SCHEME OF EXAMINATION

&

SYLLABI

OF

4-Year

BACHELOR OF BUSINESS ADMINISTRATIONPROGRAMME

(Based on National Education Policy (NEP) - 2020)

WITH EFFECT FROM THE ACADEMIC SESSION

2024-25



MAHARSHI DAYANAND UNIVERSITY ROHTAK (HARYANA)

PROGRAMME SPECIFIC OUTCOMES

The programme-specific learning outcomes of the Four-Year (Eight Semesters) BBA programme are as follows:

PSO1: Demonstrate a continuous pursuit of knowledge and skills in advanced areas of business management and related fields, fostering personal and professional growth.

PSO2: Effectively adapt to and manage the rapidly changing economic, social, political, technological, and cultural environments that impact business organizations and society at large.

PSO3: Equip themselves with the necessary skills and knowledge for gainful employment in their chosen specialized domains, ensuring a successful transition into the professional world.

PSO4: Disseminate comprehensive knowledge of the critical functions in managing international business, finance, human resources, operations, marketing, and systems to gain a competitive advantage in a globalized economy.

PSO5: Exhibit proficiency in the tools and techniques used for effective business decision-making, applying analytical and problem-solving skills to real-world business scenarios.

PSO6: Utilize strategic management principles and practices to guide business operations, ensuring the alignment of organizational goals with market demands and opportunities.

PSO7: Engage in research activities that provide insights into complex business challenges, fostering innovation and the development of effective solutions.

PSO8: Effectively handle contemporary organizational challenges, demonstrating strong team spirit and collaborative skills to enhance organizational performance and cohesion.

First Year: Second Semester

Course Code	Title of the Course (s)	Summative Assessment	Formative Assessment	Practicum/ Viva-Voce	Total Marks	Credits (L-T-P)
Discipline-Specific Courses (DSC) – Major (DSC2)						
24IMSI402DS01 Managerial Skills 70 30 - 100 3-1-0						
24IMSI402DS02	Essentials of Economics	70	30	-	100	3-1-0
Z41W15140ZD30Z	Essentials of Economics	/0	30	<u>-</u>	100	3-1

Discipline Relevant/Allied – Minor (MIC2)

Students may opt for **one course** @ **four credits** from the pool of Minor Courses designed at the central level by the University.

Multidisciplinary Courses (MDC2)

Students may opt for **one course** @ **three credits** from the pool of Multidisciplinary Courses by selecting out of any of the broad fields (Life Sciences, Physical Sciences, Arts, Humanities and Social Sciences, Commerce & Management, and Interdisciplinary Studies) designed at the central level by the University which they have not studied at the 12th-level or the opted course is not related to their major and minor stream under this category.

Ability Enhancement Course (AEC2)

Students may opt for **one course** @ two credits from the pool of Ability/Language Enhancement Courses designed at the central level by the University.

Skill Enhancement Course (SEC2)						
24IMS402SE01	Business Communication	25	-	50	75	1-0-2
VV.1 (171.1C) (VV.1.CA)						

Value Added Course (VAC2)

Students may opt for **one course** @ **two credits** from the pool of Value-Added Courses designed at the central level by the University.

Total Credits 22

Note:

Students exiting the programme after the second semester and securing 48 credits including 4 credits of summer internship will be awarded UG Certificate in Business Administration.

Total Credits (22+22=44+4) for UG Certificate (Business Administration) 48

Second Year: Third Semester

Course Code	Title of the Course (s)	Summative Assessment		Practicum/ Viva-Voce	Total Marks	Credits (L-T-P)
Discipline-Specific Courses – Major (DSC3)						
25IMSI403DS01	Cost and Management Accounting	70	30	-	100	3-1-0
25IMSI403DS02	Corporate Governance	70	30	-	100	3-1-0
25IMSI403DS03	Disaster Management	70	30	-	100	3-1-0

Discipline Relevant/Allied – Minor (MIC3)

Students may opt for **one course** @ **four credits** from the pool of Minor Courses designed at the central level by the University.

Multidisciplinary Courses (MDC3)

Students may opt for **one course** @ **three credits** from the pool of Multidisciplinary Courses by selecting out of any of the broad fields (Life Sciences, Physical Sciences, Arts, Humanities and Social Sciences, Commerce & Management, and Interdisciplinary Studies) designed at the central level by the University which they have not studied at the 12th-level or the opted course is not related to their major and minor stream under this category.

