II | **Business Language and Presentation** Business, commercial and managerial vocabulary – terms used in trade, business plans/ proposals, presenting business plans, multimedia corporate presentations | 12 |
| Unit - III | **Business Correspondence** Inviting quotations, sending quotations, placing orders, Social and public relations correspondence; Reading and writing shorter business messages –invitations, thank you notes, greetings and congratulations. | 12 |
| Unit - IV | **Technology and Business Communication** Use of digital platforms in business communication; Handling online orders, complaints and other sales correspondence, use of social media tools for advertising, buying and selling; publicizing business ideas through blogs, web-pages etc.; online business communities; webinars and conference calls. Privacy and data security issues in business communication. | 12 |
| Unit - V | **Business Documentation** Drafting simple contracts and deeds (non-legal); Project on legal documentation for bank transactions; Property documentation; Contract of employment etc.; note-sheet,; Creating, storing/ archiving and retrieving folders/ documents. Document sharing and collaborative working; Privacy and data security issues in business documentation | 12 |

## Books Recommended:

1. Andrews, D. C., & Andrews, W. D. (2003). Management Communication: A Guide. Boston: Cengage Learning.
2. Locker, K., & Kaczmarek, S. (2009). Business Communication: Building Critical Skills. New York: McGraw Hill Education.
3. Newman, Amy. (2017). Business Communication: In Person, In Print, Online. Boston: Cengage Learning.
4. Shirley, T. (2005). Communication for Business. London: Pearson Education.
5. Smallwood, R. F., & Williams, R. F. (2013). Managing Electronic Records: Methods, Best Practices, and Technologies. New Jersey: John Wiley and Sons.
6. Wilson, K., & Wauson, J. (2011). The AMA Handbook of Business Documents: Guidelines and Sample Documents That Make Business Writing Easy. New York: AMACOM.

**Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)**

**Programme: B.com. II (Information System Management ) Semester - IV**

| Code of Subject | Title of Subject | Total no. of Period |
|---|---|---|
| BCI : 45 | (DSC)Web Technology | 60 |

## Course Outcomes:

1. Implement and analyze behavior of web pages using HTML and CSS

2. Apply the client side technologies for web development

3. Analyze the concepts of Servlet and JSP

4. Analyze the Web services and frameworks

5. Apply the server side technologies for web development

6. Create the effective web applications for business functionalities using latest web development platforms

| Units | Contents | No. of Periods |
|---|---|---|
| Unit - I | **Introduction to Web Development**<br>The Internet, basic internet protocols, the world wide web, HTTP Request message, HTTP response message, web clients, web servers. HTML: Introduction, history and versions. HTML elements: headings, paragraphs, line break, colors and fonts, links, frames, lists, tables, images and forms, Difference between HTML and HTML5. CSS: Introduction to Style Sheet, CSS features, CSS core syntax, Style sheets and HTML, Style rule cascading and inheritance, text properties. Bootstrap. | 12 |
| Unit - II | **Client Side Technologies**<br>JavaScript: Introduction to JavaScript, JavaScript in perspective, basic syntax, variables and data types, statements, operators, literals, functions, objects, arrays, built in objects, JavaScript debuggers.<br>DOM: Introduction to Document Object Model, DOM history and levels, intrinsic event handling, modifying element style, the document tree, DOM event handling, jQuery, Overview of Angular JS. | 12 |
| Unit - III | **Java Servlets and XML**<br>Servlet: Servlet architecture overview, A "Hello World" servlet, Servlets generating dynamic content, Servlet life cycle, parameter data, sessions, cookies, URL rewriting, other Servlet capabilities, data storage, Servlets concurrency, databases (MySQL) and Java Servlets. XML: XML documents and vocabularies, XML declaration, XML Namespaces, DOM based XML processing, transforming XML documents, DTD: Schema, elements, attributes. AJAX: Introduction, Working of AJAX. | 12 |
| Unit - IV | **JSP & Web Services**<br>JSP: Introduction to Java Server Pages, JSP and Servlets, running JSP applications, Basic JSP, JavaBeans classes and JSP, Support for the Model-view-controller paradigm, JSP related technologies.<br>Web Services: Web Service concepts, Writing a Java Web Service, Writing a Java web service client, Describing Web Services: WSDL, Communicating Object data: SOAP. Struts: Overview, architecture, configuration, actions, interceptors, result types, validations, localization, exception handling, annotations | 12 |
| Unit - V | **Server-Side Scripting Languages**<br>PHP: Introduction to PHP, uses of PHP, general syntactic characteristics, Primitives, operations and expressions, output, control statements, arrays, functions, pattern matching, form handling, files, cookies, session tracking, using MySQL with PHP, WAP and WML. Introduction to ASP.NET: Overview of the .NET Framework, Overview of C#, Introduction to ASP.NET, ASP.NET Controls, Web Services. Overview of Node JS. | 12 |

