Table UG11: Pool of Multidisciplinary Courses

Sr.No	Subject	Sem	Nomenclature of Course	Page No.
1.	History	Sem 1	Introduction to Indian History and culture	1
		Sem 2	Introduction to Indian History and culture	4
		Sem 3	Introduction to Indian History and culture in Haryana	*
4.	Geography	Sem 1	Basics of Geography	6
		Sem 2	Man and Environment	8
		Sem 3	Geography of Haryana	*
5.	English	Sem 1	Grammar for Beginners	*
		Sem 2	International English Language Proficiency Development	*
		Sem 3	Communication in Professional Life	*
8.	Hindi	Sem 1	Hindi Bhasha evm Lipi	*
		Sem 2	Social Media aur Hindi	*
		Sem 3	Hindi Bhasha aur Rozgar	*
11.	Sanskrit	Sem 1	Shrimadbhagavat Geeta	*
		Sem 2	Niti Sahitya	*
		Sem 3	Sanskrit ka samnya vayakarn tatha uchcharan	*
14.	Physical Education	Sem 1	Health, Wellness and Yoga	*
		Sem 2	Yoga and Stress Management	*
		Sem 3	Nutrition in Physical Education & Sports	*
17.	Economics	Sem 1	Economic Environment in India	11
		Sem 2	Problems of Indian Economy	13
		Sem 3	Fundamentals of Economics	*
19.	Urdu	Sem 1	Urdu Zabaan Ka Taaruf	97
		Sem 2	Urdu Ki Sheri Asnaf	99
		Sem 3	Urdu Ki Nasri Asnaf	101
22.	Dance of Bharat	Sem 1	Study of Folk Dances	*
		Sem 2	Prominent Indian Folk Forms	*
		Sem 3	Folk Costumes & Instruments	*
23.	Music Vocal	Sem 1	Introduction of Indian Music	*
		Sem 2	Theory of Indian Music	*
		Sem 3	Hindustani Music	*
26.	Music Instrumental	Sem 1	Terminology of North Indian Music	*
		Sem 2	Basic Term of Indian Music	*
		Sem 3	Forms of Vocal & Instrumental Music	*
29.	Psychology	Sem 1	Understanding Psychology	16
		Sem 2	Counseling Techniques	*
		Sem 3	Psychology of Abnormal Behaviour	*
32.	Home Science	Sem 1	Food safety, sanitation and hygiene	18
		Sem 2	Care and wellbeing across lifespan	19
		Sem 3	Basics of Art and design	*
33.	Biotechnology	Sem 1	Biology-I	20

		Sem 2	Biology-II	23
		Sem 3	Biology-III	*
36.	Botany	Sem 1	Fundamentals of Botany	27
		Sem 2	Economic Botany	29
		Sem 3	Ornamental Plants	*
16.	Zoology	Sem 1	Basics of Zoology-I	31
		Sem 2	Basics of Zoology-II	32
		Sem 3	Basics of Zoology-III	*
17.	Physics	Sem 1	Health Physics	33
		Sem 2	Physics in Everyday Life	35
		Sem 3	Basics of Semiconductor Devices	*
18.	Mathematics	Sem 1	Introductory Mathematics	37
		Sem 2	Essential Mathematics	40
		Sem 3	Statistical tools for data analysis	*
19.	Chemistry	Sem 1	Introductory Chemistry –I	43
		Sem 2	Introductory Chemistry –II	*
		Sem 3	Introductory Chemistry –III	*
20.	Commerce	Sem 1	Basics of Commerce	46
		Sem 2	Banking and financial awareness	48
		Sem 3	Basic Business laws for Entrepreneur	*
21.	Business Administration	Sem 1	Introduction to Marketing	*
		Sem 2	Digital Marketing	*
		Sem 3	Entrepreneurship and Start-Ups	*
22.	Computer Science	Sem 1	Fundamentals of Computer Science	50
		Sem 2	Fundamentals of Web Technologies	52
		Sem 3	Programming with Python	54
23.	B.Sc. Animation (UTD)	Sem 1	Introduction to Film Making	*
		Sem 2	Film Making	*
		Sem 3	Audio Editing for Animation	*
24.	Yoga	Sem 1	Yoga and Positive Health	*
		Sem 2	Yogic Management of Lifestyle related Disorder	*
		Sem 3	Yoga Therapy	*
25.	Sport Science	Sem 1	a) Fitness & Wellness b) Gym Management	*
		Sem 2	Yoga & Stress Management	*
		Sem 3	a) Olympic Education b) Adapted Physical Education c) Injury Prevention & Rehabilitation	*
26.	Media Studies	Sem 1	Media Literacy	*
		Sem 2	Media Ethics	*
		Sem 3	Film Appreciation	*
27	B. Design in	Sem 1	Introduction of Design Material	*

	Interior Design (UTD)	Sem 2	Primary Materials & Exploration	*
		Sem 3	Introduction of Ergonomics	*
28	Political Science	Sem 1	Indian Polity	56
		Sem 2	Indian Constitutions	58
		Sem 3	Politics of Globalizations	*
29	Music	Sem 1	Terminology of North India Music	*
		Sem 2	Basic Term of Indian Music	*
		Sem 3	Forms of Vocal & Instrumental Music	*
30	Sociology	Sem 1	Understanding Indian Society	60
		Sem 2	Rural Development and Change	62
		Sem 3	Contemporary Social Problems in India	*
31	Culinary Arts (Department of Management)	Sem 1	Introduction to Hospitality Management	63
		Sem 2	Inclusive HR Practices	65
		Sem 3	Internship (Culinary Arts)	*
32	Hospitality Management (Department of Management)	Sem 1	Fundamentals of Bakery & Pastisserie	67
		Sem 2	Human Resources & Diversity in Global Workspace	69
		Sem 3	Internship (Hospitality Management)	*
33	Hospitality and Hotel Administration (Dept. of Management	Sem 1	Housekeeping Operations	71
		Sem 2	Food Production & Culinary Arts	73
		Sem 3	Basics of Facility Management	*
34	Animation (Dept. of Media Studies)	Sem 1	Stop Motion Animation	103
		Sem 2	Photo Editing	105
		Sem 3	Introduction to 2D Animation	107
35	Tourism & Travel Management (Department of Management)	Sem 1	Introduction to Travel and Tourism Management	76
		Sem 2	Tour Package Management & Destinations	78
		Sem 3	Adventure Tourism	*
36.	Philosophy	Sem 1	Philosophy of Gandhi	80
		Sem 2	Yoga & Meditation	81
		Sem 3	Applied Philosophy	*
37.	B.Sc. Hospitality Management (Department of Management)	Sem 1	Housekeeping basics	*
		Sem 2	Food production and culinary arts	83
		Sem 3	Hospitality business etiquettes	*
38.	B.A International Culinary Arts (Department of Management)	Sem 1	Introduction to HACCP	85
		Sem 2	Slow Food & Gastronomic Practices	88
		Sem 3	Self-Development Report	*
39.	Public	Sem 1	Basics of Public Administration	91

	Administration	Sem 2	Indian Administration	93
		Sem 3	Financial Administration	95

* Detailed Syllabus will be provided in due course of time

Subject: Introduction to Indian History and Culture –I	**Maximum Marks: 75** **(TE + TI + PE + PI = 75**
Course Code: MDC1, (240/HIS/MD/101)	**Time Allowed: 3 Hrs.**
Credits : 3	**Multidisciplinary Course**

Note for paper setter:

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course Outcomes: - After completing the syllabus, students will be able to:

1. To understand the history of ancient India, civilization, society, and polity.
2. To understand the Dynasties that ruled India.
3. To understand the rulers, polity, economy, society during medieval period.
4. To understand art and architecture, dance and music, religion and philosophy during ancient period.