Ability Enhancement Course (AEC3)

Students may opt for **one course** @ two credits from the pool of Ability/Language Enhancement Courses designed at the central level by the University.

Skill Enhancement Course (SEC3)						
25IMS403SE01	Business Etiquettes	25	-	50	75	1-0-2
Total Credits						24

MANAGERIAL SKILLS Course Code: 24IMSI402DS01

L-T-P External Marks: 70
3-1-0 Internal Marks: 30
Time: 3 Hours

Course Objectives:

- 1. To acquaint the students with the basics of managerial skills and their application in managing the business more effectively and more efficiently.
- 2. To offer exposure to students of the importance of social psychological setup in becoming a dynamic manager.

Course Outcomes:

On successful completion of the course, the students will be able to:

- 1. Understand the essential managerial skills and the applications;
- 2. Learn how to solve an analytical problem, and why employee empowerment and delegation of work are crucial:
- 3. Know the importance of team building and group behavior in an organization;
- 4. Analyze the importance of communication and motivation skills in developing effective and efficient managers.

UNIT-I

Introduction to managerial skills: Meaning and concept of managerial skills, Need and its importance, Techniques of skill development for effective management, Application of management skills. Coordination and Interpersonal roles.

UNIT-II

Problem-solving: Problem-solving, creativity, innovation, steps of analytical problem solving, limitations of analytical problem solving, impediments of creativity, multiple approaches to creativity Empowering and delegating: Meaning of empowerment, dimensions of empowerment, how to develop empowerment, inhibitors of empowerment, delegating works.

UNIT-III

Teams and Groups: Team Building, developing teams and teamwork, advantages of a team, leading a team, team membership, Group Dynamics, Group Behaviour, Cohesion, Importance of Brain Storming, Sensitivity Training, Nominal Group techniques, Leadership and competence development.

UNIT-IV

Communication: Process of communication, Need and Importance of communication skills, Types of communication, conduct of meetings, Interviews, reporting of projects, reporting of case analysis, Building self-confidence, Role of motivation skills in developing managers

Suggested Readings:

- 1. Essentials of Management by Herald Koontz, Weihrich and Cannice, Tata-McGraw Hill Publishing House.
- 2. Management by James A.E. Stoner, Freeman, Gilberth, Pearson Publishing House.
- 3. Management by Robbins, Coulter, Fernandez Pearson Publishing House.
- 4. Richard L. Daft: Principles of Management, Cengage Learning India.
- 5. V.S.P. Rao Managerial Skills Excel Books, 2010, New Delhi
- 6. David A Whetten, Cameron Developing Management skills, PHI 2008
- 7. Ramnik Kapoor Managerial Skills Path Makers, Bangalore
- 8. Kevin Gallagher, Skills development for Business and Management Students, Oxford, 2010
- 9. Monipally, Muttthukutty Business Communication Strategies Tata McGraw Hill.
- 10. Robbins Stephen P: Organisational Behaviour, Pearson.

Instructions for External Examiner: The question paper shall be divided into two sections. Section 'A' shall comprise seven short answer type questions from the whole of the syllabus carrying two marks each, which shall be compulsory. The answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

ESSENTIALS OF ECONOMICS Course Code: 24IMSI402DS02

L-T-P External Marks: 70
3-1-0 Internal Marks: 30
Time: 3 Hours

Course Objectives:

- 1. To provide a basic understanding of how different activities of an economy work and interact, and its implications for society.
- 2. To make students aware of the contemporary issues of emerging economies.

Course Outcomes:

On successful completion of the course, the students will be able to:

- 1. Distinguish between nominal and real economic measures;
- 2. To understand behaviour of economic agents and their inter-dependence;
- 3. Explain the important measures of the aggregate performance of an economy;
- 4. Develop a critical ability to analyse public policy; and
- 5. Understand the challenges in meeting macroeconomic performance targets.

