



An Autonomous Institute Affiliated to Devi Ahilya Vishwavidhyalaya, Indore Accredited by NAAC with 'A' Grade Phone No. 0731-2499911, 49661355, 4961356

E-mail: info@spipsindore.ac.in, Website: www.spipsindore.com

Part A: Introduction

Programme: Certif	icate Course	Class: I Year	Session: 2024-2025
Course Code:		EL-	101T
Course Title:		Basics of Bus	siness Studies
Course Type:		Ele	ctive
Pre-requisite:			(open for all)
Course Learning	1. T	he successful completion of this c	course shall enable the student:
Outcomes	2. T	he Course will be helpful to provi	de basic knowledge of business.
	a	nd feel and perform its responsibil	and Business ethics to guide corporate sector lity towards society.
		tudents will be capable to unde ystem, banking procedure.	erstand ethical aspect of business, banking
		tudents will be capable to understansurance procedure, stock exchange	and practical banking, insurance system, ge system.
		o help them for employment in re	
	7. T	o gain a comprehensive underst	tanding of fundamental business principles ecision-making and management in a global
Credit Value		4	1+2
Total Marks	Max. Marl	s 30+70 Min. Passin	ng Marks: 35

Part B: Content of the course

Total N	Total No. of Lectures (in hours per week)- 6 Total Lectures: 60 Theory+ 30 Practical ho			
Unit	Topic			
1	Concept of Business: Historical background of business in India. Meaning and objectives of business. Industry, trade and commerce. Business Sectors; Goods and services sectors. Concept and salient features of sole trade, partnership, LLP and co-operative society. Meaning, features and types of Joint stock company. Online Business: Need, importance limitations, process, dangers and precautions.	12+6		
2	Business Ethics: Historical background of business ethics in India. Concept and significance of business ethics. Balancing between objectives of business and ethics of business. Evaluation of business ethics in India. Corporate Social Responsibility (CSR): Historical background of CSR, concept, objectives, need and importance of CSR. Contribution of Indian corporate sector under CSR. Evaluation of CSR in India.	12+6		

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	Banking: Historical background, classification of bank. Meaning, definition and functions of commercial bank. Role of banks in economic growth. Features of Indian banking system.	12+6
	Bank Deposits: Meaning and types. Features of bank accounts. Procedure to open and close bank accounts (Including online procedure).	
	Loans and Advances: Principles to sanction loans and advances. Classification of loans and advances. Procedure to apply for house loan, personal loan, education loan and commercial loan.	
4	Insurance: Origin and development of insurance. Meaning, principles and importance of insurance. Classification of insurance.	12+6
	Life Insurance: Meaning, objectives, principles and importance. Types of life insurance policy. Claim procedure and settlement. General Insurance: Meaning, objectives and importance. General Insurance Policies: Vehicle, health, household goods, commercial premises and goods and another available policy.	
5	Stock Exchange: Historical background. Meaning, functions and	12+6
	importance. Important terminology related to stock exchange. Primary and secondary market. Procedure of dealing in primary and secondary market. NSE, BSE. Various index and interpretation of fluctuations in it.	
	Mutual Funds: Concept, salient features, importance and types. Systematic Investment Plan (SIP). Performance of mutual funds in India.	

Part C learning Resources

Text books:

- 1. Dr C.B. Gupta Values & Ethics in Business Sultan Chand & sons New Delhi
- 2. Dr C.B. Gupta Business Organization & Management Sultan Chand & sons New Delhi
- 3. Rathi & Agrawal Investment Management & Security Analysis S. Chand & sons New Delhi
- Dr S.C. Saxena & Dr. V.P. Agrawal Business Organization & Communication Sahitya Bhawan Pub. Agra.
- 5. Dr. O.P. Gupta & Dr. Sudhir Kumar Sharma Banking & InsuranceSahitya Bhawan Pub. Agra
- 6. Dr. R. L. Nolakhha Principles of Insurance R.B.D. Publication Jaipur

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Suggestive digital platforms, web links:

1 http://cbseacademic.nic.in/web material/CurriculumMain20/SrSecondary/BusinessStudies.pdf 2. https://ncertnic.in/textbook.php?kebs1=0-11

3.http://www.opentextbooks.org.hk/system/files/export/6/6841/pdf/Business_Fundamentals_6841.pdf

4.https://vtechworks.lib.vt.edu/bitstream/handle/10919/70961/Fundamentals%20of%20Business%20%

	Part D- Assessment and Evaluation	
Suggested Continuous Eva Maximum Marks: 100 Continuous Comprehensive E	luation Methods: Evaluation (CCE): 30 marks University Exam ((UE) :70 marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
External Assessment: University Exam Section: 70 Time: 03.00 Hours	Section(A): Six Very Short Questions	06 x 01 = 06
	Section (B): Five Short Questions	$05 \times 08 = 40$
	Section (C): Two Long Questions	02 x 12 = 24 Total 70

Part D- Practical Assessment and Evaluation				
Suggested Continuous Evaluation	methods:			
Internal Assessment	Marks	External Assessment	Marks	
Class Interactions/Quiz	10	Viva Vice on Practical	10	
Attendance	5	Practical Record file	10	
Assignment (Charts / Modal/seminar/ Rural services/Technology Dissemination/report of excursion/Lab visits/survey/Industrial visits	15	Table/Ground work/Experiments/Practical's	50	
Total	30	Total	70	

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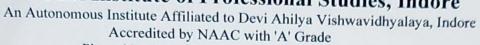
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BA I Year: Generic English (Theory + Tutorial)

		Part A Introduction
Pro	ogram: Certificate Course	Class: I Year Session: 2024- 2025
Subj	ect: Generic English	
1	Course Code	EL-102T
2	Course Title	Communicative English
3	Course Type (Core Course/Elective/Generic) Elective/Vocational/.)	Elective
4	Pre-requisite (if any)	This course can he opted as an elective by the students of following subjects: Class 12 th passed in any discipline /Open for all
5	Course Learning Outcome (CLO)	The study of this course will enable the students to acquire the knowledge of Phonology and Morphology. Syntax and Structure, and Vocabulary and Discourse. The students will be able to converse in real-life situations with effective language skills. The course will also help them Acquire literary sense, Use idiomatic and lexical language. and Communicate effectively across the globe.
6	Credit Value	Theory 4 Credits Practical 2 Credits
7	Total Marks	Max. Marks: 30+70 Min. Passing Marks 35

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Total No.	of Lectures- 60 Theory + 30 Practical		
Unit	Topics	No. of	No of
I	Communication 1.1 What is communication, its meaning, types and its purpose in the age of Globalization. 1.2 Communicative needs and problems 1.3 Expansion of an idea 1.4 Rules of use of language, use of appropriate words Keywords/Tags: Linguistic and communicative competence, Communication. affective and cognitive strategies, ESL. EFL. Acquisition of LI, I2 and Collocational language.	Lectures 12	Practica 6
П	Practicing Listening skill, Reading and Understanding Skills 2.1 Listening to Radio and TV news, discussion and comprehension of rules of grammar; 2.2 Parts of Speech. Pronunciation and intonation. Melodic parts of an Utterance variation of pitch. 2.2 Reading newspapers, analysis and interpretation 2.3 IPA and phonetic symbols 2.4 Precis writing and paraphrasing 2.5 Vocabulary enrichment	12	6
Ш	Practicing Writing Skills 3.1 Formal and informal writing of letter and invitation, meeting minutes, official orders and appointments. creative writing, listening to talks and presentation, note-making tips. 32 Communicative approach, lexical approach, task based learning 3.3 Report writing, Story writing, Daily routine in English Keywords/Tags: Productive skills. Code mixing, Situational conversation, Structural English.	12	6

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IV	Practicing Speaking Skills 4.1 Situational conversation between two friends on different topics 4.2 Group and Peer Discussions, Role play Keywords/Tags: Situational conversation. Frequent use of proverbs, phrases and idioms, Types of Role-Play Conversational English.	12	6
V	Application of Communicative English 5.1 Translation (from Hindi to English and vice- versa 5.2 Contrastiveanalysis between L1 and L2: At structural, phonological and lexical levels with examples Keywords/Tags: Literary translation, Translation theories. L1 Interference. Bilingualism,	12	6

Part C- Learning Resources Text Books, References, Books, and Other Resources

- "A Communicative Grammar of English". Leech Geoffrey, and Jan Svartik, Routledge, 2003 Third Edition.
- "CTL for ESL Teachers & Learners". Gautam, GS, Classical Publishing Co., New Delhi, India 2012 1st ed.
- "Communicative English for Globalization". Gautam GS. Classical Publishing Co., New Delhi, India 2013. Is ted.
- "Communicative English Language Skills". Sumague, Julieta Arjona. Society Publishing, 2020.
- "Communicative Methodology in Language Teaching". Brumfit, C. Cambridge University Press. 1984.
- "Language Teaching: A Scientific Approach". Lado Robert. McGraw-Hill, New York. 1964.
- "Motivation- The Teacher's Responsibility." Allwright, Dick. ELT Journal 31/4. 1977
- "Problem and Principles in Language Teaching". Brumfit, C. Pergamon Institute of English, 1980.
- "The Learner-Centred Curriculum". Nunan, D. Cambridge University Press. 1988.

uggested Digital Platform web links:

Copyright skillsyouneed.com 2011-2021. "What Is Communication? Verbal, Non-Verbal & Written Skillsyouneed.com/ips/what-is-communication.html

 $\label{eq:communication} \begin{tabular}{l}{l}{Ekeeda.~"Written Communication-Introduction to Communication Skills" YouTube, uploaded by Ekeeda, 6 Nov. \\ 2018. $\underline{www.youtube.com/watch?v=BHgQ03UuQvE}$ \end{tabular}$

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Msengeti, David. "Communication Notes." *SlideShare*, 2016, www.slideshare.net/mwakidimi/communication-notes-69103614.

