M.COM., CA

Syllabus

Program Code: PCC

2024 - Onwards

MANNAR THIRUMALAI NAICKER COLLEGE

(AUTONOMOUS)

Re-accredited with "A" Grade by NAAC

PASUMALAI, MADURAI – 625 004

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS), MADURAI – 625 004

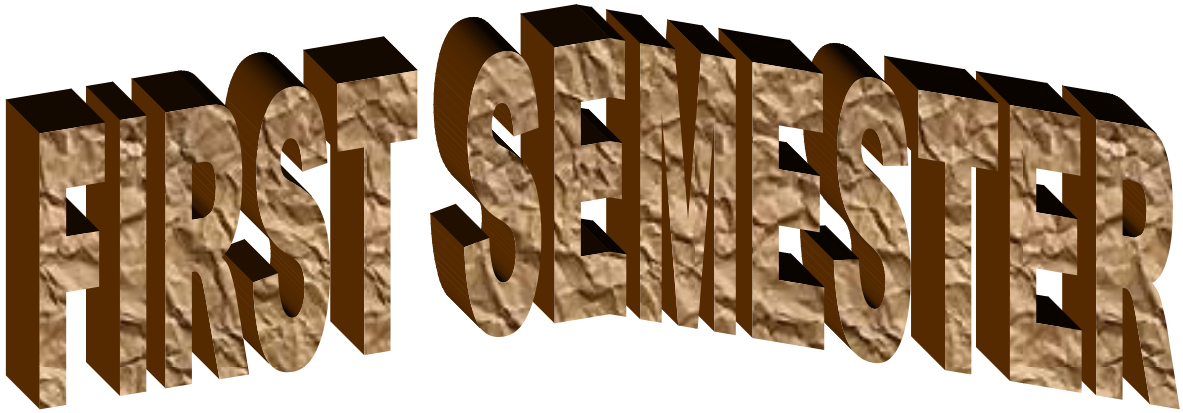
M. COM C.A CURRICULUM

(For the students admitted from the academic year 2024-2025 onwards)

Course Code	Title of the Course	Hrs	Credits	Maximum Marks		
				Int	Ext	Total
FIRST SEMESTER						
Part – III	**Core courses**					
24PCCCC11	BUSINESS FINANCE	6	5	25	75	100
24PCCCC12	DIGITAL MARKETING	6	5	25	75	100
24PCCCC13	BANKING AND INSURANCE	6	4	25	75	100
Part – III	**Elective courses**					
24PCCEC11	INTRODUCTION TO INDUSTRY 4.0	6	3	25	75	100
24PCCEC12	DATABASE MANAGEMENT SYSTEM	6	3	25	75	100
	Total	30	20	125	375	500
SECOND SEMESTER						
Part – III	**Core courses**					
24PCCCC21	STRATEGIC COST MANAGEMENT	6	5	25	75	100
24PCCCC22	CORPORATE ACCOUNTING	6	5	25	75	100
24PCCCC23	SETTING UP OF BUSINESS ENTITIES	6	4	25	75	100
Part – III	**Elective courses**					
24PCCEC21	DATA MINING AND DATA INTERPRETATION	5	3	25	75	100
24PCCEC22	MANAGEMENT INFORMATION SYSTEM	5	3	25	75	100
Part – IV	**Skill course**					
24PCCSP21	ADVANCED EXCEL – LAB	2	2	25	75	100
	Total	30	22	150	450	600

24PCCINT1	Internship* Industrial Activity	-	-	-	-	-

*** At the end of the semester, all the students should complete their internship during the summer vacation (April - May) for which the marks with due credits will be awarded in the third semester.**


FIRST SEMESTER

Course Name	BUSINESS FINANCE			
Course Code	24PCCCC11	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To outline the fundamental concepts in finance
- To estimate and evaluate risk in investment proposals
- To evaluate leasing as a source of finance and determine the sources of startup financing
- To examine cash and inventory management techniques
- To appraise capital budgeting techniques for MNCs

UNIT - I Introduction to Business Finance and Time vale of money 18

Business Finance: Meaning, Objectives, Scope -Time Value of money: Meaning, Causes – Compounding – Discounting – Sinking Fund Deposit Factor – Capital Recovery Factor – Multiple Compounding– Effective rate of interest – Doubling period (Rule of 69 and Rule of 72) – Practical problems.

UNIT - II Risk Management 18

Risk and Uncertainty: Meaning – Sources of Risk – Measures of Risk – Measurement of Return – General pattern of Risk and Return – Criteria for evaluating proposals to minimize Risk (Single Asset and Portfolio) - Methods of Risk Management–Hedging currency risk.

UNIT - III Startup Financing and Leasing 18

Startup Financing: Meaning, Sources, Modes (Bootstrapping, Angel investors, Venture capital fund) – Leasing Meaning – Types of Lease Agreements – Advantages and Disadvantages of Leasing – Financial evaluationfrom the perspective of Lessor and Lessee.

UNIT - IV Cash, Receivable and Inventory Management 18

Cash Management: Meaning, Objectives and Importance – Cash Cycle – Minimum Operating Cash – Safety level of cash – Optimum cash balance - Receivable Management: Meaning – Credit policy – Controlling receivables: Debt collection period, Ageing schedule, Factoring – Evaluating investment in accounts receivable - Inventory Management: Meaning and Objectives – EOQ with price breaks – ABC Analysis

UNIT - V Multi National Capital Budgeting 18

Multi National Capital Budgeting: Meaning, Steps involved, Complexities, Factors to be considered- International sources of finance – Techniques to evaluate multi-national capital expenditure proposals Discounted Pay Back Period, NPV, Profitability Index, Net Profitability Index and Internal Rate of Return - Capital rationing -Techniques of Risk analysis in Capital Budgeting.

Total Lecture Hours	**90**

Theory – 40% Problem – 60%

BOOKS FOR STUDY:

- Maheshwari S.N., (2019), "Financial Management Principles and Practices", 15th Edition, Sultan Chand &Sons, New Delhi.
- Khan M.Y &Jain P.K, (2011), "Financial Management: Text, Problems and Cases", 8th Edition, McGraw Hill Education, New Delhi.
- Prasanna Chandra, (2019), "Financial Management, Theory and Practice", 10thEdition, McGraw Hill Education, New Delhi.
- Apte P.G, (2020), "International Financial Management" 8th Edition, Tata McGraw Hill, New Delhi.

BOOKS FOR REFERENCES:

- Pandey I. M., (2021), "Financial Management", 12thEdition, Pearson IndiaEducation Services Pvt. Ltd, Noida.
- Kulkarni P. V. &Satyaprasad B. G., (2015), "Financial Management", 14thEdition, Himalaya Publishing House Pvt Ltd, Mumbai.
- RustagiR. P., (2022),"Financial Management, Theory, Concept, ProblemS 6thEdition, TaxmanPublications Pvt. Ltd, New Delhi.
- ArokiamaryGeetha Rufus, Ramani N. & Others, (2017), "Financial Management", 1st Edition, Himalay Publishing House Pvt Ltd, Mumbai.

WEB RESOURCES:

- **https://resource.cdn.icai.org/66674bos53808-cp8.pdf**
- **https://resource.cdn.icai.org/66677bos53808-cp10u2.pdf**
- **https://resource.cdn.icai.org/66592bos53773-cp4u5.pdf**
- **https://resource.cdn.icai.org/65599bos52876parta-cp16.pdf**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP				
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		✓	GLOBAL			
Changes Made in the Course	Percentage of Change			No Changes Made			New Course		✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Explain the important finance concepts	**K1 to K5**
CO2	Estimate risk and determine its impact on return	**K1 to K5**
CO3	Examine leasing and other sources of finance for startups	**K1 to K5**
CO4	Summarise cash receivable and inventory management techniques	**K1 to K5**
CO5	Evaluate techniques of long term investment decision incorporating risk factor	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	1	3	3	3				
CO2	3	3	2	3	3	3				
CO3	2	2	1	2	2	2				
CO4	2	2	1	2	2	2				
CO5	3	3	2	3	3	3				
S- STRONG				M – MEDIUM				L - LOW		

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	2	2	2		
CO 2	3	3	3		
CO 3	3	2	2		
CO 4	2	2	2		
CO 5	3	3	3		
WEIGHTAGE	13	12	12		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.6	2.4	2.4		