UNIT-I

Nature of Economics, positive and normative economics, diverse fields of economics, economic theory, economic models, economic policy and economic systems (command economies, laissez-faire, mixed systems), scarcity and choice, fundamental problems of economy, demand, supply and markets

UNIT-II

National Income, economic growth and development, productivity and capital formation, saving and Investment, working of a multiplier, government spending and outcomes

UNIT-III

The Economics of Central Banking, creation of credit, determination of exchange rate, international trade and economic integration, trade openness and growth

UNIT-IV

Macroeconomic Challenges (with special reference to India): inflation, income inequality, poverty, unemployment, corruption, human development, and global warming

Suggested Readings:

- 1. Mankiw, N. G. (2020). Principles of economics. Cengage Learning.
- 2. Fair, R. C., & Oster, S. M. (2007). Principles of economics. Prentice Hall.
- 3. Dwivedi, D. N. (2009). Principles of economics. Vikas Publishing House.
- 4. Puri, V. K., & Misra, S. K. (2017). *Indian economy* (pp. 236-238). Mumbai: Himalaya Publishing House.
- 5. Economic Surveys (2001 onwards). Ministry of Finance, Government of India.

Instructions for External Examiner: The question paper shall be divided into two sections. **Section 'A'** shall comprise seven short answer type questions from the whole of the syllabus carrying two marks each, which shall be compulsory. The answer to each question should not exceed 50 words normally. **Section 'B'** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

BUSINESS COMMUNICATION Course Code: 24IMS402SE01

L-T-P External Marks: 25
1-0-2 Practicum Marks: 50
Time: 3 Hours

Course Objectives:

- 1. The course is designed to provide students with the skills and knowledge of communication in the business environment.
- 2. Familiarize the basic writing skills that lay a strong foundation for writing business documents.

Course Outcomes:

On successful completion of the course, the students will be able to:

- 1. Describe the basics of communication and its process, elements, and importance;
- 2. Familiar with the various barriers in communication;
- 3. Outline the listening skills and the characteristics of good and poor listeners;
- 4. Identify the various types of listening, their approaches, and barriers; and
- 5. Present themselves in front of the people and organizers.

UNIT-I

Introduction: Basics of communication, seven Cs of effective communication, barriers to communication, the ethical context of communication

UNIT-II

Business communication at the workplace: Letter writing – component, layout and process, e-mail communication, bad news messages, persuasive written communication, memos, notice, agenda and minutes of meeting

UNIT-III

Report writing: Types of business reports, the structure of reports, short reports, long reports, abstracts and summaries, proposals

UNIT-IV

Communication Skills: Reading skills, listening skills, note making, persuasive speaking, body language, gestures

Suggested Readings:

- 1. Murphy, Herta A., Herbert W. Hildebrandt & Jane P Thomas, Effective Business Communication, Tata McGraw Hill, New Delhi
- 2. Konera, Arun, Professional Communication, Tata McGraw Hill, New Delhi
- 3. McGrath, E.H., Basic Managerial Skills for All, PHI, New Delhi
- 4. Meenakshi Raman & Prakash Singh, Business Communication, Oxford University Press, New Delhi

Instructions for External Examiner: The question paper shall be divided into two sections. Section 'A' shall comprise five short answer type questions from the whole of the syllabus carrying one mark each, which shall be compulsory. The answer to each question should not exceed 50 words normally. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

हिंदी भाषा संवर्धन-1

Semester I/ Semester II (Session 2024-25)

Course	23HNDX01AE01	Course Credits	2(L:T:P:)
Code			(2:0:0)
Max.	50(External (term-end	Time of end term	3 Hours
Marks	exam)-35	examination	
	(Internal -15)		

The examiner has to set a total of nine questions (two from each unit and one compulsory question consisting of short answer from all units. The candidate has to attempt one question each from each unit along the compulsory question (5 X7- 35 marks)

Course Objectives:

- 1. विद्यार्थियों को हिन्दी भाषा के महत्त्व एवं गुणवत्ता से सुविज्ञ करवाकर हिन्दी की ओर उन्मुख करना।
- 2. विद्यार्थियों को हिन्दी—भाषा की वैज्ञानिकता के विषय में बतलाकर इसके गौरव से सुपरिचित करवाना।
- 3. हिन्दी भाषा के माध्यम से नवयुवक—नवयुवतियों को राष्ट्रीयता के पुनीत भावों की ओर उन्मुख करना।