Suggested equivalent online courses:

http://www.coursera.org/specializations/improve-english Improve your English Communication Skills Specialization by Gerry Landers, Amalia B. Stephens, Karen Peterson, Georgia Tech Language Institute.





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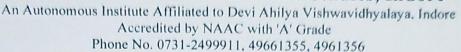
	Part D- Theory Assessment and Evaluation	
Suggested Continuous Eval Maximum Marks: 100 Continuous Comprehensive Ev	uation Methods: aluation (CCE): 30 marks University Exam (UE) :70	marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
External Assessment: University Exam Section: 70 Time: 03.00 Hours	Section(A) : Six Very Short Questions	06 x 01 = 06
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Par	rt D- Practical As	ssessment and Evaluation	
Suggested Continuous Evaluation	methods:		
Internal Assessment	Marks	External Assessment	Marks
Class Interactions/Quiz	10	Viva Vice on Practical	10
Attendance	5	Practical Record file	10
Assignment (Charts / Modal/seminar/ Rural services/Technology Dissemination/report of excursion/Lab visits/survey/Industrial visits	15	Table/Ground work/Experiments/Practical's	50
Total	30	Total	70

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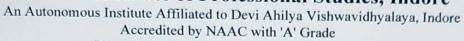
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Part A-Introduction

	rogramme: Certificate	Class: 1 Year	Session 2024-2025
1	bject: Physical Education Course Code		1.100
2	Course Title		L-106T cept of Physical Education
3	Course Type		lective
4	Pre-requisite	This course can be opted as an election and it is open for all.	ive subject by the students of any core
5	Course Learning Outcomes	 On completion in of this cour Know the Physical Education area in their personal, social a The students will learn about for. Fitness, Health and Wellr society. They will understand the Structure International level specially International Children's Emer for all." Students will be able to. iden components of fitness, and wi and cooling down and develous balance diet. This course will help the studenth of the sports related event 	and Sports better and May excel in this
6	Credit Value	4 Theory	+ 2 Practical
7	Total Marks	Max. Marks: 30+70.	Min. Passing Marks:35

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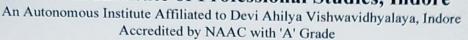
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Part B: Content of the course

 Meaning of Education . Meaning of Education and Physical Education Concept of Physical Education and Sports in Ancient India, Contribution of Physical Education towards Total Education, Aims and Objectives of Physical Education and Sports 	lecture
 Need and Importance of Physical Education and Sports Changing Concept of Physical Education in Future Prospect Career Opportunity in Physical Education and Sports 	12
 Contribution of Physical Education and Sports in fitness, health and wellness Concept of Fitness, Health and Wellness Basic Concept of the Major Organs of the Body (Heart, Lungs, Muscles and Bones Effect of Physical Activity and Sports on General Physiological Health (Heart, Lungs, and Muscles), Contribution of Physical Activity and Sports on Psychological aspect of Health (Stress, Anxiety and Motivation), Contribution of Physical Activity and Sports on Sociological Aspect of Human Behaviour (Socialization in Society) 	12
 Physical Education in India and role of UNICEF in development of sports Introduction and Contribution of Physical Education Institutions: Young Men's Christian Association (YMCA) College of physical Education, Lakshmibai National Institute of Physical Education (LNIPE), Sports Authority of India (SAI), Netaji Subhash National Institute of Sports (NSNIS). UNICEF Concept of "Children Rights in Sports Principles." UNICEF Concept of "Child Focused Sports for Development" UNICEF Concept of "Recreation Kit in a Carton" 	12
'h	 Basic Concept of the Major Organs of the Body (Heart, Lungs, Muscles and Bones Effect of Physical Activity and Sports on General Physiological Health (Heart, Lungs, and Muscles), Contribution of Physical Activity and Sports on Psychological aspect of Health (Stress, Anxiety and Motivation), Contribution of Physical Activity and Sports on Sociological Aspect of Human Behaviour (Socialization in Society) Introduction in India and role of UNICEF in development of sports Introduction and Contribution of Physical Education Institutions: Young Men's Christian Association (YMCA) College of physical Education, Lakshmibai National Institute of Physical Education (LNIPE), Sports Authority of India (SAI), Netaji Subhash National Institute of Sports (NSNIS). UNICEF Concept of "Children Rights in Sports Principles." UNICEF Concept of "Child Focused Sports for Development"







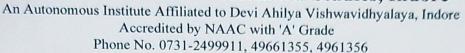
Phone No. 0731-2499911, 49661355, 4961356 E-mail: info@spipsindore.ac.in, Website: www.spipsindore.com

IV	Health and Skill related Fitness, Warming Up, Cooling down, Nutrition and Balance Diet Health Related Fitness - Components and Importance, Skill Related Fitness - Components and Importance, Warming Up Meaning, Types and Importance, Cooling Down Meaning and Importance Concept of Nutrition Nutrients and Balance Diet	12
V	Sports General Awareness (Self Learning Mode) National and State level Sports awards (Dhyan Chand Khel Ratn Award, Arjun Award, Dronacharya Award, Vikram Award, Eklavya Award and Vishwamitra Award) International Sports Personalities (International Renowned athletes and Indian Athletes at International Level), Sports structure of Madhya Pradesh Higher Education Dept., Concept of indigenous Sports of India: Kabaddi, Kho-Kho, Malkhamb	12

on, Physical- Fitness, Health and Wellness, Physiological Health, Heart, Lungs, Muscles, Stress Anxiety, Motivation, Socialization and Sports, YMCA, LNIPE, SAI, NSNIS, NIS, Uriicef Children Rghts in Sports Principles, Unicef Child Focused Sports for Development, Unicef Sports in a Box, Health Related Fitness: Skill Related Fitness, Warming Up, Cooling Down, Limbering Down, Nutrition, Proximate Principles of Food, Nutrients, Balance Diet, National Sports Awards, Madhya Pradesh Sports Awards, Sports Personalities, Indoor Sports, Indoor Games, Outdoor Sports, Outdoor Games

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Part C-Learning Resources

Text Books, Reference Books, Other Resources

- Singhm Ajmer, Gill Jagtar Singh, Baish Jagdeesh, Barar Rashpal Singh, "Essentials of Physical Education" New Delhi, Kalyani Publisher.
- 2. Barrow, H M "man and Movement: Principles and Physical Education" PHI Learning.
- 3. Bucher, CA, "Foundation of Physical Education", New Delhi
- 4. Deshpande, S H "Physical Education in Ancient India", Amaravati, Degree College of Physical Education,
- 5. Kamlesh, M L, Foundation of Physical Education, New Delhi, Sports Pub. 2013.