LESSON PLAN:			
UNIT		HRS	PEDAGOGY
I	Introduction to Business Finance and Time vale of money	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Risk Management	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Startup Financing and Leasing	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	Cash, Receivable and Inventory Management	18	Chalk and talk, Power Point Presentation, Video Lectures
V	Multi National Capital Budgeting	18	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO2	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K5, K5)
CI AII	**CO3**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO4	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K5, K5)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
	K1	**2**			**2**	**3.57**	**25**
	K2	**2**	**10**		**12**	**21.43**	
CIA I	**K3**		**10**		**10**	**17.86**	**18**
	K4			**16**	**16**	**28.57**	**29**
	K5			**16**	**16**	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100.00**	**100**
	K1	**2**			**2**	**3.57**	**25**
CIA II	**K2**	**2**	**10**		**12**	**21.43**	
	K3		**10**		**10**	**17.86**	**18**
	K4			**16**	**16**	**28.57**	**29**
	K5			**16**	**16**	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 –Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K3,K3)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K4,K4)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.37	3
K2	5	10		15	10.13	10
K3		30	40	70	47.29	47
K4		10	32	42	28.37	28
K5			16	16	10.81	11
Marks	10	50	80	148	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K3**	
		OR		
13. b)	**Unit - III**	**CO3**	**K3**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K3**	
		OR		
18. b)	**Unit - III**	**CO3**	**K3**	
19. a)	**Unit - IV**	**CO4**	**K4**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K4**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	DIGITAL MARKETING			
Course Code	24PCCCC12	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To assess the evolution of digital marketing
- To appraise the dimensions of online marketing mix
- To infer the techniques of digital marketing
- To analyze online consumer behavior
- To interpret data from social media and to evaluate game based marketing

UNIT - I Introduction To Digital Marketing **18**

Digital Marketing – Transition from traditional to digital marketing – Rise of internet – Growth of e-concepts –Growth of e-business to advanced e-commerce – Emergence of digital marketing as a tool – Digital marketing channels – Digital marketing applications, benefits and challenges – Factors for success of digital marketing – Emerging trends and concepts, Big Data and IOT, Segments based digital marketing, Hyperlocal marketing - Opportunities for digital marketing professionals.

UNIT - II Online Marketing Mix **18**

Online marketing mix – E-product – E-promotion – E-price – E-place – Consumer segmentation – Targeting –Positioning – Consumers and online shopping issues – Website characteristics affecting online purchase decisions – Distribution and implication on online marketing mix decisions – Digitization and implication on online marketing mix decisions.

UNIT - III Digital Media Channels **18**

Digital media channels – Search engine marketing – ePR – Affiliate marketing – Interactive display advertising – Opt-in-email marketing and mobile text messaging, Social media and viral marketing – Online campaign management using – Facebook, Twitter, Instagram, Snapchat, Pinterest – Metaverse marketing -Advantagesand disadvantages of digital media channels – Metaverse marketing.

UNIT - IV Online Consumer Behavior **18**

Online consumer behavior – Cultural implications of key website characteristics – Dynamics of online consumer visit – Models of website visits – Web and consumer decision making process – Data base marketing – Electronic consumer relationship management – Goals – Process – Benefits – Role – Next generation CRM.

UNIT - V Analytics And Gamification **18**

Digital Analytics – Concept – Measurement framework – Demystifying web data - Owned social metrics – Measurement metrics for Facebook, Twitter, YouTube, Slide Share, Pinterest, Instagram, Snapchat and LinkedIn – Earned social media metrics - Digital brand analysis – Meaning – Benefits – Components – Brand share dimensions – Brand audience dimensions – Market influence analytics – Consumer generated media and opinion leaders – Peer review – Word of mouth – Influence analytics – Mining consumer generated media – Gamification and game based marketing – Benefits – Consumer motivation for playing online games

Total Lecture Hours	**90**

BOOKS FOR STUDY:

- Puneet Singh Bhatia, (2019) "Fundamentals of Digital Marketing", 2nd Edition,Pearson Education Pvt Ltd, Noida.
- Dave Chaffey, Fiona Ellis-Chadwick(2019) "Digital Marketing", Pearson Education Pvt Ltd, Noida.
- Chuck Hemann& Ken Burbary(2019) "Digital Marketing Analytics", Pearson Education Pvt Ltd, Noida.
- Seema Gupta,(2022) "Digital Marketing" 3rd Edition, McGraw Hill Publications Noida.
- Kailash Chandra Upadhyay,(2021) "Digital Marketing: Complete Digital MarketingTutorial", Notion Press, Chennai.
- Michael Branding, (2021) "Digital Marketing", Empire Publications India Private Ltd, New Delhi.

BOOKS FOR REFERENCES:

- VandanaAhuja, (2016) "Digital Marketing", Oxford University Press. London.
- Ryan Deiss& Russ Henneberry, (2017) "Digital Marketing", John Wiley and Sons Inc. Hoboken.
- Alan Charlesworth,(2014), "Digital Marketing - A Practical Approach", Routledge, London.
- Simon Kingsnorth, Digital Marketing Strategy,(2022) "An Integrated approach to Online Marketing", Kogan Page Ltd. United Kingdom.
- MaityMoutusy,(2022) "Digital Marketing" 2nd Edition, Oxford University Press, London.

WEB RESOURCES:

- **https://www.digitalmarketer.com/digital-marketing/assets/pdf/ultimate-guide-to-digital- marketing.pdf**
- **https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/educational- technologies/all/gamification-and-game-based-learning**
- **https://journals.ala.org/index.php/ltr/article/download/6143/7938**

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Explain the dynamics of digital marketing	**K1 to K5**
CO2	Examine online marketing mix	**K1 to K5**
CO3	Compare digital media channels	**K1 to K5**
CO4	Explain online consumer behavior	**K1 to K5**
CO5	Analyse social media data	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	2	3	3	3				
CO2	3	3	2	3	3	3				
CO3	3	3	2	2	3	2				
CO4	3	3	2	2	3	3				
CO5	3	3	1	3	3	2				
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3		
CO 2	3	3	3		
CO 3	3	3	2		
CO 4	3	3	3		
CO 5	3	3	2		
WEIGHTAGE	15	15	13		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	3.0	3.0	2.6		

LESSON PLAN:			
UNIT		HRS	PEDAGOGY
I	Introduction to Business Finance and Time valeof money	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Risk Management	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Startup Financing and Leasing	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	Cash, Receivable and Inventory Management	18	Chalk and talk, Power Point Presentation,Video Lectures
V	Multi National Capital Budgeting	18	Seminar, Assignment, Chalkand talk, Power Point Presentation, Video Lectures

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K3, K3)
	CO2	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K5, K5)
CI AII	**CO3**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO4	**K1 – K5**	2	K1,K2	2(K4, K4)	2(K5, K5)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	**2**			**2**	**3.57**	**25**
	K2	**2**	**10**		**12**	**21.43**	
	K3		**10**	**16**	**26**	**46.43**	**46**
	K4	**0**			**0**	**0.00**	**0**
	K5			**16**	**16**	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100.00**	**100**
CIA II	**K1**	**2**			**2**	**3.57**	**25**
	K2	**2**	**10**		**12**	**21.43**	
	K3				**0**	**0.00**	**0**
	K4		**10**	**16**	**26**	**46.43**	**46**
	K5			**16**	**16**	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 –Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K4,K4)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K4,K4)
5	CO5	K1 – K5	2	K1, K2	2 (K5,K5)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5	10		15	10.71	11
K3		20	16	36	25.71	26
K4		10	48	58	41.43	41
K5		10	16	26	18.57	19
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K5**	
		OR		
15. b)	**Unit - V**	**CO5**	**K5**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K4**	
		OR		
17. b)	**Unit - II**	**CO2**	**K4**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K4**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K4**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	BANKING AND INSURANCE			
Course Code	24PCCCC13	**L**	**P**	**C**
Category	Core	6	-	4

COURSE OBJECTIVES:

- To understand the evolution of new era banking
- To explore the digital banking techniques
- To analyse the role of insurance sector
- To evaluate the mechanism of customer service in insurance and the relevant regulations
- To analsye risk and its impact in banking and insurance industry

UNIT - I Introduction to Banking **18**

Banking: Brief History of Banking - Rapid Transformation in Banking: Customer Shift - Fintech Overview -Fintech Outlook - The Financial Disruptors - Digital Financial Revolution - New Era of Banking.Digital Banking – Electronic Payment Systems–Electronic Fund Transfer System – Electronic Credit and Debit Clearing – NEFT – RTGS –VSAT–SFMS–SWIFT.

UNIT - II Contemporary Developments in Banking **18**

Distributed Ledger Technology –Blockchain: Meaning - Structure of BlockChain - Types of Block Chain - Differences between DLT and Blockchain - Benefits of Blockchain and DLT - Unlocking the potential of Blockchain–Crypto currencies, Central Bank Digital Currency (CBDC) - Role of DLT in financial services -AI in Banking: Future of AI in Banking - Applications of AI in Banking - Importance of AI in banking - Banking remained with AI. Cloud banking - Meaning - Benefits in switching to Cloud Banking

UNIT - III Indian Insurance Market **18**

History of Insurance in India – Definition and Functions of Insurance–Insurance Contract – Indian Insurance Market – Reforms in Insurance Sector – Insurance Organisation Insurance organization structure. Insurance Intermediaries: Insurance Broker – Insurance Agent-Surveyors and Loss Assessors-Third Party Administrators(Health Services) – Procedures-Code of Conduct.

UNIT - IV Customer Services in Insurance **18**

Customer Service in Insurance – Quality of Service-Role of Insurance Agents in Customer Service-Agent's Communication and Customer Service –Ethical Behaviour in Insurance – Grievance Redressal System in Insurance Sector –Integrated Grievance Management System-Insurance Ombudsman - Insurance Regulatory and Development Authority of India Act (IRDA) – Regulations and Guidelines.