COURSE CONTENTS:

Unit1: Ancient India

Prehistoric Period: Paleolithic, Mesolithic, and Neolithic Cultures; Indus Valley Civilization (Harappan Civilization); Major Sites: Harappa, Mohenjo-Daro, Dholavira, Lothal; Urban Planning, Economy, Social Life, Religion. **Vedic Period: Early** Vedic Period (Rig Vedic Period); Society, Economy, Polity, Religion.Later Vedic Period: Changes in Society, Polity, Economy, Religion. **Mahajanapadas:** Sixteen Mahajanapadas; Magadha's Rise and Its Dynasties: Haryanka, Shishunaga, Nanda

Unit 2

Mauryan Empire: Chandragupta Maurya, Bindusara, Ashoka;Administration, Economy, Art, Architecture, Ashoka's Dhamma. **Post-Mauryan Period: Indo**-Greeks, Shakas, Kushanas;

Cultural Developments, Trade and Commere. Gupta **Empire: Important Rulers: Chandragupta I, Samudragupta, Chandragupta II; Golden Age: Art, Literature, Science, Technology. Post-Gupta Period: Harshavardhana and His Times; Regional Kingdoms: Chalukyas, Pallavas**

Unit 3

Medieval India: Early Medieval Period;Rajput Kingdoms; Important Dynasties: Palas, Pratiharas, Rashtrakutas. Delhi Sultanate: Slave Dynasty, Khilji Dynasty, Tughlaq Dynasty, Sayyid Dynasty, Lodi Dynasty;Administration, Economy, Society, Culture .Vijayanagara and Bahmani Kingdoms ;Administration, Economy, Society, Culture,Contributions in Art and Architecture.

Unit 4:

Indian Culture: Art and Architecture; Ancient Period: Indus Valley, Mauryan, Gupta. Medieval Period: Delhi Sultanate.

Literature: Ancient: Vedas, Epics (Mahabharata, Ramayana), Classical Sanskrit Literature. Medieval: Bhakti and Sufi Movements,

Music and Dance: Classical Music: Hindustani and Carnatic. Classical Dances: Bharatanatyam, Kathak, Odissi, Kathakali, Manipuri, Kuchipudi, Mohiniyattam

Religion and Philosophy: Vedic Religion, Buddhism, Jainism; Bhakti and Sufi Movements.

Science and Technology: Ancient Contributions: Astronomy, Mathematics, Medicine

Suggested Readings:

1. *NCERT History Publications*

2. "India's Ancient Past" by R.S. Sharma

3. "History of Medieval India" by Satish Chandra

4.The wonder that was India by A.L.Basham, Macmillan publishers ltd.London

5.Advanced History of India by R.C. Majumdar, Macmillan publishers ltd.London

6. History and culture of the Indian people by R.C. Majumdar, Macmillan publishers ltd.London

Subject: Introduction to Indian History and Culture -II	**Maximum Marks: 75** **(TE + TI + PE + PI = 50 + 25 + 0 + 0)**
Course Code: MDC-2 ,(240/HIS/MD/201)	**Time Allowed: 3 Hrs.**
Credits: 3	**Multidisciplinary Course**

Note for paper setter:

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course Outcomes: - After completing the syllabus, students will be able to:

1. To understand the society, economy, and polity during Mugal period.
2. To understand the advent of Europeans in India and British conquest of India
3. To understand the Indian freedom struggle.
4. To understand art and architecture, dance and music, religion and philosophy during medieval and modern period

COURSE CONTENTS:

Unit: 1

Mughal Empire: Important Rulers: Babur, Humayun, Akbar, Jahangir, Shah Jahan, Aurangzeb; Administration, Mansabdari System, Economy, Society, Culture. **Maratha Empire:**Rise of Marathas under Shivaji ,Administration, Military Organization, Economy

Modern India: Advent of Europeans-Portuguese, Dutch, French, English.Establishment of British East India Company

Unit 2

British Conquest of India: Major Battles: Battle of Plassey, Battle of Buxar; Consolidation of British Power. Socio-Religious Reform Movements: Brahmo Samaj, Arya Samaj, Theosophical

Society; Important Reformers: Raja Ram Mohan Roy, Swami Vivekananda. Revolt of 1857: Causes, Course, Consequences; Impact on British Policies

Unit 3

Indian National Movement: Early Nationalists: Moderate Phase; Extremists: Bal Gangadhar Tilak, Bipin Chandra Pal, Lala Lajpat Rai; Gandhi Era: Non-Cooperation Movement, Civil Disobedience Movement, Quit India Movement; Role of Subhash Chandra Bose and INA; Partition and Independence

Unit 4:

Indian Culture: Art and Architecture-Medieval Period: Mughal Architecture; Modern Period: Colonial Architecture, Post-Independence Developments

Literature: Medieval: Persian Literature; Modern: Indian Writing in English, Regional Literature

Music and Dance: Folk Music and Dances

Religion and Philosophy: Modern Religious Movements

Science and Technology; Medieval and Modern Developments

Suggested Readings:

1. NCERT History Publications

2"History of Medieval India" by Satish Chandra

3. History of Modern India" by Bipan Chandra

4.Indian Art & Culture by Nitin Sinshania, 5th Edition Mc Graw Hill

5.History of Indian Art by Sandhya Ketkar, Jyotsna prakashan

Gurugram University Gurugram, Haryana (India)

Multidisciplinary Course from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

(As per NEP 2020 w.e.f session 2024-25)

Course Title: Introduction to Geography -Semester-I

Paper Code: **MDC-1,** 240/GEO/MD101

Note for paper setter:

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75 Marks
Time: 3 Hours	End Semester Exam:	50 Marks
Note: (i) The MDC course are to be offered to students of different discipline/Subject from the department for pool of the Courses in the University (ii) The Question one of paper is compulsory. It will encompass two parts: Part-A, of question one of paper will contain Map work of five marks (Five data points of one mark each). Candidates will be required to mark on all five data point neatly and cleanly on the provided Map. Part –B, of question one of paper will contain Multiple Choice Questions (MCQ)/Objective type/Terms of Five marks (one mark each). (iii) The question paper will have four units. Two questions will contain from each unit of the syllabus. Candidates are required to attempt one question from each unit. These questions will be of Ten marks each.	Internal Assessment: Attendance Assignment/Seminar/ presentation/class presentation Session Examination	25 Marks 05 Marks 05 Marks 15 Marks

Learning/Course Objectives: To comprehend geography as a introductory notion to relate & recognize the accountable factors for human being growth in an assortment of surroundings. The introductory geography course will cover the essential concepts of geography in general to familiarize oneself with geography in a tangible environment. It will enrich geography knowledge to understand geographic processes and events to be acquainted with every grading agent on earth.