	Part D- Assessment and Evaluation	
Suggested Continuous Eva Maximum Marks: 100 Continuous Comprehensive E	luation Methods: Evaluation (CCE): 30 marks University Exam ((UE) :70 marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
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Time : 05.00 Homs	Section (B): Five Short Questions	05 x 08 = 40
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Syllabus of Practical Paper

		P	art A- Introduction		
Prog	gram: Certificate Course		Year: I Year		Session: 2024-25
Subj	ject: Physical Education		•		
I	Course Code		EL-	-106P	
2	Course Title		Introduction and Conce	ept of Ph	nysical Education
3	Course Type (Core Course Elective /Generic Elective/Vocational/)		Ele	ctive	
4	Pre-requisite (if any)		s course can be opted as an only core and it is open for all		subject by the students
5	Course Learning outcomes (CLO)	Stud Dev the i Stud Allia (AA fitne Stud Pres and asse They or ca They cont	completion of this course, leants will able to demonstrate eloping fitness, warm up an importance of warming up a dentswill able to ance for Health, Physical Echer HPERD) fitness test for othess exercise. Hents will be able to measure sure, Body Mass Index (BM this will be useful at individual sement purpose. Will learn to conduct recreation organize play day activity will learn two games / spoinue in their life and keep the vieldge of major games.	te the ex ad cool de and cooling conduction, hers and where Heart / All) and I dual and de extional a y in their	ercises for own and able to explain ng down for workout. ct The American , Recreation and Dance will able to guide for Pulse Rate, Blood Body Fat Percentage community for activities for community institution. will help them to
6	Credit Value	2			
7	Total Marks	Max	. Marks: 30+70	Min	n. Passing Marks:35

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	Part B- Content of the Course	
Total	No. of Lectures-Tutorials-Practical (in hours per week: L-T-P: Practical - 30 Hours	
Unit	Topics	No. of Lectures
I	Exercise for developing general fitness Warming up Exercises and Cooling Down Exercises.	4
II	Concept and Conduction of The American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) Fitness test battery.	4
III	Measurement of Heart Rate I Pulse Rate Measurement of blood pressure Calculation of Body Mass Index (BMI) Calculation of Body Fat using US Navy Method	4
IV	Conducting community recreation activities Organisation of recreational activities / Play Day	4
V	Practice of any two game / Sport as per available facility in the Institution / College as per the list of Association of Indian Universities (AIU): Basic Skills, Basic Rules and Ground Marking 1st Game - July to Dec 2nd Game - Jan to May	14

Keywords/Tags:

General fitness, Warming up, Cooling Down, Limbering Down, AAHPERD Fitness test, Heart Rate / Pulse Rate, Blood pressure, BMI, US Navy Fat Method, Recreational Activities, Play Day

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

- · Bompa, T. O., & Buzzichelli, C. A. "Periodization: Theory and Methodology of Training." USA: Human kinetics. 2019(6th ed.)
- Brooks, D. Effective "Strength Training". USA: Human Kinetics. 2001
- · Brown, E. L. Ferrigno, V. A., & Santana, J. C. "Training for Speed, Agility and Quickness."USA:Human Kinetics. 2000

Note: Books listed in theory section can also be used for the reference purpose for PShort Pu Post for Ar 10/6/24 Ar practical.





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Suggestive digital platforms web links

- •https://www.healthline.comThealth/how-to-check-heart-rate#target-heart-rates
- •https://www.mvsportsfitness.com/2020/05/aahperd-fitness-test.html?m=1
- http:fiwww.plavday.org.uk/about-playdaviwhats-Plavdavi
- •https://www.nhlbi.nih.gov/health/educational/lose wt/BMI/bmicalc.htm
- •https://www.wikihow.com/Measure-Body-Fat-Using-the-US-Naw-Method

	Part D-Assessn	nent and Evaluation	
Suggested Continuous Evaluation	methods:		
Internal Assessment	Marks	External Assessment	Marks
Class Interactions/Quiz	10	Viva Vice on Practical	10
Attendance	5	Practical Record file	10
Assignment (Charts / Modal/seminar/ Rural services/Technology Dissemination/report of excursion/Lab visits/survey/Industrial visits	15	Table/Ground work/Experiments/Practical's	50
Total	30	Total	70

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Part A - Introduction

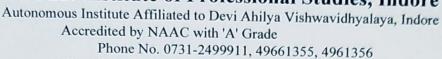
Pr	ogramme: Certificate Co	ourse Class: B.Com.	I Year	Session 2024-25		
Su	Subject: Commerce					
1	Course Code		EL-109			
2	Course Title	Bu	isiness Economic	s		
3	Course Type		Elective			
4	Pre-requisite	Not	required open for	all		
5	Course Learning Outcomes	in various market structu good produced.	olds (demand) and ures to determine	nt will be able to d businesses (supply) interact price andquantity of a behavior and the economic		
		of the demand curve and	I what shifts the detection of Pricing	on costs and the economic		
6	Credit Value		6			
7	Total Marks	Max marks :30+70	linimum Passing I	Marks 35		

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Part B: Content of the course

Unit	Topic	No. of Lectures
	Historical background of economics in India with special reference to Kautilya, Definition of Economics, Concept of Micro and Macro Economics, Method of Economic study, Economics Law and their nature, Significance of Economics, Basic problems of Economics	18
2	Elasticity of Demand, Concept and measurement of Elasticity of Demand, Price, Income and cross elasticity, Average Revenue, Marginal Revenue and Elasticity of Demand, Determination of Elasticity of Demand, Importance of Elasticity of Demand,	18
3	Factors of Production- Land, Labour, Division of labour, Efficiency of Labour, Capital, Organisation and Enterprises, The scale of production, Production function and Law of returns, Return of scale, Equal product curve analysis, Theories of Population.	18
4	Market and their classification, Theory of cost and concept of revenue. Price determination under perfect competition and Equilibrium of the firm, Monopoly-price and output determination and monopoly control, Price determination under monopoly, Imperfect and monopolistic competition-price determination.	18
5	Rent- concept, Ricardian and modern theories of Rent, Quasi Rent, Wages- concept, nominal and real wages, theories of wage determination; Profit-Nature, concept and Theories of profit.	18

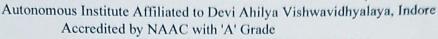
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Part C - Learning Resources

1	Kennedy John Fundamentals of Business Economics	Himalaya Pub.Nagpur
2	Singh Dr.S.K. Business Economics	Sahitya Bhawan Publication Agra
3	Bhatiya H.L. Micro Economics	Modern Publisher New Delhi
4	Sinha Dr. V.C. & Dr. PushpaBusiness Economics	SBPD PublicationAgra

Suggestive digital platforms, web links:

- 1. https://www.icsi.edu/media/website/Business%20Economics%20(FndProg).pdf
- 2.http://www.ddegjustacinistudyrnaterialibbaibba-103.pdf
- 3.https://old.mu.acin/wp-content/upIoads/2020/01/FYBCOM-BUSSINES-ECO-1-

Eng.pdf4.http://elibrary.vsscicollege.ac.in/web/data/books-com-

sc/bcom1/BUSINESS%20ECONOMICS.pdf

Suggested Continuous Eva Maximum Marks: 100 Continuous Comprehensive E	luation Methods: valuation (CCE): 30 marks University Exam ((UE) :70 marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
External Assessment: University Exam Section: 70 Time: 03.00 Hours	Section(A) : Six Very Short Questions	06 x 01 = 06
	Section (B): Five Short Questions	05 x 08 = 40
	Section (C): Two Long Questions	02 x 12 = 24 Total 70

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Phone No. 0731-2499911, 49661355, 4961356

E-mail: info@spipsindore.ac.in, Website: www.spipsindore.com

Part A: Introduction Programme: Certificate Course Class: I Year Session: 2024-2025 Subject: Commerce Course Code: EL-110 Course Title: Banking and Insurance Course Type: Elective Pre-requisite: Not required (open for all) Course Learning The successful completion of this course shall enable the student: Outcomes • To understand Banking and insurance services for the economic growth of a country and importance for the entire business procedure. To understand the banking system, banking procedure, practical banking, etc. · To understand the Insurance system, insurance procedure, regulation of banking and insurance. They also shall be capable to earn employment in the field of banking and insurance. Credit Value 6

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Max. Marks -30+70

Total Marks

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Min Passing Marks 35

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T	otal No. of Lectures (in hours per week)- 6 Total Lectures: 90 h	ours
Unit	Торіс	No. of
I	Introduction to Banking: Historical background of banking. Definition, principles and importance of bank. Classification of bank. Functions of commercial bank. Structure of commercial banking in India. Features of Indian banking system, credit creation. Central banking: RBI and its functions. Credit control.	
	Nationalization and Merger of banks: General Introduction to Nationalization of Banks. Evaluation of nationalization and merger of Indian banks.	18
	Recent Trends in Banking: Digital Banking in India, Evolution of Digital Banking, Electronic transactions through digital platforms like UPI, AEPS, and BHIM etc.	
П	Bank Deposits: Meaning and types. Features of back accounts. Procedure to open and close bank accounts (Including online procedure). Loans and Advances: Principles to sanction loans and advances. Classification of loans and advances. Procedure to apply for house loan, personal loan, education loan and commercial loan.	18
III	Insurance: Historical background of Insurance. Meaning, elements, basic principles and importance of insurance. Kinds of insurance. Regulation of insurance in India. IRDA: Functions and role to regulate insurance in India.	18
IV	Life Insurance: Historical background, meaning, objectives, importance, essential elements. Life Insurance Policy and its types. Insurance proposal to policy!- Procedure, Conditions of Life Insurance Policies, Claim filing procedure and settlement of claims. Life Insurance Corporation of India: Functions, progress and Evaluation.	18
V	General Insurance: Meaning, objectives & importance. Kinds of general insurance and its features. Basic principles of general insurance. Procedure to apply general insurance policies. Claim filing procedure and settlement of claims.	18
	General Insurance Corporation of India: Functions, progress and structure.	
y	Banking, Insurance, Nationalization, Loans and Advances Progress, Decutation	
y ords	Performance of private sector companies in general insurance sector. Banking, Insurance, Nationalization, Loans and Advances Progress, Regulation, Recent trends in Banking	