UNIT - V Risk Management **18**

Risk Management and Control in banking and insurance industries – Methods of Risk Management – Risk Management by Individuals and Corporations – Tools for Controlling Risk.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Indian Institute of Banking and Finance (2021), "Principles & Practices of Banking", 5th Edition, Macmillan Education India Pvt. Ltd, Noida, Uttar Pradesh.
- Mishra M N & Mishra S B, (2016), "Insurance Principles and Practice", 22nd Edition, S. Chand and Company Ltd, Noida, Uttar Pradesh.
- Emmett, Vaughan, Therese Vaughan M., (2013), "Fundamentals of Risk and Insurance", 11th Edition, Wiley & Sons, New Jersey, USA.
- Theo Lynn , John G. Mooney, Pierangelo Rosati, Mark Cummins (2018), Disrupting Finance: FinTech and Strategy in the 21st Century (Palgrave Studies in Digital Business & Enabling Technologies), Macmillan Publishers, NewYork (US)

BOOKS FOR REFERENCES:

- SundharamKPM & Varshney P. N., (2020), "Banking Theory, Law and Practice", 20th Edition, Sultan Chand & Sons, New Delhi.
- Gordon & Natarajan, (2022), "Banking Theory, Law and Practice", 9th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
- Gupta P. K. (2021), "Insurance and Risk Management" 6th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
- Susanne Chishti., & Janos Barberis(2016), The Fintech book: The financial technology handbook for investors, entrepreneurs and visionaries. John Wiley & Sons.

WEB RESOURCES:

- **https://corporatefinanceinstitute.com/resources/knowledge/finance/fintech-financial-technology/**
- **https://mrcet.com/downloads/digital_notes/CSE/IV%20Year/CSE%20B.TECH%**
  20IV%20YEAR%20II%20SEM%20BCT%20(R18A0534)%20NOTES%20Final%20PDF.pdf
- **https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral_Layout.aspx?page=Page**
  No108&flag=1

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		K LEVEL
After studying this course, the students will be able to:		
CO1	Relate the transformation in banking from traditional to new age	K1 to K5
CO2	Apply modern techniques of digital banking	K1 to K5
CO3	Evaluate the role of insurance sector	K1 to K5
CO4	Examine the regulatory mechanism	K1 to K5
CO5	Assess risk mitigation strategies	K1 to K5

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	1	3	3	3				
CO2	3	3	3	3	3	3				
CO3	2	2	1	2	2	2				
CO4	3	2	2	1	2	2				
CO5	3	3	1	3	3	3				

S- STRONG M – MEDIUM L - LOW

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3		
CO 2	3	3	3		
CO 3	2	3	2		
CO 4	2	3	2		
CO 5	3	3	3		
WEIGHTAGE	13	15	13		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.6	3.0	2.6		

LESSON PLAN:

UNIT		HRS	PEDAGOGY
I	Introduction to Banking	18	Chalk and talk, Power Point Presentation,Video Lectures
II	Contemporary Developments in Banking	18	Chalk and talk, Power Point Presentation,Video Lectures
III	Indian Insurance Market	18	Chalk and talk, Power Point Presentation,Video Lectures
IV	Customer Services in Insurance	18	Chalk and talk, Power Point Presentation,Video Lectures

V	Risk Management	**18**	**Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO2	**K1 – K5**	2	K1,K2	2(K5, K5)	2(K5, K5)
CI AII	**CO3**	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K3, K3)
	CO4	**K1 – K5**	2	K1,K2	2(K4, K4)	2(K5, K5)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	Section A (Multiple Choice Questions)	Section B (Either / Or Choice)	Section C (Either / Or Choice)	Total Marks	% of (Marks without choice)	Consolidate of %
CIA I	K1	2			2	3.57	25
	K2	2	10		12	21.43	
	K3				0	0.00	0
	K4			16	16	28.57	29
	K5		10	16	26	46.43	46
	Marks	4	20	32	56	100.00	100
CIA II	K1	2			2	3.57	7
	K2	2			2	3.57	
	K3		10	16	26	46.43	46
	K4		10		10	17.86	18
	K5			16	16	28.57	29
	Marks	4	20	32	56	100	100

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 –Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5			5	3.57	4
K3		20	32	52	37.14	37
K4		30	16	46	32.86	33
K5			32	32	22.86	23
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K4**	
		OR		
12. b)	**Unit - II**	**CO2**	**K4**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	INTRODUCTION TO INDUSTRY 4.0			
Course Code	24PCCEC11	**L**	**P**	**C**
Category	ELECTIVE	6	-	3

COURSE OBJECTIVES:

- To enable the students to comprehend the change from industry 1.0 to 4.0
- To gain knowledge on the challenges and future prospects of applying artificial intelligence
- To learn the applications of big data for industrial growth and development
- To understand the applications of IoT in various sectors
- To understand why education has to be aligned with industry 4.0

UNIT - I Introduction **18**

Industry: Meaning, Types - Industrial Revolution: Industrial Revolution 1.0 to 4.0: Meaning, Goals and Design
Principles - Technologies of Industry 4.0 - Big Data – Artificial Intelligence (AI) – Industrial Internet of Things - Cyber Security – Cloud – Augmented Reality

UNIT - II Artificial Intelligence **18**

Artificial Intelligence (AI): Need, History and Foundations -The AI - environment - Societal Influences of AI – Application Domains and Tools - Associated Technologies of AI - Future prospects of AI – Challenges of AI.

UNIT - III Big Data **18**

Evolution - Data Evolution - Data : Terminologies - Essential of Big Data in Industry 4.0 - Big Data Merits and Limitations - Big Data Components : Big Data Characteristics - Big Data Processing Frameworks - Big Data Tools - Big Data Applications - Big Data Domain Stack : Big Data in Data Science – Big Data in IoT - Big Datain Machine Learning - Big Data in Databases - Big Data Use cases: Big Data in Social Causes - Big Data for Industry - Big Data Roles - Learning Platforms; Internet of Things (IoT) : Introduction to IoT – Architecture of IoT Technologies for IoT - Developing IoT Applications - Applications of IoT - Security in IoT.

UNIT - IV Applications of IoT **18**

IoT in Manufacturing – Healthcare – Education – Aerospace and Defence – Agriculture – Transportation and Logistics – Impact of Industry 4.0 on Society: Impact on Business, Government, People – Tools for Artificial Intelligence - Big Data and Data Analytics - Virtual Reality - Augmented Reality – IoT - Robotics.

UNIT - V Industry 4.0 **18**

Education 4.0 – Curriculum 4.0 – Faculty 4.0 – Skills required for Future - Tools for Education – Artificial Intelligence Jobs in 2030 – Jobs 2030 - Framework for aligning Education with Industry 4.0.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Seema Acharya J, Subhashini Chellappan, (2019) "Big Data and Analytics", 2nd Edition, Wiley Publication, New Delhi.
- Russel S, Norvig P (2010), "Artificial Intelligence: A Modern approach", 3rd Edition, Prentice Hall, New York.
- Pethuru Raj and Anupama C. Raman, (2017), "The Internet of Things: Enabling Technologies, Platforms, and Use Cases", Auerbach Publications

BOOKS FOR REFERENCES:

- Judith Hurwitz, Alan Nugent, Fern Halper, Marcia Kaufman, "Big Data for Dummies", John Wiley & Sons, Inc.
- Nilsson (2000), Artificial Intelligence: A new synthesis, Nils J Harcourt Asia PTE Ltd

WEB RESOURCES:

- **https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SEEA1403.pdf**
- **https://library.oapen.org/bitstream/handle/20.500.12657/43836/external_content.pdf? sequence=1**
- **https://www.vssut.ac.in/lecture_notes/lecture1428643004.pdf**

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP						
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓			
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓					
*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**											

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Discuss on the change from industry 1.0 to 4.0	**K1 to K5**
CO2	Discover the challenges and future prospects of applying artificial intelligence	**K1 to K5**
CO3	Apply big data for industrial growth and development	**K1 to K5**
CO4	Apply IoT in various sectors like Manufacturing, Healthcare, Education, Aerospace and defense	**K1 to K5**
CO5	Appraise why education has to be aligned with industry 4.0	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	2	3	3	3	3	3		
CO2	2	3	2	3	3	3	3	3		
CO3	2	3	2	3	3	3	3	3		
CO4	2	3	2	3	3	3	3	3		
CO5	2	3	2	3	3	3	3	3		
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3	3	3
CO 2	3	3	3	3	3
CO 3	3	3	3	3	3
CO 4	3	3	3	3	3
CO 5	3	3	3	3	3
WEIGHTAGE	15	15	15	15	15
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	3.0	3.0	3.0	3.0	3.0

LESSON PLAN:			
UNIT		HRS	PEDAGOGY
I	Introduction	18	Theory
II	Artificial Intelligence	18	Theory
III	Big Data	18	Theory
IV	Applications of IoT	18	Theory
V	Industry 4.0	18	Theory

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5	10		15	10.71	11
K3		20	32	52	37.14	37
K4		20	16	36	25.71	26
K5			32	32	22.86	23
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	DATABASE MANAGEMENT SYSTEM			
Course Code	24PCCEC12	**L**	**P**	**C**
Category	ELECTIVE	6	-	3

COURSE OBJECTIVES:

- To introduce the basic concepts of Relational Database Management System and the working knowledge of Linux environment
- To understand designing databases and queries in SQL
- To learn RDBMS
- To upskill the functions and operators
- To understand the constraints, locks and MySQL

UNIT - I Introduction to Database Systems and Linux **18**

Introduction to File and Database systems Database System Structure - Data Models Introduction to Network Models: ER Model, Relational Model - Introduction to Linux Operating System - Properties of Linux - Desktop Environment - Linux basics commands - Working with Files - Text Editors - I/O Redirections - PipesFilters, and Wildcards - Changing Access Rights.