Learning/Course Outcomes:CO1: To gain knowledge of earth and its major spheres.CO-2: To understand movement of the earth and drifting and moving land masses.CO-3: To recognize the major features and minerals of the earth.CO-4: To become acquainted with major spheres, climate and issues of the earth.CO-5: To make geography a more interdisciplinary and trans-disciplinary field of study to understand the geographic concepts that are important for long-term development and growth

UNIT-I

What is Geography, The earth in Space, Graphic Representation of the Earth, Lines on the Globe, The Hemisphere?

UNIT-II

Finding Direction and Locating Places, Movement of the Erath, The Shape, Size and Structure of the Earth, Drifting and Moving Landmasses,

UNIT-III

Continents and Countries of the World, Sculpturing the Earth's Surface, Landforms of the Earth, Rocks, Minerals,

UNIT-IV

Lithosphere, Hydrosphere, Atmosphere and Biosphere. Soil and Soil Erosion, Water forms of the Earth, Weather and Climate, Vegetation of the Earth, Contemporary issues of the Earth,

Recommended Readings:

- Dayal, P. (1990) *A Text Book of Geomorphology*, Shukla Book Depot, Patna.
- Dayal, P. (2019) *Bhuakriti Vigyan, (in Hindi),* Rajesh Publications, New Delhi.
- Getis Arthur and Bjelland Mark and Getis Victoria., (2014), *Introduction to Geography*, McGraw Hill Education.
- Hallam, A. (1973): *A Revolution in Earth Science: From Continental Drift to Plate Tectonics*, Oxford University Press, London.
- Homes A. (1965): *Principles of Physical Geology*, 3rd Edition, ELBSS Edn.
- Husain Majid (2002), *Fundamentals of Physical Geography*, Second Edition, Rawat Publications, Jaipur and New Delhi.
- Kale, V. and Gupta, A. (2001): *Introduction to Geomorphology*, Orient Longman, Kolkata.
- Khullar, D.R. (2021): *Bhautik Bhugol, (in Hindi),* Kalyani Publishers, New Delhi.
- Leong, Goh Cheng., (2015), *Certificate Physical and Human Geography*, Oxford University Press, New Delhi
- Singh Savindra (2021), *Bhuakriti Vigyan, (in Hindi),* Pravalika Publications, Allahabad.
- Singh Savindra (1993), *Physical Geography*, Prayag Pustak Bhawan, Allahabad.
- Singh, Savinder., (2006), *Physical Geography*, Pravalika Publications, Allahabad
- Strahler Alan and Strahler Aurthur., 2005, Introducing Physical Geography, John Wiley & Sons, Inc.

Gurugram University Gurugram, Haryana (India)

Multidisciplinary Course from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

(As per NEP 2020 w.e.f session 2024-25)

Course Title: Man and Environment -Semester-2

Paper Code: **MDC-2,** 240/GEO/MD201

Note for Paper Setter:

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Credit: 03 (2+1+0) L+T+P Hrs/Week	Total Marks	75 Marks
Time: 3 Hours	End Semester Exam:	50 Marks
Note: (i) The MDC course are to be offered to students of different discipline/Subject from the department for pool of the Courses in the University (ii) The Question one of paper is compulsory. It will encompass two parts: Part-A, of question one of paper will contain Map work of five marks (Five data points of one mark each). Candidates will be required to mark on all five data point neatly and cleanly on the provided Map. Part –B, of question one of paper will contain Multiple Choice Questions (MCQ)/Objective type/Terms of Five marks (one mark each). (iii) The question paper will have four units. Two questions will contain from each unit of the syllabus. Candidates are required to attempt one question from each unit. These questions will be of Ten marks each.	Internal Assessment: Attendance Assignment/Seminar/ presentation/class presentation Session Examination	25 Marks 05 Marks 05 Marks 15 Marks

Learning/Course Objectives: To comprehend the fundamental idea of Man and Environment and related elements that contributes to human development in diverse environments. The fundamental ideas of the link between humans and their environment will be covered in the introductory Man and Environment course. To become acquainted with people and their surroundings in a physical setting. To learn more about ideas related to the environment and humans. To comprehend geographical occurrences and processes. To understand how humans behave in their surroundings.

Learning/Course Outcomes: CO1: To gain knowledge of environment and related threats. CO-2: To understand various facets of man and environment inter-relation.CO-3: To recognize major awareness mode for environment and sustainable development.CO-4: To become acquainted with environmental issues to make geography interdisciplinary and trans-disciplinary.CO-5: To understand the man and environment concepts that are important for long-term development and growth

UNIT-I

Meaning of Environment, Definitions of Environment, Classification and Components of Environment, The Environmental Crisis, Major Global Environmental Threats, Approaches to the study of man-environment relationship,

UNIT-II

Population, Environment and Quality of life, Psychological factors of man-environment relationship, . The general pattern of motivational components, Environmental Education, Concept of Environmental Education ,

UNIT-III

Environment Education, Environment and Sustainable Development, Goals of Environmental Education, Historical perspectives of Environmental Education, Caring for the earth: A Strategy for Sustainable Living, United Nation Conference on Environment and Development,

UNIT-IV

Principles of Environmental Education, Psychological basis of Environmental Education, Philosophical basis of Environmental Education, Goals for Curriculum Development in Environmental Education-The Ecological Foundations Level, The Conceptual Awareness Level

Recommended Readings:

- Agarwal, K.C. (2001*) Environmental Biology*, Nidi Pub. Ltd. Bikaner.
- Bharucha, Frach, *The Biodiversity of India*, MApin Publishing Pvt. Ltd. Ahmedabad-380013, India, E-mail:mapin@icenet.net (R).
- Brunner R.C. (1989), *Hazardous Waste* Incineration,Mc. Graw Hill Inc. 480p.
- Cunningham,W.P.Cooper,T.H.Gorhani,E&Hepworth,M.T.(2001),*EnvironmentalEncyclopedia*,Jai coPub.House,Mumbai 1196 p.
- *Down to Earth*, Centre for Science and Environment,New Delhi
- Gleick, H.P., (1993). *Water in crisis, Pacific Institute for Studies in Dev*. Environment & Security Stockholm Env. Institute, Oxford Univ. Press, 473p.
- Hawkins R.E. *Encyclopedia of Indian Natural History*, Bombay Natural History Society, Bombay(R).
- Heywood, V.H. & Watson, R.T. (1995). *Global Biodiversity Assessment*, Cambridge Uni. Press 1140p.
- Jadhav, H & Bhosale, V.M. (1995). *Environmental Protection and Laws*. Himalaya Pub. House, Delhi284p.
- Mackinney, M.L. & Schoch, RM (1996), *Environmental Science systems & solutions*, Web enhanced edition. 639p.
- Odum, E.P. (1971), *Fundamentals of Ecology*.W.B. Saunders Co.USA, 574p.