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Part C-Learning Resources

- 1. Dr. Q.P. Gupta & Dr. Sudhir Kumar Sharma, Banking & Insurance, Sahitya Bhawan Pub., Agra
- 2. Dr. R. L. Nolakhha, Principles of Insurance, R.B.D. Publication, Jaipur
- 3. Dr K.P.M. Sundaram & Dr P. N. Varshney, Banking Theory Law & Practice, S. ChandSons, New

Suggestive digital platforms, web links:

- 1.http://www.universityofcalicut.info/SDE/Banking onl9May2016.pdf
- 2.http://www.gdcboysang.aain/Aboutfdroid/uploads/B15thSemBcom.pdf
- 3.https://ebooks.lpude.in/management/bba/term 5/DMGT303 BANK1NG AND INSURANCE.pdf
- 4. https://www.subhshiv.in/2021/03/Bima-avm-bank-ke-prakar-notes-PDF.html

	Part D- Assessment and Evaluation	
Suggested Continuous Eva Maximum Marks: 100 Continuous Comprehensive E	luation Methods: Evaluation (CCE): 30 marks University Exam ((UE) :70 marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
External Assessment: University Exam Section: 70 Time: 03.00 Hours	Section(A): Six Very Short Questions	06 x 01 = 06
	Section (B): Five Short Questions	$05 \times 08 = 40$
	Section (C): Two Long Questions	02 x 12 = 24 Total 70

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St. Paul Institute of Professional Studies, Indore



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		Part A: Introduction
Pro	ogram: Certificate Course	Class: I Year Session: 2024-2025
Sub	ject: Mathematics	
I	Course Code	EL-111
2	Course Title	Calculus and Differential Equations
3	Course Type	Elective
4	Pre-requisite (if any)	To study this course, a student must have had the subject Mathematics in class 12 th .
5	Course Learning Outcomes (CLO)	The course will enable the students to: 1. Sketch curves in a plane using its Mathematical properties in the different coordinate systems of reference. 2. Using the derivatives in Optimization. Social sciences, Physics and Life sciences etc. 3. Formulate the Differential equations for various Mathematical models. 4. Using techniques to solve and analyze various Mathematical models.
6	Credit Value	Theory:6
7	Total Marks	Max.Marks:30+70 Min. Passing Marks: 35

	Part B: Content of the Course	
Total No.	of Lectures (in hours per week): 6 hours per week	Total Lectures: 90hours
Unit	Topics	No. of Lectures
1	I.I Historical background: 1.1.I Development of Indian Mathematics: Ancient and Early Classical Period (till 500CE) I.1.2Abrief biography of Bhaskaracharya (with special reference to Lilavati) and Madhava Successive differentiation Leibnitz theorem Maclaurin's series expansion Taylor's series expansion Partial Differentiation Partial derivatives of higher order Euler's theorem on homogeneous functions Asymptotes Asymptotes Condition for Existence of Asymptotes Parallel Asymptotes 1.4.4Asymptotesofyolarcurves	18





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II	2.1 Curvature' 2.I.IFormula for radius of Curvature: Curvature at origin, Centre of Curvature Coocavity and Convexity: Concavity and Convexity of curves Point of Inflexion, Singular point, Multiple points Tracing of curves Curves represented by Cartesian equation Curves represented by Polar equation	18
III	3.1 Integration of transcendental functions Introduction to Double and Triple Integral. Reduction formulae Quadrature 3.4.I For Cartesian coordinates	10
III	3.4.2 For Polar coordinates Rectification: For Cartesian coordinates, For Polar coordinates	18
	4.1 Linear differential equations 4.1.1 Linear equation: Equations reducible to the linear form	
IV	Change of variables, Exact differential equations First order and higher degree differential equations Equations solvable for x, y and p Equations homogenous in x and y Clairaut's equation, Singular solutions, Geometrical meaning of differential equations, Orthogonal trajectories	18
v	5.1 Linear differential equation with constant coefficients Homogeneous linear ordinary differential equations Linear differential equations of second order Transformation of equations by changing the dependent/ Independent variable 5.5 Method of variation of parameters	18

Keywords/Tags

Indian Mathematics, Successive differentiation, Partial Differentiation, Asymptotes, Curvature, Tracing of curves. Rectification, Linear differential equations, Method of variation or parameters.

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Part C: Learning Resources

Text Books. Reference Books, Other Resources

Suggested Readings:

Text Books:

- 1. Gorakh Prasad: Differential Calculus, Pothishala PrivateLtd., Allahabad, 2016.
- 2. Corakh Prasad: integral Calculus, Pothishala Private Ltd. .Allahabad, 2015.
- 3. M.D. Raisinghania: Ordinary and Partial Differential Equations. S Chand A Co Ltd, 2017.
- Gerard G. Emch, R.Sridharanand M.D. Srinivas: Contributions to the History of IndianMathematics. Hindustan Book Agency, Vol. 3, 2005.

Reference Books:

- 1. N. Piskunov: Differential and Integral Calculus, CBS Publishers, 1996.
- 2. G.F.Simmons: Differential Equations, TataMcGraw Hill. 1972.
- E.A.Codington: An Introduction to ordinary differential Equation, Prentice Hall of India, 1961.
- D.A.Murray: introductory Course in Differential Equations, Orient Longman(India) 1967.
- H.T. H Piaggio: Elementary Treatise on Differential Equations and their Application, C.B.S.Publisher&Distributors, Delhi. 1985.
- 6.Bibhuti bhusan Datta and Avadhesh Narayan Singh: History of Hindu Mathematics, Asia Publishing House, 1962.

Suggested Digital PlatforzzssWeb.links:

hltps://epgp.inflibnet.ac.in

https://freevideolectures.com./university/iit-roorkes

https://www.higfiereducation.mp.gov.in/?page=xhzfQmpZwkyI\fo2b%2Fy5G7w%3D°/«3D

https://www.bhojvirtualuniversity.com

Suggested Equivalent online courses:

hxps://npteI.ac.in/courses/I11106100/

https://nptel.ac.in/courses/III/101/I 11101080/

	Part D- Assessment and Evaluation	
Suggested Continuous Eva Maximum Marks: 100 Continuous Comprehensive E	luation Methods: valuation (CCE): 30 marks University Exam ((UE) :70 marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
External Assessment: University Exam Section: 70 Time: 03.00 Hours	Section(A): Six Very Short Questions	06 x 01 = 06
	Section (B): Five Short Questions	$05 \times 08 = 40$
	Section (C): Two Long Questions	02 x 12 = 24 Total 70

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		Pa	art A: Introduction	
Pr	ogram: Certificate/ I	Diploma/ Degree	Class: I Year	Session: 2024-2025
Sub	ject: Mathematics			
I	Course Code		EL	-112
2	Course Title		Computation	al Mathematics
3	Course Type		Ele	ctive
4	Pre-requisite (if any)		Student must have be	asic analytic aptitude.
5	Course Learning Outcomes CLO)	 Impleme scenario Impleme solve cor Use stati Use Mat 	ent trigonometric solutions ent matrices and simult implex problems stical tools efficiently thematical Logic and proceedings of set theory	ions for measurements in real world aneous equations to redicate calc ilus for solving problems y for finding solutions to set related
6	Credit Value			5
7	Total Marks	Max.Marks:30+	-70	Min. Passing Marks: 35

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	Part B: Content of the Course	
Total No	of Lectures (in hours per week):6 hours per week Total Lectures:	90 hours
Unit	Topic	No. of Lecture
Ĭ	Trigonometry: Angles & their Measurement, Values of Trigonometry Ratios, Height and Distance. Elementary Matrices and types of matrices.	18
П	Equations: Simultaneous linear equations, Methods of Solving Simultaneous equations, Quadratic equations.	18
III	Statistics: Frequency Distribution, Measure of Central Tendency; Mean, Median, Mode. Measures of variation: Mean deviation, Standard deviation.	18
IV	Mathematical Logic: Statements and notation, Connectives: Negation, Conjunction, and Disjunction. Statement formula and truth tables. Tautologies, Tautological implication, contradiction contingency.	18
V	Set Theory: Basic concept of set theory, notation, inclusion and equality of sets, the power sets, operations on set, Venn diagrams.	18

	Part C: Learning Resources	
	Text Books. Reference Books, Other Resources	
Suggested Readings:		

Suggested Readings:

Text Books:

- Business mathematics SM Shukla sahitya bhavan publication
- Business mathematics DC Agarwal Sri Sai Prakasha
- · Text book of discrete mathematics S K Sarkar s Chand
- Reference books
- Fundamental of statistics Taj Mahal publications
- Mathematical statistics Ray and Sharma Ramprasad and sons
- Business mathematics Sancheti and Kapoor s Chand and sons
- Business mathematics structure with applications to computer science. Indian edition JP Tremblay are Manohar Mcgra Hill Publication

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P	art D- Assessment and Evaluation	
Suggested Continuous Evalu	uation Methods:	
Maximum Marks: 100		
Continuous Comprehensive Ev	aluation (CCE): 30 marks University Exam (UE)):70 marks
Internal Assessment :	Class Test	30
Continuous Comprehensive	Assignment/Presentation	
Evaluation (CCE):30	E-quiz	
External Assessment :	Section(A): Six Very Short Questions	$06 \times 01 = 06$
University Exam Section: 70	Section (B) : Five Short Questions	05 x 08 = 40
Time: 03.00 Hours	Section (C): Two Long Questions	02 x 12 = 24
		Total 70

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			Part A - Introduction	
	n: Certificate		B.A. I Year	Session: 2024-25
Subject	t: Public Administra	tion		
1	Course Code		EL-1	113
2	Course Title		Indian Ac	dministration
3	Course Type (C Course/Elective Elective/Vocation	/Generic	Eld	ective
4	Pre-requisite (if	any)	To study this course, a student r	must have passed 12" Class
5	Course Learning Outcomes (CLO)		Administration will be a 2. Learning about the framework on which In 3. Understanding the funct agencies under the India	constitutional and structural adian Administration is based. tioning of various administrative
6	Credit Value			06
7	Total Marks		Max. Marks: 70+30	Min. Passing Marks:35

Total N	lo. of Lectures (in hours per week)- 6 Total Lectures: 90 hours	
Unit	Topics	No. of Lectures
1	Evolution & Constitutional Framework: Evolution of Indian Administration during Ancient, Medieval and British Period; Constitutional Framework of Indian Administration; Salient features of Indian Administration.	18
2	Union Government: The President; Prime Minister & Council of Ministers.	18
3	Central Line and Staff Agencies: Central Secretariat, Cabinet Secretariat, Prime Minister Office, Ministry of Home and Finance.	18
4	Constitutional Institutions-Union State Relation & Control over Administration: Election Commission of India; Union Public Service Commission and Finance Commission of India; Union State Relations (Legislative, Executive and Financial); Parliamentary, Executive and Judicial Control over Administration.	18
5	Citizen and State Interface: Citizens Grievance Redressal; Institutions and Mechanisms for Preventions of Corruption: Central Vigilance Commission; Lok Pal and Lok Ayukta; Political and Civil Servant Relationship.	18

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Part C — Learning Resources

Text Books, Reference Books, Other Resources

- 1. Arora, Ramesh K. and Goyal, Rajni. Indian Public Administration: Institutions and
- 2. Issues. New Age International Publishers: New Delhi.
- 3. Avasthi, A and Avasthi, A P. Indian Administration. Lakshmi Narain Agrawal: Agra
- 4. Balfour, Lady Betty Lord Lytton's Indian Administration 1 876-1 880 The Untold History. Gyan Books: New Delhi
- 5. Basu, D D. Introduction to the Constitution of India (21" Edition). Lexus Nexus: NewDelhí
- 6. Chakraborty, Bidyut Indian Administration. Sage: New Delhi
- 7. Cott, J E Woola British Rule in India. Anmol: Delhi
- 8. Fadia, B L and Fadia, Kuldeep Indian Administration, (New Edition). Sahitya Bliawan: Agra
- 9. Ghuman, B S; Monga, Anil and Johal. Ramanjit Kaur (Eds.) Corruption and Quality of Governance: Experiences of Select Commonwealth Countries. Aalekh Publishers: Jaipur
- 10. Kamgle R P The Kautiya Arthshastra. Motilal Banarsidass: New Delhi
- 11. Kapur, Devesh; Mehta, Pratap Bhanu and Vaishnav, Milan (Eds.) Rethinking Public Institutions in India. Oxford University Press: New Delhi
- 12. Maheshwari, S R Indian Administration. Orient Longman: New Delhi
- 13. Palmer, N D Indian Political System. George Alien and Unwin: London
- 14. Sarkar, Jadunath Sir Mughal Administration. M.C. Sarkar: Calcutta
- 15. Sharma, Ashok Administrative Institutions in India. RBSA Publishers: Jaipur
- 16. Sharma, M Indian Administration. Anmol: New Delhi
- 17. Sharma, Prabhu Dutta and Sharma, B M Indian Administration: Retrospect and Prospect. Rawat Publications: Jaipur
- 18. Singh, M and Singh. H Public Administration in India. Sterling Publishers: New Delhi

Web Resources:

- https://epustakalay.com/hook/
- https://parliamentofindia.nic.in/
 https://presidentofindia.nic.in/
- https://www.pinindia.Nov.in/en/
- https://loksabha.nic.in/
- https://rajvasabha.nic.in/
- https://main.sci.eov.in/
- http://vikramuniv.ac.in/political-science/

Par	t D- Assessment and Evaluation	
Suggested Continuous Evalua	tion Methods:	
Maximum Marks: 100		
Continuous Comprehensive Evalu	nation (CCE): 30 marks University Exam (UE):70	marka
Internal Assessment:	Class Test	
Continuous Comprehensive	Assignment/Presentation	30
Evaluation (CCE):30	E-quiz	
External Assessment: University Exam Section: 70	Section(A): Six Very Short Questions	06 x 01 = 06
Time: 03.00 Hours	Section (B): Five Short Questions	05 x 08 = 40
	Section (C): Two Long Questions	02 x 12 = 24
		Total 70

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		PAR	T A: Introduction	
	m: Certificate		ass: I Year	Session: 2024-2025
Subject:	Multimedia & Anii	nation		
1.	Course Code		EL-114T	
2.	Course Title		Multimedia & Animation	
3.	Course Type (Core Course/Elective/Gen Vocational	eric Elective/		ctive
4.	Pre-Requisite (if any)	To study this course, a stud knowledge of using compu- internet. This course is ope	ter and
5.	Course Learning Outcomes(CLO)		On completion of this cour 1. Gain a deep understar and techniques, characters will be able to 3. Develop skills in utility	se, learners will be able to:
6.	Credit Value		4 Theory + 2 Practical	
7.	Total Marks		Max. Marks: 30+70	Min. Passing Marks: 35

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	PART B: Content of the Course			
	No. of Lectures (in hours per week): 4 Hr. per week			
Total No. of Lectures: 60 Hrs.				
Unit	Topics	No. of Lectures		
I	Introduction to Multimedia: What is multimedia. Multimedia and Hypermedia, Components of multimedia -textual, images, graphics, animation. audio and video. Linear and Non-Linear Multimedia, Application of Multimedia, Requirement of Multimedia System. Multimedia Authoring Tools: Multimedia Authoring. Multimedia Authoring Metaphors, Multimedia Production. Multimedia Presentation and tools. Automatic Authoring. Editing and Authoring Tools. Multimedia Hardware. Compression & Decompression.	12		
II	Fonts and Hypertext: Usage of text in Multimedia, Families and faces of fonts. outline fonts. bltmap fonts. International character sets and hypertext. Digital font's techniques. Image fundamentals: Image formats, Bitmap and Vector. Color Models, Color palettes, 2D Graphics, Image Compression and File Formats: GIF, JPEG, JPEG 2000, PNG, TIFF, EXIF, PS. PDF, Basic Image Processing. Use of image editing software, Photo Retouching. Image resolution. Colour. Raster and Vector Graphics.	12		
Ш	Audio fundamentals: Audio quality, fomiats and devices, Digitization of sound. frequency and bandwidth, decibel system. data rate, audio file format, Sound synthesis. Musical Instrument Digital Interface (MIDI), wavetable. Compression and transmission of audio on Internet, Editing and adding sound to multimedia project, Audio software and hardware. Video Fundamental: Video basics. Formats. how video works. Types of video signals - component. composite and S-video. Analog video, Digital video, Broadcast Video Standards (NTSC, PAL), Video Recording and Tape formats. Shooting and editing Video, Video compression and File formats (JPEG.MPEG), Video software and hardware.	12		
IV	Animation: Introduction and definition of animation, Principles. Types and uses. Methods and Techniques of animation, Basic animation, Text and image animation. Time line construction and management. Masking Motion and shape Tweening. Morphing, Onion skinning. Animation File Formats. Keyfranie animation, Working with symbols and Animation Software.	12		

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	Basic 2D and 3D animation: Overview of 2D animation and its features, Drawing tools. types of panels. transformation, property panel, working with	
V	objects. group, bitmap. Controlling Movie clips with code. Working with Dynamic Text	12
	fields and Input Text Fields. Loading external content and other movies. Dynamic	
	preloaders.	
	Interactivity with code. Difference between 2D and 3D animation, Tweening and motion	
	along a path, Controlling movie playback. Text and hyperlink. adding sound and movie.	
	Introduction to 3D animation and its basic concepts, and its applications.	