UNIT - II SQL Definition and Normalization **18**

SQL – Data Definition - Queries in SQL - Updates - Views - Integrity and Security. Relational Database design – Functional dependences and Normalization for relational databases (up to BCNF) - Query Forms.

UNIT - III Files and RDBMs **18**

Record Storage and Primary File Organization - Secondary Storage Devices - Operations on Files - Heap File - Sorted Files - Hashing Techniques - Index Structure for Files - Different Types of Indexes - B-Tree - B+Tree - Query Processing - Multimedia Databases - Basic Concepts and Applications - Indexing and Hashing - Text Databases - Overview of RDBMs - Advantages of RDBMs over DBMs – Introduction to Data Mining.

UNIT - IV Data Definition and Manipulation Language **18**

Data Definition Language - Data Manipulation Language - Transaction Control - Data Control Language Gran - Revoke Privilege Command - Set Operators - Joins- Kinds of Joins - Table Aliases - Sub queries - Multipleand Correlated Sub Queries - Functions - Single Row - Date, Character, Numeric, Conversion and Group Functions

UNIT - V Constraints and MYSQL **18**

Constraints - Domain, Equity, Referential Integrity Constraints - Locks - Types of Locks, Table Partitions - Synonym - Introduction to PL/SQL - Introduction - MySQL as an RDBMS Tool - Data types and Commands.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Ramakrishnan Raghu and Gehrke Johannes, "Database Management Systems", McGraw–Hill, USA.
- Rajendra Prasad Mahapatra and Govind Verma, "Database Management System", Khanna Publications, New Delhi.

BOOKS FOR REFERENCES:

- Ramon A Mata-Toledo and Pauline K Cushman, "Database Management System", Schaun's Outlines, New York.
- Abraham Silberschatz, Henry F Korth and S. Sudarshan, "Database System Concepts" McGraw–Hill, USA.

WEB RESOURCES:

- **http://education-portal.com/academy/lesson/what-is-a-database-management-systempurpose-and-function.html.**
- **http://www.comptechdoc.org/os/linux/usersguide/linux_ugbasics.html.**
- **http://www.dummies.com/how-to/content/common-linux-commands.html.**

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change	**50 %**	No Changes Made		New Course			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Identify models and schemas in DBMS and LINUX	**K1 to K5**
CO2	Demonstrate Queries in SQL	**K1 to K5**
CO3	Discuss handling files and databases	**K1 to K5**
CO4	Apply skills on functions and operators in RDBMS	**K1 to K5**
CO5	Apply constraints and locks in SQL	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	3	3	3	2	2	2	3	2	
CO2	3	3	2	3	3	3	2	2	3	
CO3	1	2	2	2	1	2	3	2	2	
CO4	3	3	3	3	3	3	3	3	3	
CO5	3	3	3	3	1	2	1	3	2	

S- STRONG **M – MEDIUM** **L - LOW**

CO / PO MAPPING:					
COS	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO 1	**2**	**3**	**3**	**3**	**2**
CO 2	**3**	**3**	**2**	**3**	**3**
CO 3	**1**	**2**	**2**	**2**	**1**
CO 4	**3**	**3**	**3**	**3**	**3**
CO 5	**3**	**3**	**3**	**3**	**1**
WEIGHTAGE	**12**	**14**	**13**	**14**	**10**
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	**80**	**93**	**87**	**93**	**67**

LESSON PLAN:			
UNIT		**HRS**	**PEDAGOGY**
I	Introduction to Database Systems and Linux	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
II	SQL Definition and Normalization	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
III	Files and RDBMs	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
IV	Data Definition and Manipulation Language	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
V	Constraints and MYSQL	**18**	**Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5	10		15	10.71	11
K3		20	32	52	37.14	37
K4		20	16	36	25.71	26
K5			32	32	22.86	23
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	


SECOND SEMESTER

Course Name	STRATEGIC COST MANAGEMENT			
Course Code	24PCCCC21	**L**	**P**	**C**
Category	CORE	6	-	5

COURSE OBJECTIVES:

- To analyse the aspects of strategic and quality control management
- To analyse and select cost control techniques
- To apply activity based costing for decision making
- To utilise transfer pricing methods in cost determination
- To apply cost management techniques in various sectors

UNIT - I Introduction to Strategic Cost Management **18**

Introduction to Strategic Cost Management (SCM) – Need for SCM – Differences between SCM and Traditional Cost Management - Value Chain Analysis: Meaning and steps - Quality Cost Management: Meaning of Quality and Quality Management – Cost of Quality –Indian Cost Accounting Standard 21 on Quality Control - Introduction to Lean System – Benefits of Lean System – Just in Time (JIT) – Kaizen Costing.

UNIT - II Cost Control and Reduction **18**

Cost Management Techniques: Cost Control: Meaning and Prerequisites - Cost Reduction: Meaning and Scope – Differences between Cost control and cost reduction - Pareto Analysis: Meaning, importance and applications - Target Costing: Meaning, steps and Principles – Life Cycle Costing: Meaning, Strategies for each stage of product life cycle, Benefits – Learning Curve: Meaning, Learning curve ratio and applications.

UNIT - III Activity Based Cost Management **18**

Activity Based Cost Management: Concept, Purpose, Stages, Benefits Relevance in Decision making and its Application in Budgeting – Practical problems.

UNIT - IV Transfer Pricing **18**

Transfer Pricing: Meaning, Benefits, Methods: Pricing based on cost, Market price on transfer price, Negotiated pricing and Pricing based on opportunity costs – Practical Problems.

UNIT - V Cost Management in Agriculture and IT sector **18**

Agriculture Sector: Features, Cost Structure, Cost Management, Tools to measure the performance, Minimum Support Price and International Perspective –Information Technology Sector: Features, Cost Structure, Cost Management and International Perspective.

Total Lecture Hours **90**

(40% of marks must be allotted to problem solving questions. 60% of marks must be allotted to Theory questions).

BOOKS FOR STUDY:

- Ravi M Kishore (2018), "Strategic Cost Management", 5th Edition, Taxmann Publications Pvt. Ltd, New Delhi.
- Bandgar P. K., (2017), "Strategic Cost Management", 1st Edition, Himalaya Publishing House Pvt Ltd Mumbai.
- Sexena V. K., (2020), "Strategic Cost Management and Performance Evaluation", 1st Edition, Sultan Chand & Sons, New Delhi.

BOOKS FOR REFERENCES:

- John K Shank and Vijay Govindarajan(2008), Strategic Cost Management, Simon & Schuster; Latest edition, UK
- JawaharLal, (2015), "Strategic Cost Management", 1st Edition, Himalaya Publishing House Pvt Ltd, Mumbai.)
- Arora M. N., (2021), "A Text Book of Cost and Management Accounting", 11th Edition, Vikas Publishing House Pvt. Ltd., New Delhi.