- Rao M.N.& Datta,A.K. (1987) *Waste Water Treatmen*t. Oxford &TBH Publ. Co. Pvt. Ltd. 345p.
- Sharma, B.K. (2001), *Environmental Chemistry*, Goal Publ. House, Meerut.
- *Survey of the Environment*, The Hindu (M).
- Trivedi R.K., *Handbook of Environmental Laws, Rules, Guidelines*, Compliances and Standards, Vol. I and II Enviro Media (R).
- TrideviR.K.andP.K.Goal, *Introduction to air pollution*, Techno Science Publications(TR).
- Wagner K.D., (1998), *Environmental Management*, W.B. Saunders co. Philadelphia,USA499p.

A text book environmental education G.V.S. Publishers by Dr. J.P.Yadav.

MDC-1

Session 2024-2025			
Part-A Introduction			
Subject	Economics		
Semester	I		
Name of the Course	Economic Environment in India		
Course Code			
Course Type: (CC/MCC/MDC/ CCM/ DSEC/VOC/DSE/PC/AEC/ VAC	MDC COURSE ID : 240/ECO/MD101		
Course Learning Outcomes (CLO)	At the end of the course the student will be able to: 1. Comprehend the meaning and components of Indian Economic Environment 2. Understand the basic features of Indian Economy 3. Understand the dynamics of population in India 4. Understand the features and significance of Indian Planningand NITI Aayog 5. Comprehend the development issues in the industrial sector in India during planning period 6.Understand the features and limitations of Public – Private sector New Economic Policy		
Credits	Theory	Tutorial	Total
	02	1	03
Contact Hours	02	1	03
Max. Marks: 75 **Internal Assessment Marks: 25** **End Term Exam Marks: 50**	**Time: Hrs**		

Part-B Contents of the Course

Instructions for Paper Setters

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Unit	Topics	Contact Hours
I	Indian Economic Environment – Concept, Components and Importance, Basic characteristics and features of Indian economy.Features of India's population	
II	Economic Planning in India: Features, Objectives and Assessment of Indian Planning. NITI Aayog Industrial development in India: Industrial development during the period of planning ,Role, problems and Government measures of Industrial development	

III	Public and Private sector in India: Objectives, significance and limitations. Role of Government in growth of private sector. Features of New Economic Policy 1991: Liberalisation, Privatisation and Globalisation.	
Suggested Evaluation Methods		
Internal Assessment: 25		**End Term Examination:50** Theory

Part-C Learning Resources
Recommended Books/E-Resources/LMS: Brahmananda, P.R. and Panchmukhi : The Development Process of Indian Economy, V.R. (eds.) 1987 Himalaya Publishing House, Bombay. Lucas ,E.B., and Papanek, G.F. : The Indian Economy- Recent Developments and (eds.) 1988 Future Prospects, Oxford University Press, New Delhi. Jalan, Bimal 1992 : The Indian Economy – Problem and Prospects, Viking, New Delhi.

MDC-2

Session 2024-2025			
Part-A Introduction			
Subject	Economics		
Semester	II		
Name of the Course	Problems of Indian Economy		
Course Code			
Course Type: (CC/MCC/MDC/ CCM/ DSEC/VOC/DSE/PC/AEC/ VAC	MDC		
Course Learning Outcomes (CLO)	1.To understand and analyze the nature of growth & development of India Economy. 2.Understanding evolution and problems of Agriculture sector in India. 3.Understanding significanceand problems of Industrial sector in India. 4. Utilize the detailed skills and techniques to address the problems of Indian economy like poverty, inequality, unemployment.		
Credits	Theory	Tutorial	Total
	02	1	03
Contact Hours	02	1	03
Max. Marks: 75 **Internal Assessment Marks: 25** **End Term Exam Marks: 50**	**Time: 3 Hrs**		

Part-B Contents of the Course

Instructions for Paper Setters

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Unit	Topics	Contact Hours
I	Agriculture in India – Importance, Causes of backwardness and low productivity in agriculture and its remedies, Emerging trends in Indian Agriculture. Land Reforms.	

II	Problem of over Population and Population control. Poverty and unemployment in India. Programmes for eradication of poverty and unemployment .	
III	Industry in India: Small and Large scale industry- Importance, problems and suggestions for improvement. Inter- state disparities in the pattern of development.	
Suggested Evaluation Methods		
Internal Assessment: 25		**End Term Examination:50** Theory

Part-C Learning Resources
• *Kapila, Uma, "Indian Economy: Performance and Policies"Academic Foundation, NewDelhi (Latest Edition).* • *Mishra, S.K. and Puri,V.K, "Indian Economy"Himalya Publication House (Latest Edition).* • *Rudar Dutt and Sundram;Indian Economy S. Chand and Company (Latest Edition)*

- *Datt, Gaurav and Mahajan, Ashwani "Dutt &Sundharam Indian Economy" S. Chand & Company (Latest Ed.).*
- *Sen, R.K. and B.Chatterjee, "IndianEconomy:Agenda for 21st Century (Essays in honour of Prof. P.R. Brahmananda)", Deep & Deep Publications, NewDelhi.*
- *Singh Ramesh (2020-21), "Indian Economy", McGraw Hill Education (India) Private Limited (Latest Ed.). Purkayastha Gautam, "Dynamics of Indian Economy", Kalyani*

Multidisciplinary courses

Semester-1

MDC-I Understanding Psychology (Credits 03)

COURSE ID: 240/PSY/MD101

Maximum Marks: 75
Theory Examination: 35
Theory Internal Assessment: 15
Practical Examination: 20
Practical Internal Assessment: 05
Time: 2Hrs.

Course Outcomes:

- Students will understand the key concepts and principles of Psychology.
- Students will develop an awareness of the various subfields within psychology.
- Students will understand and apply basic research methods in psychology
- Students will be able to apply psychological theories and principles to real-life situations.

Instructions:

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Unit I: Introduction

Meaning, Nature and Scope of Psychology. Methods of Psychology: Interview, Case Study and Observation.

Unit II: Motivation and Emotion

Motivation: Nature, Needs, Drives and Incentives, Intrinsic-Extrinsic Framework.
Emotion: Components of Emotions, Bodily Expressions, Internal and External changes

Unit III: Learning and Memory

Concept and nature of learning. Principles and applications of Classical Conditioning and operant conditioning.
Memory: nature and Types of memory: Sensory memory, Short term memory and Long term memory.

Suggested Readings

1. Morgan, C.T. and King, R.: Introduction to Psychology. Tata McGraw Hill Publishing Company Limited, New Delhi (1993).
2. Guilford, J.P.: General Psychology D. Van Nostrand: Princeton (1956).
3. Mohsin, S.M.: Elementary Psychology Delhi: Motilal Banarasi Das, (1997).
4. Hilgard & Atkinson: Introduction to Psychology (6th Ed.) New Delhi: Oxford & IBH Publishing Co., (1976). 8. Khatoon, N.: General Psychology New Delhi: Pearson Education (2012).
5. Feldman, R.S. (2004). Understanding Psychology (6th Edition), New Delhi, Tata-McGraw Hill.