Keywords/Tags: Multimedia. Hardware, Software, Images, GIF. JPEG, JPEG 2000, PNG. TIFF, EXIF. PS. PDF, Video, Compression. Animation. Tweening, Morphing, controlling movie clips, transformation. 2D. 3D, MIDI. file formats.

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings:

- Tay Vaughan, "Multimedia Making It Works", Tata McGraw-Hill.
- Ze-Nian Li and Mark S. Drew "Fundamentals of Multimedia" Pearson Education International.
- Rajneesh Aggarwal & B. B Tiwari, "Multimedia Systems", Excel Publication. New Delhi
- Li & Drew. "Fundamentals of Multimedia", Pearson Education.
- · Parekh Ranjan, "Principles of Multimedia", Tata MeGraw-Hill.
- · M.Mahalakshmi. Multimedia '. Margham Publications,
- Pakhira, Malay K, Computer Graphics, Multimedia and Animation", Prentice Hall India Pea. Ltd.
- Liz Blazer Animated Storytelling: Simple Steps for Creating Animation and Motion Graphics."
- Andy Beane "3D Animation Essentials" John Wiley.

Suggestive digital platform web links:

htt0s:/!ept>p.intoibnet.ac.in/Home Vice

Subject'?catid=7 https://onlinecourses.soa>

ain2.ac.in/cec2 I cs18 pre> ie

https://onlinecorirses.seasarn2.ac.iii/wori21 cs04/preview

Suggested equivalent online courses

https://wii s.classcentral.cont/course/sea)am-animations-13880

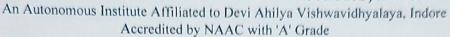
	Part D- Assessment and Evaluation	
Suggested Continuous Evaluat	tion Methods:	
Maximum Marks: 100		
Continuous Comprehensive Evalu	nation (CCE): 30 marks University Exam (UE):	:70 marks
Internal Assessment:	Class Test	30
Continuous Comprehensive	Assignment/Presentation	
Evaluation (CCE):30	E-quiz	
External Assessment: University Exam Section: 70	Section(A): Six Very Short Questions	$06 \times 01 = 06$
Time: 03.00 Hours	Section (B): Five Short Questions	05 x 08 = 40
	Section (C): Two Long Questions	02 x 12 = 24
		Total 70

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		P	ART A	: Introduction				
Prograi	m: Certificate	Class: B.Co	m/BB/	A I Year	Session: 2024-2025			
Subject	: Computer Science							
1.	Course Code			E	L-114P			
2.	Course Title			Multimedia	& Animation Lab			
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational			Elective '				
4.	Pre-Requisite (if any	To study this course. a student must have prior basic knowledge using computer and internet. This course is open for all.						
5.	Course Learning Outcomes(CLO)	•	Gain a deep understan techniques, character r Students will be able to Develop skills in utiliz	course, learners will be able to: ding of animation principles and notion graphics. o find jobs in various fields. ing multimedia software such as to create engaging visual content.				
6,	Credit Value				2			
7.	Total Marks	Max. Marks	: 30+70		Min. Passing Marks: 35			

Note: In the first week of the lab, the instructor must facilitate the students with the basic operation of multimedia tools and software like Coreldraw, Photoshop, Picasa, Sound forge, Waveform Editor, Moviemaker, Dreamweaver, Macromedia Flash, 3D Max, Blender etc. or any other open source suitable multimedia tools.

	PART B: Content of the Course	
No. of Lab.	Practical (in hours per week): 2 Hrs. per week	
	Total No. of Lab Hrs. 30	
	Consection I in CD via 1	
	Suggestive List of Practical	No. of Labs.
	Prepare a multimedia presentation	30 Hours
	Prepare and edit different types of images, and their conversion into other file formats.	
	3. Learning to do Image, Audio and Video file Compression.	
	4. Prepare different types of graphics.	
	5. Design multimedia posters and banners.	
	6. Morphing and Tweening of images.	
	7. Create animation of basic movements like bouncing a ball, moving a wheel, dancing a doll etc.	
	8. Apply different operations (rotation, scaling, movement etc) on objects.	
	9. Recording of video and audio	
	10. Integration of sound files and editing	

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- 11. Integration of video files and editing
- 12. Prepare jingles and advertisements by applying multimedia
- 13. Develop a 2D animation using shape tweening and motion tweening.
- 14. Create a 2D animation using motion guide layer and masking
- 15. Create text animation
- 16. Design simple 3D animation using basic shapes.
- 17. Develop basic 3D animation of different objects.
- 18. Create a small animated story.

Keywords/Tags: CorelDraw, Photoshop. Picasa, Sound forge. Waveform Editor, Moviemaker. Dreamweaver, Macromedia Flash. 3D Max. Blender. Video, Compression, Animation, Tweening. Morphing controlling movie clips, transformation, 2D, 3D. MIDI.

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings:

- Tay Vaughan. Multimedia Making It Works". Tata McGraw-Hill.
- Ze-Nian Li and Mark S. Drew 'Fundamentals of Multimedia" Pearson Education International.
- Rajneesh Aggarwal & B. B Tiwari. "Multimedia Systems", Excel Publication, New Delhi
- · Li & Drew, Fundamentals of Multimedia", Pearson Education.
- Parekh Ranjan, "Principles of Multimedia", Tata McGraw-Hill.
- · M.Mahalakshmi, "Multimedia", Markham Publications,
- Pakhira. Malay K. "Computer Graphics. Multimedia and Animation". Prentice Hall India Pvt. Ltd.
- Liz Blazer "Animated Storytelling: Simple Steps for Creating Animation and Motion Graphics." Andy Beane "3D Animation Essentials" John Wiley.

Suggestive digital platform web links: https://epgp.inflibnet.ac.in/Home/ViewSiiblect*?catid=7
https://onlinecourses.si as ani2.ac.in/nou21 cs04/pres ieiv

Suggested equivalent online courses

https://www.classcentral.cont/course/swav(irn-animations-13880

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PART	D: Assessmen	nt and Evaluation	(LIEV.	
Internal Assessment: Continuous	20	External Assessment: University E 70 Marks Time: 02.00 Hours	xam (UE);	
Comprehensive Evaluation (CCE): Internal Assessment	Marks	External Assessment	Marks	
Hands-on Lab Practice	5 Marks	Practical record file	10 Marks 10Marks	
Lab Test from practical list &	15 Marks	Viva voce on practical		
Assignments (Charts/ Model/ Seminar / Rural Service/	10 Marks	Table works/ Experiments	50 Marks 70 Marks	
Technology/ Dissemination/ Total	30 Marks	Total		

Any remarks/suggestions: Focus of the lab practical /course should be on developing creative designing, visualization and implementation abilities to solve real world problems.

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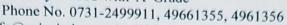
Part A: Introduction

Program: Certifica	ate Class: I Year	Session: 2024-2025
Subject: Computer :	Science	5-0301011, 2024 2023
Course	EL-115T	
Course Title:	Data Analysis and Visualization t	hrough spread sheets
Course Type:	Elective	
	To study this course, a student must have prior basic ki Internet. This course is open for all	nowledge of using computer and
Course Learning Outcomes	On the completion of this course learners will be able 1. Prepare a spreadsheet file and enter data into the 2. illustrate formatting and editing capabilities on 3. demonstrate basic calculations and save data. 4. import and export data into the spreadsheet. 5. Demonstrate basic visualising, analysing, organ 6. Do the jobs in financial as well as in other busin globe.	e sheet. the data.
Expected Job Role /career opportunities	 Accountants and Auditors Administrative Assistants, Office Clerks, and Info Analysts in Business, Management, and Markets Cost estimators Educators, Teaching Assistants, and Instructors Financial Analysts, Investment Bankers, and Loan Analysts of Market Research and Digital Markete Construction Managers, Project Managers, and Pr Managers of Sales, Marketing, Training, and Adn 	n Officers ers
Credit Value	4 Theory + 2 Practical	
Total Marks	May Ma 1 20170	ng Marks 35

	Part B: Content of the course No. of Lectures (in hrs. per week):4 Lecture per week	
	Total No. of Lectures: 60 Hrs.	
Module	Topics	No. of
I	Introduction to Spreadsheet- What is Spreadsheet, History, Importance, Brands and platforms, Excel, Calc and Google Sheets, User Interface, Ribbon, Quick Access toolbar. Basics of Spreadsheet-Overview of spreadsheet, opening new file and savings spreadsheet through menu and keyboard shortcut, rows, columns, cells, workbooks and worksheets. Fundamentals of rows, columns and cells and navigation; various modes of selecting cells (shift arrow, ctrl shift arrow, mouse click and drag mouse click and shift click); merging cells; selecting rows and columns, non-contiguous cells; how to enter data(numeric, text, date), Autofit, keyboard navigation, auto complete, navigating edges, navigating first and last used cells, working with multiple sheet, inserting and deleting sheets, renaming sheets. Number formatting- introduction general and text number and fraction NC, accounting, percentage date, time; inserting and deleting rows and cells. Formatting cells- introduction bold, italics and underline, border, fill and font, alignment, format painter and clear format, editing the cell	Lectures 12