WEB RESOURCES:

- **https://www.accountingtools.com/articles/strategiccostmanagement.html#:~:text=Strategic%20cost%20management%20is%20the,it%20or%20have%20no%20impact.**
- **https://ca-final.in/wp-content/uploads/2018/09/Chapter-4-Cost-Management-Techniques.pdf**
- **https://resource.cdn.icai.org/66530bos53753-cp5.pdf**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP					
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		✓	GLOBAL				
Changes Made in the Course	Percentage of Change			No Changes Made			New Course		✓			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Explain strategic cost management and QC	**K1 to K5**
CO2	Choose the appropriate technique for cost control	**K1 to K5**
CO3	Make use of activity based costing in practice	**K1 to K5**
CO4	Choose transfer pricing methods to solve problems	**K1 to K5**
CO5	Construct cost structure for Agriculture and IT sector	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	3	3	3				
CO2	3	3	2	3	3	3				
CO3	3	3	2	3	3	3				
CO4	3	3	2	3	3	3				
CO5	3	3	1	3	3	3				
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3		
CO 2	3	3	3		
CO 3	3	3	3		
CO 4	3	2	3		
CO 5	3	3	3		
WEIGHTAGE	15	14	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	3.0	2.8	3.0		

LESSON PLAN:			
UNIT		HRS	PEDAGOGY
I	Introduction to Strategic Cost Management	18	Chalk and talk, Power Point Presentation,Video Lectures
II	Cost Control and Reduction	18	Chalk and talk, Power Point Presentation,Video Lectures
III	Activity Based Cost Management	18	Chalk and talk, Power Point Presentation,Video Lectures
IV	Transfer Pricing	18	Chalk and talk, Power Point Presentation,Video Lectures
V	Cost Management in Agriculture and IT sector	18	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K4, K4)
	CO2	**K1 – K5**	2	K1,K2	2(K4, K4)	2(K5, K5)
CI AII	**CO3**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO4	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K5, K5)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	**2**			**2**	**3.57**	
	K2	**2**			**2**	**3.57**	**8**
	K3		**10**		**10**	**21.74**	**22**
	K4		**10**	**16**	**16**	**34.78**	**35**
	K5			**16**	**16**	**34.78**	**35**
	Marks	**4**	**20**	**32**	**56**	**100.00**	**100**
CIA II	**K1**	**2**			**2**	**3.57**	
	K2	**2**	**10**		**12**	**21.43**	**25**
	K3		**10**		**10**	**17.86**	**18**
	K4			**16**	**16**	**28.57**	**29**
	K5			**16**	**16**	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 –Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K4,K4)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5			5	3.57	4
K3		30	16	46	32.86	33
K4		20	32	52	37.14	37
K5			32	32	22.86	23
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K3**	
		OR		
12. b)	**Unit - II**	**CO2**	**K3**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K4**	
		OR		
17. b)	**Unit - II**	**CO2**	**K4**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	CORPORATE ACCOUNTING			
Course Code	24PCCCC22	**L**	**P**	**C**
Category	CORE	6	-	5

COURSE OBJECTIVES:

- To understand the accounting treatment for issue of shares
- To determine profits for fire and marine insurance
- To prepare consolidated financial statements
- To account for price level changes
- To adopt financial reporting standards

UNIT - I Issue of Shares and Final Accounts of Companies 18

Issue of Shares: ESOPs - ESPS - Sweat Equity Shares - Book Building- Buy-back of Shares - Conversion ofdebentures into shares - Final accounts of Companies as per Schedule III of the Companies Act, 2013 – Managerial remuneration.

UNIT - II Insurance Company Accounts 18

Insurance Company Accounts: Types of Insurance - Final accounts of life assurance Companies- Ascertainment of profit- Valuation Balance Sheet-Final accounts of Fire, Marine and miscellaneous InsuranceCompanies.

UNIT - III Consolidated financial statements 18

Consolidated financial statements as per AS 21: Consolidated Profit and Loss Account– Minority interest – Cost of control – Capital reserve – Inter-company holdings –Preparation of consolidated Balance Sheet.

UNIT - IV Contemporary Accounting Methods 18

Accounting for price level changes – Social responsibility accounting – Human resource accounting - ForensicAccounting

UNIT - V Financial reporting 18

Financial reporting: Meaning, Objectives, Characteristics – Indian Accounting Standards (AS 5, AS 10, AS 19, AS 20) – Corporate Social Responsibility: Meaning, Key provisions of Companies Act, 2013, Accounting for CSR expenditure, Reporting of CSR, Presentation and disclosure in the financial statements.

Total Lecture Hours 90

(80% of marks must be allotted to problem solving questions. 20% of marks must be allotted to Theory questions).

BOOKS FOR STUDY:

- Gupta R. L. &Radhaswamy M. (2021), "Corporate Accounting – Volume I & II", 14th Edition, Sultan Chand &Sons, New Delhi.
- Maheshwari S. N., Sharad K. Maheshwari&Suneel K. Maheshwari, (2022),"Advanced Accountancy - Volume I &II", 11th Edition, Vikas Publishing House Pvt. Ltd., New Delhi.
- Jain S. P., Narang K. L., Simmi Agrawal and Monika Sehgal (2019), "Advanced Accountancy - Corporate Accounting – Volume - II", 22nd Edition, Kalyani Publishers, New Delhi.
- Reddy T. S. &Murthy A., (2022), "Corporate Accounting – Volume I &II", 17th Edition, Margham Publications, Chennai.

BOOKS FOR REFERENCES:

- ArulanandamM.A&Raman K.S., (2021), "Advanced Accounting (Corporate Accounting – II)", 8th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
- Shukla M C, Grewal T S and Gupta S C, (2022), "Advanced Accounts Volume II",19th Edition, Sultan Chand &Sons, New Delhi.
- Gupta R. L., (2022), "Problems and Solutions in Company Accounts", 2nd Edition,Sultan Chand &Sons, New Delhi.

WEB RESOURCES:

- **https://resource.cdn.icai.org/66550bos53754-p1-cp9.pdf**
- **https://resource.cdn.icai.org/66545bos53754-p1-cp4.pdf**
- **https://resource.cdn.icai.org/66638bos53803-cp1.pdf**
- **http://ppup.ac.in/download/econtent/pdf/MBA%201st%20sem%20Lecture%20note%20on%20foren sic%20accounting%20by%20Anjali.pdf**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		✓	GLOBAL		
Changes Made in the Course	Percentage of Change		**100**	No Changes Made			New Course			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		K LEVEL
After studying this course, the students will be able to:		
CO1	Determine profit and financial position by preparing financial statementsof companies as per schedule III of Companies Act, 2013	K1 to K5
CO2	Apply the provisions of IRDA Regulations in the preparation of finalaccounts of Life Insurance and General Insurance Companies.	K1 to K5
CO3	Determine the overall profitability and financial position by preparing consolidated financial statements of holding companies in accordance with AS21.	K1 to K5
CO4	Analyse contemporary accounting methods	K1 to K5
CO5	Examine Financial Reporting based on appropriate Accounting Standards and provisions of Companies Act 2013 with respect to CoRprorate Social Responsibility	K1 to K5

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	2	3	3	3				
CO2	3	3	3	3	2	3				
CO3	3	3	2	3	3	3				
CO4	3	3	3	3	3	3				
CO5	3	3	3	3	3	3				

S- STRONG M – MEDIUM L - LOW

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3		
CO 2	2	3	3		
CO 3	3	3	3		
CO 4	3	3	3		
CO 5	3	3	3		
WEIGHTAGE	14	15	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.8	3.0	3.0		

LESSON PLAN:

UNIT		HRS	PEDAGOGY
I	Issue of Shares and Final Accounts ofCompanies	18	Chalk and talk, Power Point Presentation,Video Lectures

II	Insurance Company Accounts	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
III	Consolidated financial statements	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
IV	Contemporary Accounting Methods	**18**	**Chalk and talk, Power Point Presentation,Video Lectures**
V	Financial reporting	**18**	**Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO2	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K5, K5)
CI AII	**CO3**	**K1 – K5**	2	K1,K2	2(K2, K2)	2(K4, K4)
	CO4	**K1 – K5**	2	K1,K2	2(K3, K3)	2(K5, K5)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	Section A (Multiple Choice Questions)	Section B (Either / Or Choice)	Section C (Either / Or Choice)	Total Marks	% of (Marks without choice)	Consolidate of %
CIA I	K1	2			2	3.57	25
	K2	2	10		12	21.43	
	K3		10		10	17.86	18
	K4			16	16	28.57	29
	K5			16	16	28.57	29
	Marks	4	20	32	56	100.00	100
CIA II	K1	2			2	3.57	25
	K2	2	10		12	21.43	
	K3		10		10	17.86	18
	K4			16	16	28.57	29
	K5			16	16	28.57	29
	Marks	4	20	32	56	100	100

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 –Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5	10		15	10.71	11
K3		20	32	52	37.14	37
K4		20	16	36	25.71	26
K5			32	32	22.86	23
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	SETTING UP OF BUSINESS ENTITIES			
Course Code	24PCCCC23	L	P	C
Category	CORE	6	-	4

COURSE OBJECTIVES:

- To understand the startup landscape and its financing
- To analyse the formation and registration of Section 8 company
- To outline the concept of LLP and business collaboration
- To understand the procedure for obtaining registration and license
- To create awareness about the legal compliances governing business entities

UNIT - I Startups in India **18**

Types of business organisations –Factors governing selection of an organisation - Startups – Evolution – Definition of a Startup – Startup landscape in India – Startup India policy – Funding support and incentives – Indian states with Startup policies – Exemptions forstartups – Life cycle of a Startup – Important points for Startups – Financing options available for Startups – Equity financing – Debt financing – Venture capital financing – IPO – Crowd funding – Incubators - Mudra banks –Successful Startups in India.

UNIT - II Insurance Company Accounts **18**

Formation and registration of NGOs – Section 8 Company – Definition – Features – Exemptions – Requirements of Section 8 Company – Application for incorporation – Trust: Objectives of a trust – Personswho can create a trust – Differences between a public and private trust – Exemptions available to trusts – Formation of a trust - Trust deed –Society – Advantages – Disadvantages – Formation of a society – Taxexemption to NGOs.