PRACTICAL

1. Observation
2. Study of Emotions
3. Motivation Test
4. Maze Learning
5. Experiment on STM/LTM
6. Study of Primacy and Recency Effect

Note: Students will perform at least three practical. The examiner will allot one practical at the time of end term examination for evaluation.

MULTIDISCIPLINARY COURSE – HOME SCIENCE

Part A - Introduction	
Semester	**I**
Name of the Course (MDC-1)	**Food Safety, Sanitation and Hygiene.** COURSE ID : 240/HS/MD101

Course Learning Outcomes (CLO):

1. To learn about the basic concepts of food safety.
2. To identify the causes and prevention procedures for food borne illness, intoxication and infection.
3. To be able to list out common food adulterants in foods and understand the need for consumer education
4. Demonstrate good personal hygiene and safe food handling procedures.

Credits	**Theory**	**Tutorial**	**Practical**	**Total**
	2	1	0	3
Contact Hours	2	1	0	3

Max. Marks:75 **Internal Assessment Marks: 25** (Attendance-5, Assignment-5, Session Exam-15) **End Term Exam Marks: 50** (50 Theory)	**Time: 2 hrs (Theory), 1hrs (Tutorial)**

Part B- Contents of the Course

Instructions for Paper-Setter

Seven questions will be set in all. Question No.1 comprising objective/short answer type questions from the entire syllabus, will be compulsory. The remaining six questions will be set taking three questions from each section. The candidates will be required to attempt Q.No.1 & four others selecting two questions from each section. All questions carry equal marks.

UNIT I	**CONTACT HOURS**
1. Concept and meaning of Food Safety, food adulteration, food hazards. 2. Food poisoning and food infection 3. Naturally occurring and environmental contaminants and food pathogens. Factors affecting food safety through supply chain. 4. Sources of contaminants: Physical, chemical and microbial hazards in different foods.	**12**
UNIT II	**10**
1. Basic principles of Food hygiene and Sanitation - Personal and environmental Hygiene. 2. Hygiene aspects of Food handlers- Hygiene aspects in preparation and storage of food dish washing and garbage disposal 3. Safety of leftover foods. 4. Methods of sanitation and hygiene	
UNIT III	**11**
1. Food Adulteration and Adulterants: Meaning, Methods to identify the presence of adulterants **2.** Types of adulteration in various foods-Intentional, incidental and metallic contaminants - Consequences of adulteration	
UNIT IV	**12**
1. Objectives of developing Food Safety and Standards **2.** Current food safety regulations, 2001 **3.** FSSAI, FSMS, GMP, GHP **4.** Statutory and regulatory requirements **5.** Certification - HACCP, ISO-22000,FSSC-22000	

Part C-Learning Resources

1. Manay, S. and shadak Sharama samy, Food;Factsandprinciples, NewageInternational.(p) publishers,Newdelhi.
2. Mahtab,S,Bamji.S,Kamala Krishnaswamy, Brahmam G.N.V,Text book of Human Nutrition,Third edition, Oxford and IBH publishing co. private limited, NewDelhi.
3. Srilakshmi, B.,2002, Food Science,2nd edition, New Age International private limited., New Delhi.
4. Swaminadhan ,M.,Advanced TextbookonFoodandNutrition,Vol.1,Second Edition, Bangalore printing and publishing Co.Ltd,Banglore,2012
5. Dietary Guidelines for Indians, ICMR, National Institute of Nutrition
6. Norman Marriott (1999), Principles of Food Sanitation, 4th ed., Sanitation in Food Processing, John A. Troller, 1993, Academic press.

MULTIDISCIPLINARY COURSE – B.Sc. HOME SCIENCE

Part A - Introduction			
Semester	**II**		
Name of the Course (MDC-2)	**Care and Well-being Across Lifespan**		
Course Learning Outcomes (CLO): After completing this course, the learner will be able to: 1. Understand about care and well-being at different stages of life. 2. Demonstrate an understanding of one's health issues / conditions, including prevention and appropriate intervention and treatment when needed. 3. Describe health and wellness programs and services offered, how to access, them and their value to their well-being.			
Credits	**Theory**	**Tutorial**	**Practical**
	2	1	0
Contact Hours	2	1	0
Max. Marks:75 **Internal Assessment Marks: 25** (Attendance-5, Assignment-5, Session Exam-15) **End Term Exam Marks: 50** (50 Theory)	**Time: 2 hrs (Theory), 1hrs (Tutorial)**		

Part B- Contents of the Course	
Instructions for Paper-Setter Nine questions will be set in all. Question No.1 comprising of objective/short answer type questions from the entire syllabus, will be compulsory. The remaining eight questions will be set taking two questions from each unit. The candidates will be required to attempt Q.No.1 & four others selecting one question from each unit. All questions carry equal marks.	
UNIT I Care and Life Span: 1. Definition, Concepts and relevance of care. 2. Vulnerable periods in life that require care. **3.** Principles and components of care.	**CONTACT HOURS** **10**
UNIT II Well–Being and Life Span: 1. Components of well–being – physical, psychological, spiritual. 2. Life crisis and well–being. **3.** Factors and experiences that promote well-being.	**11**
UNIT III Care and well-being at different stages of life: 1. Childhood years. 2. Adolescence. 3. Adulthood and old age. **4.** The well-being of caregivers.	**12**
UNIT IV Policies, services and programs: 1. School health programs: mid-day meal Scheme 2. Nutrition and health for all: ICDS Scheme 3. Programme for aged people- National Old Age Pension scheme (NOAP) **4.** Role of counselling for one's wellness and yoga's role in reducing stress.	**12**

Part C-Learning Resources

1. Sunitha, D and Yakalah, P (2016) "Psychology of Childhood and Adolescence", ISBN-10, 9385877011. ·
2. BARON, R. A. and Misra, G (2000) "Psychology Indian Subcontinent Edition", Pearson Education India, 5 ·
3. Woolfolk, A. and Kapur, P. (2019) "Educational Psychology", Pearson Education India, 14.
4. IGNOU Positive Psychology-2 MCFT -06 Applied Social Psychology, New Delhi IGNOU
5. Santroch, J. W.,Life Span Development New Delhi: Tata MC Graw – Hill
6. Sriram, R., Ensuring infant and maternal health in India.
7. Patnaik J.; Childhood in Asia: A Critical look at issues, policies and programs. a. Cann USA: Information age.