Course Outcomes

- 1. शुद्ध हिन्दी के प्रयोग में अभिवृद्धि होगी।
- 2. व्यवसाय एवं रोजगार की उपलब्धता वाले सभी क्षेत्रों में हिन्दी भाषा में निष्णात युवाओं की प्रतिभागिता में अभिवृद्धि होगी।
- 3. अन्तरराष्ट्रीय स्तर पर हिन्दी–भाषा के वर्चस्व की स्थापना होगी और हिन्दी–भाषी को देश और विदेश में समुचित सम्मान मिलेगा।

इकाई–1

लिपि का मानकीकरण, मानक वर्णमाला, देवनागरी अंक माला, अनुस्वार और विसर्ग, अनुनासिक, वर्तनी की शुद्धता के लिए ध्यान देने योग्य बातें, वर्तनी संबंधी अशुद्धियों के कारण, वर्तनी संबंधी अशुद्धियों को दूर करने के उपाय

इकाई—॥

सृजनात्मक साहित्य का अर्थ, परिभाषा और स्वरूपः आलोचनात्मक साहित्य का अर्थ, परिभाषा और स्वरूपः सृजनात्मक साहित्य का भाषा—विकास में महत्त्व, निबंध लेखन, कहानी लेखन, काव्य लेखन

इकाई- ॥

अनुवाद : अर्थ, परिभाषा और स्वरूपय अनुवाद का महत्त्व, अनुवादक के गुण, अनुवाद के प्रकार : अनुवाद में कंप्यूटर का योगदान, सीरियलों का हिंदी अनुवाद, बैंकिंग साहित्य का अनुवाद, डिबेंग क्षेत्र में अनुवाद, लिप्यंतरण, हिंदी साहित्य का अन्य भाषाओं में अनुवाद, अनुवाद—क्षेत्र में रोजगार

इकाई-IV

पत्र प्रस्तुतीकरण का अर्थ, पत्र प्रस्तुतीकरण और नवीन शोधात्मक वैचारिकता, पत्र प्रस्तुतीकरण और शिक्षक की भूमिका, प्रस्तोता का मनोबल, वक्तृत्व कला का विकास, शोधात्मक अभिरुचि का विकास

प्रेरणास्पद पुस्तकें :

- 1. डॉ० हरिश्चन्द्र वर्मा, शुद्ध लेखन और हिन्दी का मानक रूप, विद्या भारती, संस्कृति शिक्षा संस्थान, कुरुक्षेत्र (हरियाणा)
- 2. सम्पा० कालिका प्रसाद, राजवल्लभ सहाय, मुकुन्दीलाल श्रीवास्तव, बृहत् हिन्दी कोशः ज्ञानमण्डल लिमिटेड, वाराणसी
- 3. मुख्य सम्पादक, डॉ० लक्ष्मीनारायण शर्मा, परिशोध, मानव—मूल्य विशेषांक, 1993
- 4. डॉ० धर्मपाल मैनी, भारतीय जीवनमूल्य, भारतीय संस्कृति संस्थान, गुड़गाँव
- 5. बृहत् प्रशासन शब्दावली, हिन्दी—अंग्रेजी, वैज्ञानिक तथा तकनीकी शब्दावली आयोग, नई दिल्ली—110006
- 6. बृहत् प्रशासन शब्दावली, अंग्रेजी—हिन्दी, वैज्ञानिक तथा तकनीकी शब्दावली आयोग, नई दिल्ली—110006
- 7. बृहत् पारिभाषिक शब्द—संग्रह, मानविकी, खंड—।।, वैज्ञानिक तथा तकनीकी शब्दावली आयोग, केन्द्रीय हिन्दी निदेशालय शिक्षा तथा समाज कल्याण मंत्रालय, भारत सरकार
- 8 डॉ० अनन्त चौधरी, नागरी लिपि और हिन्दी—वर्तनी बिहार हिन्दी ग्रन्थ अकादमी, पटना—3
- 9. डॉ० सुरेश सिंहल, अनुवाद सिद्धान्त एवं व्यवहार, अभिनव प्रकाशन, दिल्ली-6
- 10. डॉ॰ सुरेश सिंहल, प्रयोजनमूलक अनुवाद, मोनिका प्रकाशन, दिल्ली—110053

Allen, LA, —Management and Organisation-Tokyo.