## Reference Book:

1. Jeffrey C.Jackson, "Web Technologies: A Computer Science Perspective", Second Edition, Pearson Education, 2007, ISBN 978-0131856035
2. Robert W. Sebesta, "Programming the World Wide Web", 4th Edition, Pearson education, 2008.
3. "HTML and CSS: Design and Build Websites" by Jon Duckett
4. "JavaScript and JQuery: Interactive Front-End Web Development" by Jon Duckett
5. "Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5" by Robin Nixon

**Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)**

**Programme: B.com. II (Information System Management ) Semester - IV**

| Code of Subject | Title of Subject | Total no. of Period |
|---|---|---|
| BCI : 46 | (DSC)Stock Exchange and Share Marketing | 60 |

## Learning Outcomes:

1. Understand the nature and role of financial structure in an economy.
2. Comprehend the concept and functions of the money market in the financial system.
3. Develop an overview of the Indian securities market, including its meaning, functions, and intermediaries.
4. Understand the meaning, nature, and functions of the secondary market.
5. Understand the concept, history, and functions of derivatives markets.

| Units | Contents | No. of Periods |
|---|---|---|
| Unit - I | **FINANCIAL SYSTEM AND SERVICES :**<br>Nature and role of financial structure - Financial system and financial markets - Financial system and economic development -Indian financial system: an overview; Investment alternatives and evaluation ; Reforms in financial system, Investment banking ; Credit Rating ; Factoring and Forfaiting ; Housing Finance | 12 |
| Unit - II | **FINANCIAL MARKETS :**<br>Money market- meaning, constituents & function ; Money market instruments – call money, treasury bills, and certificate of deposits, Commercial bills, and trade bills, Acceptance Houses, Discount Houses ; Capital markets – primary and secondary market ; Government securities markets ; Role of SEBI - an overview and recent developments. Role of RBI,SEBI.DFHI,SHCI in Financial Markets. | 12 |
| Unit - III | **Capital Markets in India :**<br>An overview of Indian Securities Market, Meaning, Functions, Intermediaries, Role of Primary Market – Methods of floatation of capital – Problems of New Issues Market – IPO's – Investor protection in primary market – Recent trends in primary market – SEBI measures for primary market. | 12 |
| Unit - IV | **Stock exchanges and its Functions :**<br>Meaning, Nature, Functions of Secondary Market – Organisation and Regulatory framework for stock exchanges in India – SEBI : functions and measures for secondary market – Overview of major stock exchanges in India - Listing of Securities: Meaning – Merits and Demerits – Listing requirements, procedure, fee – Listing of rights issue, bonus issue, further issue – Listing conditions of BSE and NSE – Delisting | 12 |
| Unit - V | **Derivatives Markets :**<br>Derivatives: Meaning, History & functions of derivatives market, participants in Derivative market, Legal framework of derivatives market in India with respect to equity, Currency and Commodity derivatives, Forwards and Futures contract, swaps. | 12 |

## Books Recommended:

1. Prasanna Chandra, "Investment Analysis and Portfolio management", Tata McGraw Hill, 3 rd Edn., 2008
2. Julian Walmsley, "New Financial Instruments", John Wiley & Sons, 2nd edition, Inc 1998.
3. Punithavathy Pandian, "Security Analysis and Portfolio Management", Vikas Publishing House Pvt. Ltd.
4. Prasanna Chandra, "Investment Analysis and Portfolio management", Tata McGraw Hill, 3 rd Edn., 2008
5. John C Hull, " Options, Futures, and Other Derivatives" , (7th Edition), , Pearson Higher Education (2010)