MULTIDISCIPLINARY COURSE - BIOTECHNOLOGY

Part A – Introduction			
Semester	**I**		
Name of the Course ID: 240/BIOT/MDC101	**Biology-1**		
Course Learning Outcomes (CLO): After completing this course, the learner will be able to: 1. Understand the structures and purposes of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles. 2 Know about features of biodiversity in the living world and their biological classification describing the principal theories of taxonomy 3. Describe the unique characteristics of Kingdom Plantae and classify Kingdom Plantae into different groups. 4. Demonstrate knowledge of the principles of animal nomenclature and terminology by explaining the process, procedures, and purpose of the scientific classification of animals. Learn practical skills on basic Biology practical like parts of microscope, slide preparation, identify plants and animals using models and specimens.			
	Theory	**Practical**	**Total**
	2	1	3
Contact Hours	2	2	4

Max. Marks:75 **Internal Assessment Marks: 20** (15 Theory+ 5 Practical) **End Term Exam Marks: 55** (35 Theory+ 20 Practical)	**Time: 2 H (Theory), 2h (Practical)**
Part B- Contents of the Course	
Instructions for Paper-Setter Seven questions will be set in all. Question No.1 comprising objective/short answer type questions from the entire syllabus, will be compulsory. The remaining six questions will be set taking three questions from each section. The candidates will be required to attempt Q.No.1 & four others selecting two questions from each section. All questions carry equal marks.	
UNIT I **Cell**: Structure and Function: Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus, Cell cycle, mitosis, meiosis and their significance.	**CONTACT HOURS** **10**
UNIT II **The Living World Biodiversity**: Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature. **Biological Classification**: Five kingdom classification, salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids.	**10**
UNIT II **Plant Kingdom:** Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnosperms, Angiosperms, Plant Life Cycle and Alternation of Generations. **Animal Kingdom**: Salient features and classification of animals, levels of organization (cellular/tissue/organ), symmetry (radial, bilateral), phylum, porifera, Coelenterata, Ctenophora, Platyhelminthes, Aschelminthes, Annelida, Arhropoda, Mollusca, Echinodermata, hemichordata, chordata.	**10**
List of Practical:	

A: List of Experiments 30

1. Study and describe locally available common flowering plants, from family Solanaceae, Poaceae, Asteraceae or Brassicaceae.
2. Dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams),
3. Study of types of roots (tap and adventitious).
4. Study of types of stem (herbaceous and woody);
5. Study of leaf (arrangement, shape, venation, simple and compound).
6. Isolation of Chlamydomonas, paramecium and spirogyra from nearby pond and study its structure and movement under microscope.
7. Study of structure of algae under microscope
8. Study of different part of fungi

B: Study and Observe the following (spotting):

1. Parts of a compound microscope.
2. Specimens/slides/models and identification with reasons - Bacteria, *Oscillatoria, Spirogyra, Rhizopus*, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
3. Virtual specimens/slides/models and identifying features of - *Amoeba, Hydra,* liver fluke, *Ascaris*, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.

Part C-Learning Resources

Suggested readings:

1. Biology Text Book for class XI published by NCERT.https://ncert.nic.in/textbook.php?kebo1=0-19
2. Pradeep's A Text Book of Biology for Class 11 (Vol. 1 & 2) - Examination 2022/23 Paperback – by P.S. Dhami , G. Chopra, H.N. Srivastava.
3. S. Chand's Biology for XI by P.S. Verma and B.P. Pandey.
4. I.S.C. Practical Biology (Including Viva-Voce & Project Work) Class- XIby V.P. Aggarwal and S.C. Maheshwari
5. Fundamentals of Biology: CBSE Class 11 published by Wiley

MULTIDISCIPLINARY COURSE- BIOTECHNOLOGY

MDC-2			
Part A - Introduction			
Subject	**Biotechnology**		
Semester	**II**		
Name of the Course ID: 240/BIOT/MDC201	**Biology - II**		
Course Type:	**MDC-2**		
Course Learning Outcomes(CLO): (CLOs 1-4 of theory and 5th of practical) After completing this course, the learner will be able to: 1. Students will understand the physiological processes taking place at the level of the cell, organ and the whole plant, will get knowledge of Interaction of light with green plant parts, preparation of food etc. 2. Students will describe how plants obtain the reactants needed for respiration, including the role of the roots and the stomata, functions of various plant hormones in plant development. 3. Students will learn the structure of major human organs surrounding respiratory, circulatory and excretory systems and explain their role in the maintenance of healthy individuals 4. Students will learn the structure of major human organs surrounding musculoskeletal and nervous system and explain their role in the maintenance of healthy individuals. 5*. Students will be able to learn practical skills on basic Biology practical like root slide preparation, chromatography, biochemical tests, mitosis and various models.			
Credits	**Theory**	**Practical**	**Total**
	2	**1**	**3**
Contact Hours	**2**	**2**	**4**
Part B- Contents of the Course			
Instructions for Paper- Setter Nine questions will be set in all. Question No.1 comprising of objective/short answer type questions from the entire syllabus, will be compulsory. The remaining eight questions will be set taking two questions from each unit. The candidates will be required to attempt Q.No.1 & four others selecting one question from each unit. All questions carry equal marks.			

UNIT I **Plant Physiology: Plant water relations**; osmosis, plasmolysis, imbibition, mineral nutrition; plant nutrients, micro and macro nutrients, role of nutrients. **Photosynthesis in Higher Plants**: Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis ; photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.	8
UNIT II **Respiration in Plants :** Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient. **Plant - Growth and Development** :Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA;	8
UNIT III **Human Physiology: Breathing and Exchange of Gases**: Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders. **Body Fluids and Circulation**: Composition of	10

blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure. **Excretory Products and their Elimination:** Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.	
UNIT IV **Locomotion and Movement** Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout**. Neural Control and Coordination:** Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse. **Chemical Coordination and Integration** : Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease. Note: Diseases related to all the human physiological systems to be taught in brief.	30
PRACTICALS A. List of Experiments: 1. Preparation and study of T.S. of dicot and monocot roots and stems (primary). 2. Study of osmosis by potato osmometer. 3. Study of plasmolysis in epidermal peels (e.g. Rhoeo/lily leaves or flashy scale leaves of onion bulb). 4. Study of distribution of stomata on the upper and lower surfaces of leaves.	

5. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
6. Separation of plant pigments through paper chromatography.
B. Study and Observe the following (spotting):
1. Mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides.
2. Human skeleton and different types of joints with the help of virtual images/models only.
3. Differentiate between monocot and dicot plants on the basis of venation patterns.
4. Heart Model
6. Calendar of circulatory, muscular and excretory system.
7. Process of plasmolysis in onion cells
8. Study of transpiration in leaves

Recommended Books/e-resources/LMS:

1. Biology Text Book for class XI published by NCERT. https://ncert.nic.in/textbook.php?kebo1=0-19
2. Pradeep's A Text Book of Biology for Class 11 (Vol. 1 & 2) Paperback – by P.S. Dhami ,
G. Chopra, H.N. Srivastava.
3. S. Chand's Biology for XI by P.S. Verma and B.P. Pandey.
4. I.S.C. Practical Biology (Including Viva-Voce & Project Work) Class- XI by V.P. Aggarwal and S.C. Maheshwari
5. Fundamentals of Biology: CBSE Class 11 published by Wiley