Kumar, Pardeep. Management: Principles and Applications. JSR Publication House LP, Delhi.

Stoner and Freeman, —Management—Prentice Hall, New Delhi. R

Griffin- Management Principles and Application. Cengage

Parag Deewan, —Management, Principles and practices-Excel Books.

Mahajan, J.P. and Mahajan Anupama. Management Principles and Applications. Vikas Publications

Semester II Session: 2024-25

Name of Program	B.COM	Program Code	
Name of the Course	Fundamentals of	Course Code	24COM402MI01
	Accounting		
Hours per Week	4	Credits	4
Maximum Marks	100	Time of	3
	Internal 30	Examinations	
	External 70		

Note:

The examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 7 small questions of two marks each. The rest of the eight questions will beset from all the four units. The examiner will set two questions from each unit out of which the candidate shallattempt four questions selecting one question from each unit. All questions shall carry 14 marks each.

Course Learning Outcomes (CLO):

- **CLO 1:**Students will be able to understand the significance of accounting, including its meaning, objectives, scope, limitations, and the diverse users of accounting information.
- **CLO 2:**To learn the principles and practices of the double-entry system and gain proficiency in recording various transactions in the journal.
- **CLO 3:**Develop the ability to manage different subdivisions of the journal, including specialized books like the cash book, purchase book, sales book, and understand their role in accounting.
- **CLO 4:**Demonstrate competency in preparing a trial balance to ensure accuracy and in generating key financial statements like the trading account, profit and loss account, and balance sheet for a sole proprietary business, incorporating necessary adjustments.

Unit 1

Accounting: (i) Meaning, Objectives, Scope, Limitations and Users of Accounting Information (ii) Basic Accounting Terms; (iii) Accounting Principles.

Unit 2

(i) Double Entry System (ii) Recording of Transactions in Journal; (iii) Ledger

Unit 3

(i)Sub-Division of Journal: Cash Book, Single Column Cash Book and Cash Book with Bank Column, Petty Cash Book (ii) Purchase Book, Sales Book, Purchase Return Book, Sales Return Book, Journal Proper

Unit 4

(i) Trial Balance; (ii) Financial Statements: Trading Account, Profit and LossAccountandBalanceSheet of sole proprietarybusiness (With Adjustment)

References:

- D.K. Goyal: Financial Accounting, Arya Publication Ltd.
- S.N. Maheshwari: An introduction to Accounting, Vikas Publishing House Pvt. Ltd.
- NishatAzmat and Andy Lymer: Basic Accounting: The step-by-step course in elementary accountancy, Kindle

Semester:II Session: 2024-2025

Name of Program		Program Code	
Name of the Course	Environmental issues	Course Code	24EVSX02MD01
Hours per Week	3	Credits	3
Maximum Marks	75	Time of Examinations	3 Hours

Note:Examiner will set nine questions and the candidates will be required to attempt five questions in all. Question number one will be compulsory containing short answer type questions from all units. Further, examiner will set two questions from each unit and the candidates will be required to attempt one question from each Unit. All questions will carry equal marks.

Course Learning Outcomes (CLO): After completing this course, the learner will be able to:

- CLO1. Gain knowledge about major global environmental issues related to industrialization and urbanization and international efforts for environmental protection.
- CLO2. Understand the issues related to exploitation of resources, degradation and pollution
- CLO3. Understand the issues related to different types of pollution and their effect on environment in total.

Unit 1:Significant global environmental issues: acid rain, climate change, biodiversity loss, ozone layer depletion, Deforestation, resource depletion and conservation, Sustainable development, International concerns and efforts for environmental protection, Role of United Nations, Stockholm Summit, Rio Summit.

Unit 2:Regional Environmental Issues: Forest and Wildlife management, desertification, reclamation of degraded land; Human intervention on wetlands, siltation and eutrophication, reclamation of wetlands, Mining and Environment, Open cast mining, Oil exploration and transportation, Deforestation and their impact on environment.

Unit 3:Pollution: Air Pollution: Causes of air pollution, Some important pollutants of air (CO, SOX, NOX and HC and Particulates) – their sources and effects on living and non-living organisms. Water Pollution: Sources of pollution of surface and ground water, Types of water pollutants. Solid Waste – Sources, characterization, disposal and management. Soil Pollution sources of soil pollution, Pollution and residual toxicity from the application of insecticides, pesticides and fertilizers; Soil erosion.