UNIT - III Limited Liability Partnership and Joint Venture **18**

Limited Liability Partnership: Definition – Nature and characteristics – Advantages and disadvantages – Procedure for incorporation – LLP agreement – Annual compliances of LLP-Business collaboration: Definition – Types –Joint venture: Advantages and disadvantages – Types – Joint venture agreement - Successful jointventures in India– Special Purpose Vehicle – Meaning – Benefits – Formation.

UNIT - IV Registration and Licenses **18**

Registration and Licenses: Introduction – Business entity registration – Mandatory registration – PAN – Significance – Application and registration of PAN – Linking of PAN with Aadhar –TAN – Persons liable to apply for TAN – Relevance of TAN – Procedure to apply for TAN –GST: Procedure for registration – Registration under Shops and Establishment Act –MSME registration – Clearance from Pollution Control Board – FSSAI registration and license – Trade mark, Patent and Design registration.

UNIT - V Environmental Legislations in India	18
Geographical Indication of Goods (Registration and Protection) Act, 1999: Objectives, Salient Features - The Environmental Protection Act, 1986: Prevention, control and abatement of environmental pollution - The Water (Prevention And Control of Pollution) Act, 1974: The Central and State Boards for Prevention and Control of Water Pollution - Powers and Functions of Boards - Prevention and Control of Water Pollution - Penalties and Procedure- The Air (Prevention and Control of Pollution) Act, 1981: Central and State Boards fo The Prevention and Control of Air Pollution - Powers And Functions - Prevention and Control of Air Pollution - Penalties and Procedure.	
Total Lecture Hours	**90**

BOOKS FOR STUDY:

- Kailash Thakur, (2007) "Environment Protection Law and Policy in India", 2nd Edition, Deep & Deep Publication Pvt. Ltd., New Delhi.
- Avtar Singh, (2015), "Intellectual Property Law", Eastern Book Company, Bangalore
- Zad N.S and DivyaBajpai, (2022) "Setting up of Business Entities and Closure" (SUBEC), Taxmann, Chennai
- AmitVohra&RachitDhingra (2022) "Setting Up Of Business Entities & Closure", 6th Edition, Bharath Law House, New Delhi

BOOKS FOR REFERENCES:

- Setting up of Business Entities and Closure (2021), Module 1, Paper 3, The Institute of Company Secretaries of India, MP Printers, Noida
- The Air (Prevention and Control of Pollution) Act, 1981, Bare Act 2022 Edition, Universal/ Lexis Nexis, Noida
- The Water (Prevention and Control of Pollution) Act,1974, Bare Act, 2022 Edition, Universal /LexisNexis, Noida
- Cliff Ennico, (2005) "Small Business Survival Guide Starting Protecting and Securing your Business for Long-Term Success", Adams Media, USA
- Daniel Sitarz,(2011) "Sole Proprietorship: Small Business Start-up Kit", 3rdEdition, Nova Publishing, USA

WEB RESOURCES:

- https://www.icsi.edu/media/webmodules/FINAL_FULL_BOOK_of_EP_SBEC_2018.pdf
- https://www.mca.gov.in/MinistryV2/incorporation_company.html 3)
- https://legislative.gov.in/sites/default/files/The%20Limited%20Liability%20 Partnership%20 Act,%202008.pdf
- https://legislative.gov.in/sites/default/files/A1999-48.pdf
- https://www.indiacode.nic.in/bitstream/123456789/6196/1/the_environment_protection_act%2C1986.pdf

Nature of Course	EMPLOYABILITY		SKILL ORIENTED		ENTREPRENEURSHIP	✓		
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		
*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**								

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Determine profit and financial position by preparing financial statements of companies as per schedule III of Companies Act,2013	**K1 to K5**
CO2	Apply the provisions of IRDA Regulations in the preparation of final accounts of Life Insurance and General Insurance Companies.	**K1 to K5**
CO3	Determine the overall profitability and financial position by Preparing consolidated financial statements of holding companies in accordance with AS21.	**K1 to K5**
CO4	Analyse contemporary accounting methods	**K1 to K5**
CO5	Examine Financial Reporting based on appropriate Accounting Standards and provisions of Companies Act 2013 with respect to Corporate Social Responsibility	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	3	3	3				
CO2	3	2	2	3	2	3				
CO3	3	3	2	3	3	3				
CO4	3	3	3	3	3	3				
CO5	3	3	3	3	3	3				

S- STRONG **M – MEDIUM** **L - LOW**

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	1	3		
CO 2	2	3	3		
CO 3	3	3	3		
CO 4	3	3	3		
CO 5	3	3	3		
WEIGHTAGE	14	13	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTIO	2.8	2.6	3.0		

N TO POS					

LESSON PLAN:

UNIT		HRS	PEDAGOGY
I	Startups in India	18	Chalk and talk, Power Point Presentation,Video Lectures
II	Not-for-Profit Organisations	18	Chalk and talk, Power Point Presentation,Video Lectures
III	Limited Liability Partnership and JointVenture	18	Chalk and talk, Power Point Presentation,Video Lectures
IV	Registration and Licenses	18	Chalk and talk, Power Point Presentation,Video Lectures
V	Environmental Legislations in India	18	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE)
Formative Examination - Blue Print
Articulation Mapping – K Levels with Course Outcomes (COs)

Internal	Cos	K Level	Section A		Section B Either or Choice	Section C Either or Choice
			MCQs			
			No. of. Questions	K - Level		
CI AI	CO1	K1 – K5	2	K1, K2	2(K3, K3)	2(K5, K5)
	CO2	K1 – K5	2	K1, K2	2 (K4, K4)	2 (K4, K4)
CI AII	CO3	K1 – K5	2	K1, K2	2 (K2, K2)	2 (K5, K5)
	CO4	K1 – K5	2	K1, K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		No. of Questions to be asked	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**3.57**	**7**
	K2	**2**			**2**	**3.57**	
	K3		10		10	**17.86**	**18**
	K4		10	16	26	**46.43**	**46**
	K5			16	16	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100**	**100**
CIA II	**K1**	2			2	**3.57**	**25**
	K2	**2**	**10**		**12**	**21.43**	
	K3			16	16	**28.57**	**29**
	K4		10		10	**17.86**	**18**
	K5			16	16	**28.57**	**29**
	Marks	**4**	**20**	**32**	**56**	**100**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 –Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2, K2)	2 (K3, K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4, K4)	2 (K4, K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
5	CO5	K1 – K5	2	K1, K2	2 (K5, K5)	2 (K4, K4)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5	10		15	10.71	11
K3		20	16	36	25.71	26
K4		10	32	42	30.00	30
K5		10	32	42	30.00	30
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K5**	
		OR		
15. b)	**Unit - V**	**CO5**	**K5**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K4**	
		OR		
20. b)	**Unit - V**	**CO5**	**K4**	

Course Name	DATA MINING AND DATA INTERPRETATION			
Course Code	24PCCEC21	**L**	**P**	**C**
Category	ELECTIVE	5	-	3

COURSE OBJECTIVES:

- To understand the basic concepts, principles and need of data warehousing
- To gain knowledge on the data warehouse architecture, modelling and its implementation.
- To understand steps in implementing data mart and its various dimensions
- To learn the features, types and challenges of data mining
- To aid the students to understand the various data mining tools and techniques

UNIT - I Data Warehouse **15**

Definition - history of data warehouse - features of data warehouses - characteristics of data warehouse - goals of data warehousing- principles of data warehousing - need for data warehouse - benefits of data warehouse - need for separate data warehouse - difference between database and data warehouse - applications of datawarehouses - components of data warehouse- data staging component.

UNIT - II Data Warehouse Architecture **15**

Data warehouse architecture - properties of data warehouse architectures - types of data warehouse architectures- three-tier data warehouse architecture - ETL (extract, transform, and load) process - selecting an ELT tool- Difference between ETL and ELT types of data warehouses - data warehouse modelling - data modelling life cycle - types of data warehouse models- data warehouse design - data warehouse implementation- implementation guidelines - meta data - necessary of metadata in data warehouses - types of metadata- metadata repository - benefits of metadata repository.

UNIT - III Data Mart **15**

Data Mart- Reasons for creating a data mart- Types of Data Marts- Steps in Implementing a Data Mart- Difference between Data Warehouse and Data Mart. - Dimensional Modeling-Objectives of Dimensional Modeling- Advantages of Dimensional Modeling - Elements of Dimensional Modeling - Dimension Table- Multidimensional Data Model-Data Cube.

UNIT - IV Data Mining **15**

Definition - History of Data Mining- Features of Data Mining - Types of Data Mining - Data Mining Vs DataWarehousing- Advantages and Disadvantages of Data Mining - Data Mining Applications - Challenges of Implementation in Data mining - Steps involved in Data Mining - Classification of Data Mining Systems.

UNIT - V Data Mining Tools & Techniques **15**

Data Mining Implementation Process - Data Mining Architecture - Clustering in Data Mining - Different typesof Clustering - Text Data Mining - Bitcoin Data Mining - Data Mining Vs Big Data - Data Mining Models - Trends in Data Mining.