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		content, entering multiple lines of text using ctrl+ enter, autofill, copy and paste, cut and paste, autofill series, use of fill benefit it.	
I	п	and paste, cut and paste, autofill series, use of fill, handle through mouse. printing worksheet: Select Print Area, See Print Preview, Adjusting	
		Margin During Print Preview.	
		Page formatting: Page Layout-Orientation, Size, Margins; Watermark,	
		Page Colour, Page Borders; Inserting Headers And Footer, Inserting	
		Page Numbers Date Path And Filename.	
		Viewing: Fasy View Heing Fasser B. (F.	
		Viewing: Easy View Using Freeze Panes(Freeze Rows And Columns),	
		Split Windows, Layout View(Normal, Page Break And Print).	
		Saving and sharing file: Embed, PDF, Share Workbooks Through	
		Onedrive Online.	
		Import and export data: Import Access Data, Microsoft Query, Import	
		Export Text Files, XML.	12
		Protecting/securing using file properties: protect workbook, protect	
		sheet, lock cells, read only workbook.	
		Template: Creating worksheet through template-Budget, Calendar,	
		Holidays, Meal Planner, Invoice, Automated Invoice, Default Templates,	
		Time Sheet, BMI Calculator. Saving worksheet as template.	
		Calculations: Entering Formula, editing Formula, copying formula, cell	
		reference (absolute, Relative and mixed), paste formula (using keyboard	
		shortcut and fill handle).	
		Data Validation: Reject Invalid Dates, Budget Limit Prevent Duplicate	
		Entries, Product Codes, Drop Down List, Dependent Drop-Down List	
		Cm to Inches, Kg to gm.	
		Introduction to Functions: What is function, entering functions, types	
	III	of functions.	
		Count and Sum: Countif, Count Blank/nonblank Cells, Count	
		Characters, Not Equal To, Count Cells with Text, Sum, Running	
		Total, Sumif, Sum product.	
		Date & Time: Dated if, Today's Date, Date and Time Formats,	
		Calculate Age, Time Difference, Weekdays, Days until Birthday, Last	
		Day of the Month, Add or Subtract Time, Quarter, Day of the year	
		1 ext: Separate Strings, Count Words, Text to Columns, Find Search	12
		Change Case, Remove Spaces, Compare Text, Substitute Vs Replace	12
		Text, Concatenate, Substring.	
		Lookup & Reference: Vlookup, Tax Rates, Index and Match, Two-way	
		Lookup, offset, Case-sensitive Lookup, Closest Match, Compare Two	
		Columns, Xlookup.	
		Financial: PMT, Loans with Difference Durations, Investments or	
		Annuity, Compound Interest, CAGR, Load Amortization Schedule	
		NPV, IPR, Depreciation, Profit Margin.	
		Statistical: Average, Negative Numbers to Zero, Random Number	
		Rank, Percentiles and Quartiles, Box and Whisker plot, AverageIf,	
		Forecast, MaxIfs and MiniIfs, Weighted Average, Mode, Standard	
		Deviation, Frequency.	
		Round: Chop off Decimals, Nearest Multiple, Even and Odd, Mod.	
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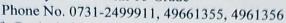
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IV	Data Visualization: Introduction to charts, various type of	12
	charts(Column, Bar, Pie, Area, XY Scatter, Bubble, Net, Stock, Column	12
	& Line); 3-D Shape(Bar, Cylinder, Cone, Pyramid); Chart elements (Tile,	
	Subtitle, X-axis, Y-axis, Z-axis, Display grids, Legends, Display data	
	series); Creating a Chart; Selecting data series, select chart type	
	Select chart components – Labels, background, axes, format and design	
	Conditional Formatting: Manage Rules, Formula based, Data bars	
	Colour Scales, Icon Sets, Find Duplicates, Shade Alternate Rows	
	Compare Two Lists, Conflicting Rules, Heat Map.	
V	Data Analysis: Sort(Custom Sort Order, Sort by Color, Reverse List	12
	Randomize List, SORT Function). Filter(Number and Text Filters, Date	
	filters, Advanced Filter, Data Form, Remove Duplicates, outlining Data	
	Subtotal, Unique Values, Filter Function.	
	Pivot Tables: Creating Pivot Table, Group Pivot Items, Pivot Table	
	Summarization, Multi-Level Pivot Table, Frequency Distribution, Pivot	
	Chart, Slicers, Update Pivot Table, Calculated Field/Item, GetPivotData.	
	Tables: Structured References, Table Styles, Quick Analysis.	
	What-If Analysis: Data Tables, Goal Seek, Quadratic Equation	
	Solver: Transportation Problem, Assignment Problem, Capital	
	Investment, Shortest Path Problem, Maximum Flow Problem, Sensitivity	
	Analysis.	
	Analysis Tool Pack: Histogram, Descriptive Statistics, ANOVA, F-Test,	
	t-Test, Moving Average, Exponential Smoothing, Correlation, Covariance, Regression.	
	Covariance, Regression.	

Keywords/Tags: Excel, Calc, Formatting, Protecting range, sheet, Functions, Sort, Filter, Freeze, Pivot, Goal, Seek, Analysis, Visualization, Charts, Graphs, Correlation, Regression.

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings:

- Jacek Artymiak, Beginning OpenOffice Calc: From Setting Up Simple Spreadsheets to Business Forecasting, 2011, Apress, ISBN: 9781430231592
- Jacek Artymiak, Beginning OpenOffice Calc Functions and Formulas Tips. Essential OpenOffice.org Calc Skills, 1st ed., 2011
- Michael Alexander, Richard Kuslieka John Walkenbach.; Microsoft Excel 2019 Bible: The Comprehensive Tutorial Resource; John Wiley & Sons.
- John Walkenbach J.; Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource; Wiley.
- Fischer W., Excel: Quick Start Guide from Beginner to expert (Excel, Microsoft Office);
 CreateSpace Independent Publishing Platform.
- Harvey G., Excel 2016 for Dummies (Excel for Dummies); John Wiley & Sons.
 Kalmstrom P.; Excel 2016 from Scratch; Excel course with demos and exercises; CreateSpace Independent Publishing Platform.
- Walkenbach J.; Excel Charts; John Wiley & Sons.

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Suggested equivalent online courses

https://www.classcentral.com/course/edx-analysing-and-visualizing-data-with-excel-4480

Suggestive digital platform web links

https://wiki.documentfoundation.org/images/c/c2/CG62-CalcGuide.pdf

http://www.openoffice.org/documentation/manuals/userguide3/0309CG3-DataAnalysis.pdf

https://documentation.libraryoffice.org/assests/Uploads/Documentation/en/CG4.1/PDF/CG4109

-DataAnalysis.pdf

https://www.vfu.bg/en/e-Learning/MS-Office--excel.pdf

http://guides.library.duke.edu/excel/visualization

	Part D- Assessment and Evaluation	
Suggested Continuous Eva Maximum Marks: 100 Continuous Comprehensive E	luation Methods: Evaluation (CCE): 30 marks University Exam (UE) :70 marks
Internal Assessment: Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation E-quiz	30
External Assessment: University Exam Section: 70 Time: 03.00 Hours	Section(A): Six Very Short Questions	06 x 01 = 06
Time . 05.00 Hours	Section (B): Five Short Questions	05 x 08 = 40
	Section (C): Two Long Questions	02 x 12 = 24 Total 70

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Part A: Introduction

Program: Certificate		Session: 2024-2025					
Subject: Computer Sc	eience						
Course Code	EL-115P						
Course Title:	Data Analysis	and Visualization Lab					
Course Type:	1	Elective					
Pre-requisite:	To study this course, a student must have Internet. This course is open for all.	prior basic knowledge of using computer and					
Course Learning Outcomes	techniques.	d enter data into the sheet. ng capabilities on the data. s and save data.					
Expected Job Role /career opportunities	Accountants and Auditors Administrative Assistants, Offic Analysts in Business, Managem Cost estimators Educators, Teaching Assistants, Financial Analysts, Investment Analysts of Market Research an Construction Managers, Project Managers of Sales, Marketing, Teaching	ent, and Markets and Instructors Bankers, and Loan Officers d Digital Marketers Managers, and Project Coordinators					
Credit Value	02						
Total Marks	Max. Marks 30+70	Min. Passing Marks 35					

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PART B: Content of the Course

No. of Lab. Practical (in hours per week): 2 Hrs. per week

Total No. of Lab.: 30 Hrs.