References:

- Singh, J.S., Singh, S.P. & Gupta, S.R. (2017). Ecology, Environment and Conservation. S. Chand (G/L) & Company Ltd.
- 2. Kumar, A. & Roy, P. K. (2008). Environmental Issues and Solutions. Daya Publishing House, New Delhi
- 3. Vashishsta, A. &Johari, S. (2020). Case Studies: Contemporary Environmental Issues and Challenges. Bloomsbury Publishing.
- 4. Sudhir, M.A. & Masillamani, M.A. (2003). Environmental Issues. Reliance Publishing House.
- 5. Gope, A., Sarkar, A., Sarkar, P., Majumdar, S. &Gosai. K. (2019). Environmental Issues & Sustainable Development. Notion Press Media Pvt Ltd.

Syllabus for Value Added Courses under NEP 2020

Name of the Program	Common for all Four year	Program Code	
	UG/Five Year Integrated		
	Programs		
Name of the Course	Digital and Technological	Course Code	23CSAX01VA01
	Solutions		
Hours/Week	2	Credits	2
Max. Marks.	50	Time of end term	3 Hours
		examination	

Note: The examiner has to set a total of nine questions (two from each unit and one compulsory question consisting with short answer from all the units. The candidate has to attempt one question each from each unit along with the compulsory question ($5 \times 7 = 35 \text{ marks}$)

Course Objectives:

- 1. To gain familiarity with digital paradigms
- 2. To sensitize about role & significance of digital technology
- 3. To provide know how of communications &networks
- 4. To bring awareness about the e-governance and Digital India initiatives
- 5. To provide a flavour of emerging technologies Cloud, Big Data, AI,ML, Blockchain, Robotics, 3D printing.

Course Outcomes:

On successful completion of this course, the student will be able to have a knowledge regarding

- 1. Knowledge about digital paradigm.
- 2. Realization of importance of digital technology, digital financial tools, e-commerce.
- 3. Know-how of communication and networks.
- 4. Familiarity with the e-governance and Digital India initiatives
- 5. An understanding of use & applications of digital technology.
- 6. Basic knowledge of all machine learning and big data

Unit - I

Introduction & Evolution of Digital Systems: Role & Significance of Digital Technology; Information and Communication Technology (ICT) & Tools; Computer System & working, Software and its types. Operating Systems: Types and Functions. <u>Problem Solving:</u> Algorithms and Flowcharts

Unit - II

Communication Systems: Principles, Model & Transmission Media.

Computer Networks & Internet: Concepts & Applications, WWW, Web Browsers, Search Engines, Messaging, Email, Social Networking. Computer Based Information System: Significance & Types. E-commerce & Digital Marketing: Basic Concepts, Benefits & Challenges

Unit – III

Emerging Technologies and their applications: Overview of Artificial Intelligence, Machine Learning, Deep Learning; Big Data, Data Science and Big Data Analytics; Internet of Things (IoT) and Industrial Internet of Things (IIoT), Robotics and 3D Printing; Blockchain Technology; Quantum Computing; Cloud computing and its service models.

Unit - IV

Digital India & e-Governance: Initiatives, Infrastructure, Services and Empowerment.

Digital Financial Tools: Unified Payment Interface, AadharEnabled Payment System, USSD, Credit / Debit Cards, e-Wallets, Internet Banking, NEFT/RTGS and IMPS, Online Bill Payment and POS.

Cyber Security: Threats, Significance, Challenges, Precautions, Safety Measures and Tools.

Suggested Readings:

- 1. P. Kumar, A. Tomar, R. Sharmila: Emerging Technologies in Computing: Theory, Practice, and Advances, CRC/Chapman & Hall, eBook.
- 2. Nasib Singh Gill: Handbook of Computer Fundamentals, Khanna Book Publishing Company(P) Limited, New Delhi.
- 3. Behrouz A. Forouzan:Data Communications and Networking, McGraw Hill.
- 4. E Balagurusamy: Fundamentals of Computers, Tata McGraw Hill.
- Buvya, Broberg, and Gosciniski: Cloud Computing- Principals and Paradigms, Wiley.