Total Lecture Hours	**75**

BOOKS FOR STUDY:

- Jiawei Han, MichelineKamber (2011), Data Mining, Concepts and Techniques, Morgan Kauffman Publishers, California.
- Pang Ning Tan, Michael Steinbach, Vipin Kumar (2005), Introduction to Data Mining, Addison Wesley, USA.
- K. P. Soman, ShyamDiwakar, V. Ajay (2006), Insight into Data Mining: Theory & Practice, Prentice Hall of India, New Delhi

BOOKS FOR REFERENCES:

- BPB Editorial Board (2004), "Data Mining", BPB publications, Noida.
- Ian H. Witten &Eibe Frank (2011), "Data Mining, Practical Machine Learning Tools and Techniques", Morgan Kaufmann series.
- Ramesh Sharda, Dursun Delen, Efraim Turban (2018), "Business Intelligence", Pearson Education Services Pvt Ltd, Noida.

WEB RESOURCES:

- **https://mrcet.com/downloads/digital_notes/ME/III%20 year/ERP%20 Complete%20Digital%20notes.pdf**
- **https://mrcet.com/pdf/Lab%20Manuals/IT/DATA%20WAREHOUSING%20AND%020DATA%20MINING%20(R18A0524).pdf00**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP					
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL			GLOBAL		✓		
Changes Made in the Course	Percentage of Change			No Changes Made			New Course		✓			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Explain the basic concepts, principles and need of data warehousing	**K1 to K5**
CO2	Appraise data warehouse architecture, modelling and its implementation.	**K1 to K5**
CO3	Choose various steps in implementing data mart and its dimensions	**K1 to K5**
CO4	Recall the features and types of data mining	**K1 to K5**
CO5	Apply various data mining tools and techniques	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	1	1	1	2	3	2	2	3	
CO2	2	3	2	2	2	3	2	2	3	
CO3	3	3	3	3	3	3	3	3	3	
CO4	3	3	3	3	3	3	3	3	3	
CO5	3	3	3	3	3	3	3	3	3	
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	1	1	1	1	2
CO 2	2	3	2	2	2
CO 3	3	3	3	3	3
CO 4	3	3	3	3	3
CO 5	3	3	3	3	3
WEIGHTAGE	12	13	12	12	13
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	80	87	80	80	87

LESSON PLAN:			
UNIT		HRS	PEDAGOGY
I	Data Warehouse	15	Chalk and talk, Power Point Presentation,Video Lectures
II	Data warehouse architecture	15	Chalk and talk, Power Point Presentation,Video Lectures
III	Data mart	15	Chalk and talk, Power Point Presentation,Video Lectures
IV	Data mining	15	Chalk and talk, Power Point Presentation,Video Lectures
V	Data mining tools and techniques	15	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	3.57	4
K2	5	10		15	10.71	11
K3		20	32	52	37.14	37
K4		20	16	36	25.71	26
K5			32	32	22.86	23
Marks	10	50	80	140	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	MANAGEMENT INFORMATION SYSTEM			
Course Code	24PCCEC22	**L**	**P**	**C**
Category	ELECTIVE - IV	5	-	3

COURSE OBJECTIVES:

- To understand the basic concept of Information system
- To identify the importance of MIS
- To understand the Functional Management Information System
- To learn the role of system analyst
- To apply the concept of Enterprise Resource Planning

UNIT - I Information System **18**

Introduction to information system - Management - Structure and Activities - Information needs and sources - Types of management decisions and information need - System classification - Elements of system, input, output, process and feedback.

UNIT - II Types of Management Information Systems **18**

Transaction Processing Information System - Information system for managers - Intelligence information system – Decision support system - Executive information systems.

UNIT - III Functional Management Information Systems **18**

Functional Management Information System: Production Information system - Marketing Information Systems - Accounting Information System - Financial Information System - Human Resource Information System.

UNIT - IV System design and Database **18**

System Analysis and Design: The work of a system analyst - SDLC- System design – Requirement analysis - Data flow diagram - Relationship diagram - Design -Implementation - Evaluation and maintenance of MIS - Database System: Overview of Database - Components - Advantages and disadvantages of database.

UNIT - V Enterprise Resource Planning **18**

Enterprise Resource Planning (ERP) System - Benefits of the ERP - How ERP is different from conventional packages - Need for ERP - ERP components - Selection of ERP Package - ERP implementation - Customer Relationship management - Organisation & Types - Decision Making - Data & information - Characteristics & Classification of information - Cost & value of information - Various channels of information and MIS

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Azam, M (2012), "Management Information System", McGrawHill Education, Noida.
- Laudon, K., Laudon, J. and Dass, R. (2010), "Management Information Systems – Managing the Digital Firm", 11th Edition, Pearson, Noida.
- Murdick, R.G., Ross, J.E. and Claggett, J.R. (2011), "Information Systems for Modern Management", 3rd Edition, PHI, New Delhi.Bharath Law House, New Delhi

BOOKS FOR REFERENCES:

- O'Brien, J.A., Morakas, G.M. and Behl, R. (2009), "Management Information Systems", 9th Edition, Tata McGraw-Hill Education, Noida.
- Saunders, C.S. and Pearson, K.E. (2009), "Managing and Using Information Systems", 3rd Edition, Wiley India Pvt. Ltd., New Delhi.
- Stair, R. and Reynolds, G. (2012), "Information Systems", 10th Edition, Cengage Learning, Noida.

WEB RESOURCES:

- **https://cleartax.in/g/terms/mis-meaning-mis-full-form-marketing-information-system/amp**
- **https://www.techtarget.com/searchitoperations/definition/MIS-management-information-systems**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP				
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL			GLOBAL		✓	
Changes Made in the Course	Percentage of Change			No Changes Made			New Course			✓	

***Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Identify the basic concept of Information system	**K1 to K5**
CO2	Discuss the importance of MIS	**K1 to K5**
CO3	Explain the functional MIS	**K1 to K5**
CO4	Describe the role of system analyst	**K1 to K5**
CO5	Apply the concept of Enterprise resource planning	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	1	2	2	1	2	1	2	2	
CO2	2	2	2	2	1	2	1	2	2	
CO3	3	3	3	3	1	2	1	2	3	
CO4	3	3	3	3	2	3	2	3	3	
CO5	3	3	3	3	2	3	2	3	3	
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	1	1	2	2	1
CO 2	2	2	2	2	1
CO 3	3	3	3	3	1
CO 4	3	3	3	3	2
CO 5	3	3	3	3	2
WEITAGE	12	12	13	13	7
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS					

LESSON PLAN:			
UNIT	COURSE NAME	HRS	PEDAGOGY
I	Introduction to information system - Management - Structure and Activities - Information needs and sources - Types of management decisions and information need - System classification - Elements of system, input, output, process and feedback.	18	THEORY
II	Transaction Processing Information System - Information system for managers - Intelligence information system – Decision support system - Executive information systems.	18	THEORY
III	Functional Management Information System: Production Information system - Marketing Information Systems - Accounting Information System - Financial Information System - Human Resource Information System.	18	THEORY
IV	System Analysis and Design: The work of a system analyst SDLC- System design – Requirement analysis - Data flow diagram - Relationship diagram - Design -Implementation - Evaluation and maintenance of MIS - Database System:	18	THEORY

	Overview of Database - Components - Advantages and disadvantages of database.		
V	Enterprise Resource Planning (ERP) System - Benefits of the ERP - How ERP is different from conventional packages - Need for ERP - ERP components - Selection of ERP Package - ERP implementation - Customer Relationship management - Organisation & Types - Decision Making - Data & information - Characteristics & Classification of information - Cost & value of information - Various channels of information and MIS	**18**	**THEORY**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K4, K4)
	CO2	**K1 – K5**	2	K2,K2	2(K3, K3)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K4, K4)
	CO4	**K1 – K5**	2	K2,K2	2(K3, K3)	2(K4, K4)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	Section A (Multiple Choice Questions)	Section B (Either / Or Choice)	Section C (Either / Or Choice)	Total Marks	% of (Marks without choice)	Consolidate of %
CIA I	K1	2			2	3.6	7.2
	K2	2			2	3.6	
	K3		20		20	35.7	35.7
	K4			32	32	57.1	57.1
	K5						
	Marks	4	20	32	56	100	100
CIA II	K1	2			2	3.6	7.2
	K2	2			2	3.6	
	K3		20		20	35.7	35.7
	K4			32	32	57.1	57.1
	K5						
	Marks	4	20	32	56	100	100

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 – Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	COs	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	**Section A (Multiple Choice Questions)**	**Section B (Either or Choice**	**Section C (Either/ or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	**5**			**5**	**3.57**	**14.28**
K2	**5**	**10**		**15**	**10.71**	
K3		**20**	**32**	**52**	**37.14**	**37.14**
K4		**20**	**16**	**36**	**25.71**	**25.17**
K5			**32**	**32**	**22.85**	**22.85**
Marks	**10**	**50**	**80**	**140**	**100**	**100**
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	**Unit**	**CO**	**K-level**		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	ADVANCED EXCEL - LAB			
Course Code	24PCCSP21	**L**	**P**	**C**
Category	SKILL	-	2	2