Suggestive List of Practical

Note: In the first day of the lab instructor must make the students get familiar with the interface of the Calc/Excel alongwith the movement of cutrsor, rows, columns, cells, cell number identification, formula bar, use of fill handle(drag as well double click), setting width of columns and height of rows, selecting rows and columns, Student must entry some data and practice above.

1. Simple data entry in a workbook in different sheet as given below.

a. Use the fill series method to fill the name as A-1, A-2 and Roll no. As 501,502 to 550.

b. In Subject S1 Pr, put the marks more than 50 (to be used in next practical).

c. Do not enter data in Total s2 and Total S3 column.

d. Perform the Operations:

Inserting columns and rows.

ii. Deleting columns and rows.

Selecting range of columns iii.

Change the width of columns and height of rows. iv.

Hiding the rows and columns v.

Show/unhide the rows and columns. vi.

e. Rename the worksheet as "UGI -Marks"

f. Save the worksheet as marks.

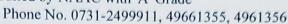
1	Name	Roll	S1-	S1	Tot	F S2-	G S2	H	L G.3	J	K	L
		No	Th(Max. 50)	Pr. (Max 50)	S1(Max 100)	Th(Max. 50)	Pr. (Max 50)	Tot S1(Max 100)	S3- Th(Max. 50)	S3 Pr. (Max 50)	Tot S1(Max 100)	Total Marks (S1+S2+S3)
L	A-1	501	36	40	=C2+D2	45	46		34	39		
	A-2	502	27	32		34	38		23			
1	A-3	503	44	46		53	40		40	40		
	A-4	504	24	30		34	39			42		
	A-5	505	43	45		23			33	40		
ı	-	-	-			23	29		28	34		
H	-			-		-	-		-	-		
	-	-	-	-		-	-		-	-		
	4 50	-	-	-		-	-		-	-		
	A-50	550	39	45		42	40		32	42		

Keywords/Tags: Excel, Calc, Formatting, protecting range, sheet, Functions, Sort, Filter, Freeze, Pivot, Goal, Seek, Analysis, Visualization, Charts, Graphs, Correlation, Regression.

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Open the Workbook" Marks" as prepared in practical-1.

Perform the following operations in this worksheet named "Marks".

- Add the formula in E2 cell as C2+D2 for subject S1 total of theory and practical.
- Copy formula from E2 cell and paste the formula to E3...E51 cells using keyboard and using fill handle with the help of mouse (press and drag and double click on fill handle both)
- Repeat the process a and b for H2 cell(=F2+G2) cell and H3..H51.
- Repeat the process a and b for K2 cell(=I2+J2) cell and K3..K51.
- Find the total of P1+P2+P3 for all A-1 to A-51 students using formula and copy copy-paste method.
- Save the file with keyboard shortcut CTRL+S.
- 3. In the sheet prepared in experiment-2, validate that any marks are more then 50 in the or greater than 100 in the S1 ,S2 and S3 theory or practical column and Total Columns. If found correct it and see that totals are automatically calculated. (Hint: Use filter method to find it). Save the file.
- 4. Use the above file and
 - a. Calculate the percentage of all students in column M by using formula say in M2(=L2/300%) and copy-paste for rest of the
 - Find the number of students having percentage more than 60%
 - c. Find the number of students having percentage between 45% and 60%.
 - Find the number of students having percentage less than 45%
 - Save the file.
- 5. Use the above file (as saved in experiment -4).
 - a. Find the name of the students got highest marks in S1.
 - b. Find the name of the students got highest marks in S2.
 - c. Find the name of the students got highest marks in S3.
 - d. Find the name of the students got highest marks in both Theory and Practical in subject S1, S2, and S3.
- Use the above file(as saved in experiment-4).
 - a. Sort the data on percentage and show only the top 10 highest rank students. Save the file as "Marks-sorted".

 - b. Hide the marks details and show only the name of the student and percentage column.

 - c. Save/Export the file as "Top 10 rank students.pdf" as pdf file.
 d. Print the worksheet and save as pdf and share it to the instructor.
 - Show/unhide all the columns.
 - f. Export the file as "Marks.txt" file as CSV file.
- 7. Open a blank worksheet.
 - a. Import the CSV file "Marks.txt" file into the worksheet
 - b. Copy the whole content of this worksheet and paste it in the new worksheet in the same file/workbook. Rename this worksheet as "UG2-Marks".
 - Change the delete the students having percentage less than 45%. (delete rows)
 - d. Allot the new Roll Nos. to the student from 601 onwards.
 - Change the marks of the students. Students will see that the totals automatically change.
 - Save the file as template with file name "UG-Marks".
 - Save and protect the file with password.
 - Save the file
- 8. Use of various existing template to create the worksheet.
 - a. Modify according to your need
 - b. Get the required result
 - c. Print it with setting of page.
 - Save the file
- Experiments related to the data validation (Use of drop-down list, length conversion etc.)
- 10. Experiments related to the use of various functions sum, average, count, sumif, countif, autosum etc.
- 11. Experiments related to the financial and statistical functions and round of the number's functions.
- 12. Create worksheet related to crop production of various crops in Indian states in last five years (Wheat, Rice, Pulses, Soyabean, Cane-Sugar etc.)
 - a. Make a bar graph
 - b. Make the Pie graph

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- 13. Create worksheet related to sales of a business company having various products in last 4 quarters for 10 salespersons.
 - a. Make a line graph to show the growth/decline of sales
 - b. Show the graph of each salesperson's sales
 - c. Find top 2 salespersons done in all 4 quarters.
 - d. Find the sakes person consistent in all 4 quarters.
 - e. Find the most popular product and the least popular product of the company.
- 14. Make all types of graphs available in the Calc/Excel using the required data with proper Title of the chart, X-axis and Y-axis title and legend titles.
- 15. Data Analysis using Sort and Filters.
- 16. Data Analysis using Pivot tables.
- 17. Use of conditional formatting.
- 18. Data analysis and Forecasting using what-if-analysis.
- 19. Use of solver techniques.
- 20. Experiments related to use of HLOOKUP and VLOOKUP.
- 21. Working with multiple sheets and linked data.

PART C: Learning Resources

Suggested Readings:

- Jacek Artymiak, Beginning OpenOffice Calc: From Setting Up Simple Spreadsheets to Business Forecasting, 2011, Apress, ISBN: 9781430231592
- Jacek Artymiak, Beginning OpenOffice Calc Functions and Formulas Tips. Essential OpenOffice.org Calc Skills, 1st ed., 2011
- Michael Alexander, Richard Kuslieka John Walkenbach.; Microsoft Excel 2019 Bible: The Comprehensive Tutorial Resource; John Wiley & Sons.
- John Walkenbach J.; Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource; Wiley.
- Fischer W., Excel: Quick Start Guide from Beginner to expert (Excel, Microsoft Office); CreateSpace Independent Publishing Platform.
- Harvey G., Excel 2016 for Dummies (Excel for Dummies); John Wiley & Sons.
 Kalmstrom P.; Excel 2016 from Scratch; Excel course with demos and exercises; CreateSpace Independent Publishing Platform.
- Walkenbach J.; Excel Charts; John Wiley & Sons.

Suggestive digital platform web links

https://wiki.documentfoundation.org/images/c/c2/CG62-CalcGuide.pdf

http://www.openoffice.org/documentation/manuals/userguide3/0309CG3-DataAnalysis.pdf

https://documentation.libraryoffice.org/assests/Uploads/Documentation/en/CG4.1/PDF/CG4109-

DataAnalysis.pdf

https://help.libraryoffice.org/6.1/en-US/text/scalc/01/statistics.html?DbPAR=CALC

https://www.vfu.bg/en/e-Learning/MS-Office--excel.pdf

http://guides.library.duke.edu/excel/visualization

Suggested equivalent online courses:

https://www.classcentral.com/course/edx-analysing-and-visualizing-data-with-excel-4480

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PART D: Assessment and Evaluation			
Internal Assessment: Continuous Comprehensive Evaluation (CCE): 30 Marks		External Assessment: University Exam (UE) – 70 Marks Time: 02.00 Hours	
Internal Assessment	Marks	External Assessment	Marks
Hands-on Lab Practice	10 Marks	Practical record file	10 Marks
Viva	5 Marks	Viva voce practical	20 Marks
Lab Test from practical list	7 Marks	Table works/ Exercise Assigned (02) in practical exam	30 Marks
Assignments (Charts/ Models) Technology Dissemination/ Excursion/ Lab visit/ Industrial Training	8 Marks	Reports of excursion/ Lab visits/ Industrial training/ Survey/ Collection/ Models	10 Marks
Total	30 Marks	Total	70 Marks
*Excursion/ Lab visits/ Industrial Training is compulsory			

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