# Part - B     BCI : 47

## Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)

### Programme: B.com. II (Information System Management ) Semester - IV

| Code of Subject | Title of Subject | Total no. of Period |
|---|---|---|
| BCI : 47 | (DSC)Java Programming | 45 |

## COURSEOUTCOMES:

On successful completion of this course, the student should be able to:

1. Show competence in the use of the Java programming language in the development of small to medium-sized application programs that demonstrate professionally acceptable coding and performance standard
2. Understand the basic principles of the object-oriented programming
3. Demonstrate an introductory understanding of graphical user interfaces, multithreaded programming, and event-driven programming

| Units | Contents | No. of Periods |
|---|---|---|
| Unit - I | **Introduction to Java :** <br> Basics of Java programming, Data types, Variables, Operators, Control structures including selection, Looping, Java methods, Overloading, Math class, Arrays in java. | 09 |
| Unit - II | **Objects and Classes :** <br> Basics of objects and classes in java, Constructors, Finalizer, Visibility modifiers, Methods and objects, Inbuilt classes like String, Character, StringBuffer, File, this reference. | 09 |
| Unit - III | **Inheritance and Polymorphism :** <br> Inheritance in java, Super and sub class, Overriding, Object class, Polymorphism, Dynamic binding, Generic programming, Casting objects, Instance of operator, Abstract class, Interface in java, Package in java, UTIL package. | 09 |
| Unit - IV | **Event and GUI programming :** <br> Event handling in java, Event types, Mouse and key events, GUI Basics, Panels, Frames, Layout Managers: Flow Layout, Border Layout, Grid Layout, GUI components like Buttons, Check Boxes, Radio Buttons, Labels, Text Fields, Text Areas, Combo Boxes, Lists, Scroll Bars, Sliders, Windows, Menus, Dialog Box, Applet and its life cycle, Introduction to swing. | 09 |
| Unit - V | **I/O programming and Multithreading :** <br> Text and Binary I/O, Binary I/O classes, Object I/O, Random Access Files. Thread life cycle and methods, Runnable interface, Thread synchronization, Exception handling with try-catch-finally, Collections in java, Introduction to JavaBeans and Network Programming. | 09 |

## Reference Books :

1. "Head First Java" by Kathy Sierra and Bert Bates
2. "Java: A Beginner's Guide" by Herbert Schildt
3. "Effective Java" by Joshua Bloch
4. "Java: The Complete Reference" by Herbert Schildt
5. "Core Java Volume I: Fundamentals" by Cay S. Horstmann

# Part - B    BCI : 47 (Practical)

## Syllabus Prescribed for 3 Years Under Graduate Programme (CBCS)

## Programme: B.com. II (Information System Management ) Semester - IV

| Code of Subject | Title of Subject | Total no. of Period |
|---|---|---|
| BCI : 47 | (DSC)Java Programming | 30 |

## Course Outcomes:

1. Understand the structure and syntax of basic Java programs.
2. Identify and apply different data types, variables, operators, arrays, and control structures in Java programming.
3. Define classes and constructors in Java, and demonstrate their usage effectively.
4. Implement classes, methods, and objects in Java, showcasing method overloading for improved code readability and reusability.
5. Demonstrate understanding of inheritance in Java and showcase method overriding for polymorphic behavior.

## List of practical

| | |
|---|---|
| 1. | Program to define a structure of a basic JAVA program |
| 2. | Program to define the data types, variable, operators, arrays and control structures. |
| 3. | Program to define class and constructors. Demonstrate constructors. |
| 4. | Program to define class, methods and objects. Demonstrate method overloading. |
| 5. | Program to define inheritance and show method overriding. |
| 6. | Program to demonstrate Exception Handling. |
| 7. | Program to demonstrate Multithreading. |
| 8. | Program to demonstrate I/O operations. |
| 9. | Program to demonstrate Network Programming. |
| 10. | Program to demonstrate Applet structure and event handling |
| 11. | Program to demonstrate Layout managers |

| Practical Marks Distribution | |
|---|---|
| Record | 10 Marks |
| Description | 10 Marks |
| Practical | 15 Marks |
| Viva | 05 Marks |
| **Total** | **40 Marks** |