COURSE OBJECTIVES:

- To understand, summarize and present numerical data using the digital tool Microsoft program Excel
- To plot numerical data as a graph and determine an equation of a line. In addition, understand the Regression analysis ,correlation analysis.
- To set up the chart function of Excel to represent numeric data in multiple formats
- To build formulas, including the use of built-in functions, and relative and absolute references.
- To observe the value of using Excel to make decisions

LIST OF PROGRAMS

1. Create a table to perform statistical and mathematical functions.
2. Create a spreadsheet to sort data and print portions of a worksheet.
3. Create worksheet with following fields Empno, Ename, Basic Pay(BP), Travelling Allowance(TA), Dearnes Allowance(DA), House Rent Allowance(HRA), Income Tax(IT), Provident Fund(PF), Net Pay(NP)
4. Given: DA= 30% of BP, HRA=20% of BP, TA=17.5% of BP, IT=15% of BP, PF=12.5% of BP
5. Create an Excel Worksheet for the monthly sales of a product and also represent the data by using bar char
6. Diagrammatic presentation of data in Graphing and Charting using MS Excel (line chart, pie chart, Pivot charts)
7. Import and Export the data (.txt or .csv) files
8. Create a spreadsheet to use IF, nested IF, VLOOKUP and the HLOOKUP functions of Excel.
9. Demonstrate any FIVE Statistical functions using MS-Excel.(MEAN,MEDIAN,MODE,Standard Deviation, Quartiles Functions,etc.,)
11. Draw a Histogram Diagram in MS-Excel using student data set
12. Use the data below to create a histogram for annual returns on stocks, bills, and bonds. Which investment ha the highest average return?

Year	Stocks	T. Bills	T. Bonds
1928	43.81%	3.08%	0.84%
1929	-8.30%	3.16%	4.20%
1930	-25.12%	4.55%	4.54%
1931	-43.84%	2.31%	-2.56%
1932	-8.64%	1.07%	8.79%
1933	49.98%	0.96%	1.86%
1934	-1.19%	0.30%	7.96%
1997	31.86%	4.91%	9.94%
1998	28.34%	5.16%	14.92%
1999	20.89%	4.39%	-8.25%
2000	-9.03%	5.37%	16.66%
2001	-11.85%	5.73%	5.57%

11. Calculate correlation coefficient in Excel AND plot a correlation graph in Excel
12. Perform Regression analysis with given dataset.
13. Perform correlation analysis with given data.
14. Create pivot table and carry out the analysis with charts.
15. From the following data obtain the Pearson's coefficient of correlation

X	10	15	12	17	13	16	24	14	
Y	30	42	45	46	33	34	40	35	
						Total Lecture Hours			**90**

BOOKS FOR STUDY:

- Mastering Advanced Excel By Ritu Arora
- Financial Analysis With Microsoft® Excel® 2016, 8e

BOOKS FOR REFERENCES:

- Microsoft Excel Step by Step (Office 2021 and Microsoft 365) Joan Lambert Curtis Frye Pearson Education, Inc.
- Jelen, B. (2015). Excel 2016 In Depth. United Kingdom: Pearson Education

WEB RESOURCES:

- **https://www.tutorialspoint.com/advanced_excel/advanced_excel_tutorial.pdf**
- **https://corporatefinanceinstitute.com/assets/CFI-Excel-eBook.pdf**
- **https://sunsreynat.files.wordpress.com/2014/06/excel-2010-advanced.pdf**

Nature of Course	EMPLOYABILITY			SKILL ORIENTED	✓		ENTREPRENEURSHIP					
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL			GLOBAL	✓			
Changes Made in the Course	Percentage of Change			No Changes Made			New Course	✓				
***Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**												

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Understand and apply basic principles of laying out Excel models for decision making	**K1 to K5**
CO2	Apply advanced formulas to lay data in readiness for analysis.	**K1 to K5**
CO3	Identify the different advanced techniques for report visualizations	**K1 to K5**
CO4	Incorporate the formatting of charts in Excel.	**K1 to K5**
CO5	Assess the practice of referencing across sheets	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	3	3	1	3	1	2	3	2	1
CO2	3	3	3	2	2	3	1	2	2	3
CO3	3	3	2	3	3	1	1	2	3	3
CO4	3	3	2	3	3	2	3	3	3	3
CO5	3	3	3	2	3	1	1	3	3	3
S- STRONG					M – MEDIUM				L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	2	2	3
CO 2	3	2	3	3	3
CO 3	3	3	2	2	2
CO 4	2	3	3	2	3
CO 5	3	2	1	3	3
WEITAGE	14	13	11	12	14
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	93	86	73	80	93

LESSON PLAN:

	HRS	PEDAGOGY
10. Create a table to perform statistical and mathematical functions. 11. Create a spreadsheet to sort data and print portions of a worksheet. 12. Create worksheet with following fields Empno, Ename, Basic Pay(BP), Travelling Allowance(TA), Dearness Allowance(DA), House Rent Allowance(HRA), Income Tax(IT), Provident Fund(PF), Net Pay(NP) 13. Given: DA= 30% of BP, HRA=20% of BP, TA=17.5% of BP, IT=15% of BP, PF=12.5% of BP 14. Create an Excel Worksheet for the monthly sales of a product and also represent the data by using bar char 15. Diagrammatic presentation of data in Graphing and Charting using MS Excel (line chart, pie chart, Pivot charts) 16. Import and Export the data (.txt or .csv) files 17. Create a spreadsheet to use IF, nested IF, VLOOKUP and the HLOOKUP functions of Excel. 18. Demonstrate any FIVE Statistical functions using MS-Excel.(MEAN,MEDIAN,MODE,Standard Deviation,	30	LCD, HANDS ON TRAINING

Quartiles Functions,etc.,)

13. Draw a Histogram Diagram in MS-Excel using student data set
14. Use the data below to create a histogram for annual returns on stocks, bills, and bonds. Which investment has the highest average return?

Year	Stocks	T. Bills	T. Bonds
1928	43.81%	3.08%	0.84%
1929	-8.30%	3.16%	4.20%
1930	-25.12%	4.55%	4.54%
1931	-43.84%	2.31%	-2.56%
1932	-8.64%	1.07%	8.79%
1933	49.98%	0.96%	1.86%
1934	-1.19%	0.30%	7.96%
1997	31.86%	4.91%	9.94%
1998	28.34%	5.16%	14.92%
1999	20.89%	4.39%	-8.25%
2000	-9.03%	5.37%	16.66%
2001	-11.85%	5.73%	5.57%

15. Calculate correlation coefficient in Excel AND plot a correlation graph in Excel
16. Perform Regression analysis with given dataset.
17. Perform correlation analysis with given data.
18. Create pivot table and carry out the analysis with charts.
19. From the following data obtain the Pearson's coefficient of correlation

X	10	15	12	17	13	16	24	14
Y	30	42	45	46	33	34	40	35

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)							
Internal	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding& Implementation**	**Debugging & Output**
CIA	**CO1**	**K1**	2				
	CO2	**K3**		5			
	CO3	**K4**			5		
	CO4	**K5, K6**				10	
	CO5	**K2**					3
Question Pattern CIA		**No. of Questions to be asked**	2	2	2	2	2
		No. of Questions to be answered	2	2	2	2	2
		Marks for each question	1	2.5	2.5	5	1.5
		Total Marks for each section	2	3	5	5	10

Distribution of Marks with K Level CIA									
	K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding**	**Debugging & Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
CIA	**K1**	2					2	8	8
	K2		3				3	12	12
	K3			5			5	20	20
	K4				5		5	20	20
	K5					5	5	20	20
	K6					5	5	20	20
	Marks	2	3	5	5	10	25	100	100

K1- Remembering and recalling facts with specific answers
K2- Basic understanding of facts and stating main ideas with general answers
K3- Application oriented- Solving Problems
K4- Examining, analyzing, presentation and make inferences with evidences
K5-Evaluating, Justifying the problems with solutions
K6-Creating solutions for applications

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)							
S. No.	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding& Implementation**	**Debugging & Output**
1	**CO1**	**K1**	**6**				
2	**CO2**	**K3**		**15**			
3	**CO3**	**K4**			**15**		
4	**CO4**	**K5, K6**				**30**	
5	**CO5**	**K2**					**9**
No. of Questions to be Asked			**2**	**2**	**2**	**2**	**2**
No. of Questions to be answered			**2**	**2**	**2**	**2**	**2**
Marks for each question			**3**	**7.5**	**7.5**	**15**	**4.5**
Total Marks for each section			**6**	**15**	**15**	**30**	**9**

Distribution of Marks with K Level								
K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding**	**Debugging & Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	6					6	8	8
K2		9				9	12	12
K3			15			15	20	20
K4				15		15	20	20
K5					15	6	20	20
K6					15	9	20	20
Marks	6	15	15	30	9	75	100	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.								