Multidisciplinary Course

Session:2024-25			
Part A–Introduction			
Subject	**BOTANY**		
Semester	**1st**		
Name of the Course	**Fundamentals of Botany**		
Course Code	240/BOTL/MD101		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	**MDC-1**		
Level of the course (As per Annexure-I)	100-109		
Pre-requisite for the course(if any)			
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1: Students will gain a foundational understanding of the biology of microorganisms, algae, fungi and lichens. 2: Students will develop a conceptual understanding of bryophytes And pteridophytes. 3: Students will acquire knowledge about the fundamental characteristics of gymnosperms and the challenges related to their propagation. 4: Students will acquire a basic understanding of angiosperm morphology. 5: Students will be able to learn the practical aspects of microorganisms, algae, fungi and students will be able to identify the major groups of plants and compare the characteristics of higher plants(angiosperms and gymnosperms)and lower plants (bryophytes and pteridophytes).		
	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
THEORY			
Max. Marks: 50 **Internal Assessment Marks: 15 End Term Exam Marks: 35**		**Time: 3Hours**	
PRACTICAL			
Max. Marks: 25 **Internal Assessment Marks: 05 End Term Exam Marks: 20**		**Time:4 Hours**	
Part B-Contents of the Course			

Instructions for Paper-Setter

1. Nine questions will be set in all. All questions will carry equal marks.
2. Question No.1 will be short answer type covering the entire syllabus and will be compulsory. The remaining eight questions will be set unit wise selecting two questions from each unit. The candidate will be required to attempt question No. 1 and four more questions selecting one question from each unit.

Unit	Topics	Contact Hours
I	General characteristics, morphology and economic importance of viruses, bacteria algae, fungi and lichens.	7
II	General characteristics, morphology and economic importance of Bryophytes and Pteridophytes.	7
III	General characteristics, morphology and economic importance Gymnosperms.	8
IV	General characteristics, morphology and economic importance of Angiosperms.	8
V*	• Cynobacteria & Algae: Study of slides of *Nostoc* and *Volvox* Through permanent slides. • *Penicillium*: Asexual stage and sexual structures through permanent slides. • *Agaricus*: Specimens of button stage and full-grown mushroom. • *Marchantia* & *Funaria*-morphology of thallus through permanent slides. • *Selaginella* & *Equisetum*- morphology specimen study. • *Cycas* & *Pinus*-morphology specimen study. • Study of vegetative and floral characters of the one or two members of some important families • Excursion Report: Report on excursion tours with photographs, collection, preservation and preparation of herbarium sheets and specimens related to Archegoniates and Angiosperms. Mounting of a collected, properly dried and pressed specimen of minimum 20 wild plants with herbarium label.	30

Part C-Learning Resources

Recommended Books/e-resources/LMS:

- Wiley, J.M., Sherwood, L.M. and Woolverton, C.J. (2019) Prescott's Microbiology. 11th Edition. McGraw Hill International.
- Lee, R.E.(2018) Phycology. 5thEdition.CambridgeUniversityPress.
- Ahluwalia, A.S.(2020).Phycology: Principles, Processes and Applications. Daya Publishing House, New Delhi.
- Dube, H.C. (2012). An Introduction to Fungi,Vikas Publishing House Pvt. Ltd., Delhi. 4th edition.
- Mehrotra, R.S. and Aggarwal, Ashok (2013) Fundamentals of Plant Pathology, TataMcGraw-Hill Publishing company Ltd, New Delhi
- Pelczar, M.J. (2001) Microbiology, 5thedition,TataMcGraw-HillCo, New Delhi.
- Sethi, I.K.and Walia,S.K.(2011). Textbook of Fungi & Their Allies, Mac Millan Publishers Pvt. Ltd., Delhi.
- Raven, P.H., Johnson, G.B., Losos, J.B., Singer, S.R. (2005).Biology. Tata McGraw Hill, Delhi, India.
- Sharma,O.P.(2017).Text Book of Pteridophyta, McMillan IndiaLtd.
- Thakur, A.K. and Bassi, S.K. (2008). Diversity of Microbes and Cryptogams. S. Chand & Co., Delhi.
- Vanderpoorten, A. & Goffinet, B.(2009)Introduction to Bryophytes. Cambridge University Press.
- Vashishta, P.C., Sinha, A.K., Kumar, A.,(2010). Pteridophyta, S. Chand. Delhi, India
- Vashishta,P.C., Sinha A.K. Kumar A. (2010) Gymnosperms S.Chand Delhi India
- Pandey, B.P.(2001).A Textbook of Botany-Angiosperms, S.Chand. Delhi, India

Multidisciplinary Course

Session:2024-25			
Part A- Introduction			
Subject	**BOTANY**		
Semester	**2nd**		
Name of the Course	**Economic Botany**		
Course Code	240/BOTL/MD201		
Course Type: (CC/MCC/MDC/CC-M/DSEC/VOC/DSE/PC/AEC/VAC)	**MDC-2**		
Level of the course (As per Annexure-I)			
Pre-requisite for the course(if any)			
Course Learning Outcomes (CLO):	After completing this course, the learner will be able to: 1.Students will gain a foundational understanding of the origins of significant cultivated plants. 2: Students will develop a conceptual understanding of important plants that yield vegetables, fiber, and oil. 3: Students will acquire knowledge about the cultivation techniques of essential plants. 4: Students will gain a conceptual understanding of the processing methods applied to economically significant plants. 5: Students will be able to gain the knowledge of economic values of cereals, legumes, spices, oil & fibre yielding plants.		
	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
THEORY			
Max. Marks: 50 **Internal Assessment Marks:15** **End Term Exam Marks: 35**	**Time:3 Hours**		
PRACTICAL			
Max. Marks: 25 **Internal Assessment Marks: 05** **End Term Exam Marks: 20**	**Time: 4 Hours**		
Part B-Contents of the Course			

Instructions for Paper-Setter

1. Nine questions will be set in all. All questions will carry equal marks.
2. Question No.1 will be short answer type covering the entire syllabus and will be compulsory. The remaining eight questions will be set unit wise selecting two questions from each unit. The candidate will be required to attempt question No. 1 and four more questions selecting one question from each unit.

Unit	Topics	Contact Hours
I	Origin of Cultivated Plants Morphology and economic importance of: Food plants-Cereals (Rice, Wheat and Maize). Pulses - Gram, Arhar and Pea.	7
II	Vegetables: Potato, Tomato and Onion. Fibers: Cotton Oils: Mustard and Coconut.	7
III	Morphology and economic importance of the following: Spices: Black pepper, Coriander, Ginger, Cloves, saffron. Medicinal Plants:*Cinchona*, *Atropa*, Opium, *Cannabis*, Neem.	8
IV	Botanical description and processing of: Beverages: Tea and Coffee. Types of wood.	8
V*	• Study of economically important plants: Wheat, Rice, Maize, Gram, Pea, Arhar, Black pepper, Ginger, Clove, Tea, Coffee, Cotton, Coconut, Mustard and different types of wood. • Collection and preparation of reports on various crops and economically important plants being cultivated/wildly available in your area.	30

Part C-Learning Resources

Recommended Books/e-resources/LMS:

- Singh,V., Pande, P.C., Jain, D.K. 2018. Economic Botany, Rastogi Publications.
- Kocchar, S.L. 2016. Economic Botany: A Comprehensive Study, 5 Ed, Cambridge India.
- Wickens, G.E. 2001.Economic Botany: Principles and Practices, Springer.
- Singh, V., Pande, P.C., Jain, D.K. 2018. Economic Botany, Rastogi Publications.
- Daubenmire, R.F. Plants & Environment (2nd Edn.,) John Wiley & Sons., NewYork 22
- S. Sundar Rajan-2007. College Botany Vol-V, Part 1: Taxonomy and Economic Botany Himalaya Publishing House.
- Susil Kumar Mukharjee-2004. College Botany Vol-III. New Central Book agency, London

Multidisciplinary Course

ZOOLOGY: SEMESTER-I								COURSE ID : 240/ZOO/MD101
CourseType	**Course Code**	**Name of the Course**	**Credit**	**Contact Hours/ Week**	**Internal Assessmentmarks**	**End Term Marks**	**Max. Marks**	**Exam Duration**
		Basics of Zoology-I	**2**	**2**	**15**	**35**	**50**	**3 hrs.**
		Practical	**1**	**2**	**5**	**20**	**25**	**4 hrs.**

Level of the course: 100-199

Pre-requisite for the course (if any): NA

Course Learning Outcomes (CLO)

1. Student will be able to learn about Kingdom Animalia
2. Student will be able to learn about Chordates
3. Student will be able to describe unique characters and recognize life functions of phylum Annelida and Arthropoda
4. Student will be able to describe unique characters and recognize life functions of phylum Mollusca, Echinodermata and Hemichordates
5. Students will be capable understand the role of non-chordates in their surroundings

Instructions for Paper-Setter

1. Nine questions will be set in all. All questions will carry equal marks.
2. Question No. 1, which will be short answer type covering the entire syllabus, will be compulsory. The remaining eight questions will be set unit wise
selecting two questions from each Unit I to IV. The candidate will be required to attempt question No. 1 and four more questions selecting onequestion from each unit.

UNIT	TOPICS	CONTACT HOURS
I	Zoology: Definition and scope, introduction to Animal Kingdom, Characters of animals Non-Chordates and Invertebrates with examples, Invertebrate Phyla, Introduction to basic characters of animal with special reference to the non-chordates; Biodiversity: Introduction and Scope; General characters of Protozoaand Porifera; Study of Amoeba and sponges with special reference to its structure and economic importance	**8**
II	General characters of Coelentrata and Annelida; Ecological importance of corals; Morphology of earthworm andits ecological role; Economic importance of Leech	**8**
III	General characters of Arthropoda and Mollusca; Study of basic characters of insects and snails; Insects as pest:Grasshopper, Economic importance of Honey Bee; Snails as pest in Paddy fields	**7**
IV	General characters of Echinodermata; Study of basic characters of Star fish with reference to its role inecosystem; Economic importance of Star Fish	**7**
V Practical	1. To study the non-chordates from pond water 2. To study the different parts of Insects by examining Housefly, butterfly, beetles 3. To study the characters of burrowing non chordates e.g. Earthworm 4. To study the life cycle of Butterfly/Mosquito 5. To study various minor phyla as connecting link 6. Identifications of Non-Chordates specimens of various phyla	**30**

Learning Resources

1. Jordan, E.L and P.S. Verma. 2009. Invertebrate Zoology, S.Chand and Co. Ltd. New Delhi.
2. Ayyar, E.K and T. Ananthakrishnan. 1992. Manual of Zoology Vol.1 Invertebrates Part I and II, S.Viswanathan Printers and Publishers Pvt. Ltd.Madras.
3. Kotpal, R.L. 2021. Zoology Invertebrates. Rastogi Publications, Meerut.
4. 5. Rastogi V.B. 2021 . Invertebrate Zoology. Kedar Nath Ram Nath , Meerut
6. Lal S.S. (2019) Practical Zoology Invertebrates. Rastogi Publications, Meerut

Multidisciplinary Course

ZOOLOGY:
SEMESTER-2

Course Type	Course Code	Name of the Course	Credit	Contact Hours/ Week	Internal Assessmentmarks	End Term Marks	Max. Marks	Exam Duration
		Basics of Zoology-II	**2**	**2**	**15**	**35**	**50**	**3 hrs.**
		Practical	**1**	**2**	**5**	**20**	**25**	**4 hrs.**

Level of the course: 100-199

Pre-requisite for the course (if any): NA

Course Learning Outcomes (CLO)

1. Student will learn the role of different groups of chordates in mantling an equilibrium in our ecosystem
2. Students will be able to identify local fishes species and their role in the ecosystem.
3. Course will help to understand how the natural systems on which we depend function.
4. Course will give the idea about how birds are economically important.
5. Student will learn about identification of chordates

Instructions for Paper-Setter

1. Nine questions will be set in all. All questions will carry equal marks.
2. Question No. 1, which will be short answer type covering the entire syllabus, will be compulsory. The remaining eight questions will be set unit wise
   selecting two questions from each Unit I to IV. The candidate will be required to attempt question No. 1 and four more questions selecting onequestion from each unit.

UNIT	TOPICS	CONTACT HOURS
I	**Basics of Chordates:** Definition and Salient features of chordates, Difference between non chordates andchordates. Characters of protochordates	**8**
II	**Pisces (Fishes):** Characteristic features of freshwater and marine fishes, Edible fishes of India, Compositefish culture. **Class Amphibia:** Features of amphibians, Parental care in amphibians, Role of amphibians inecosystem, Identification of turtles and tortoise, Frog and Toad.	**8**
III	**Class Reptilia:** Features of Reptiles, Common reptiles of India, Identification of Poisonous and non-poisonous snakes, Difference between crocodile and Gharial	**7**
IV	**Class Aves:** Characteristic features of birds, Common birds of India, Flight adaptations in birds,Commercialuses of birds, Role of birds in agriculture. **Class Mammals:** Characters and economic importance of mammals	**7**
V Practical	1. Identifying feature of different class of chordates 2. Study of connecting links in chordates 3. Study of different types of feathers. 4. Study of different local species of fishes 5. Study of nesting pattern of some local birds, mammals	**30**

Learning Resources

1. R.L.Kotpal. Modern Textbook of Zoology
2. E.L. Jordan and Verma. Chordate Zoology.
3. Barrington, E.J.W. The Biology of Hemichordata and Protochordata. Oliver and Boyd, Edinbourgh.
4. Walters, H.E. and Sayles, L.D. Biology of vertebrates. MacMillan & Co., New York.
5. Kent, C.G. Comparative anatomy of vertebrates.
6. S.S. Lal. Practical Zoology Vertebrate

Semester-I

Multi-Disciplinary Courses

Course ID - 240/PHYP/MD101
Health Physics

Marks (Theory): 50 **Credits:3 (45 lectures)**
Marks (Internal Assessment) : 25 **Time : 3 Hrs**

Note: The paper setter is to set nine questions in all. Question no. 1 (compulsory based on the entire syllabus) will consist of five short answer type questions, each of two marks. The rest of the eight questions are to be set uniformly, with two questions from each unit selected. A student is required to attempt five questions, selecting one from each unit along with compulsory question no 1. The question paper shall contain 20 % numerical problems in the relevant papers.

Course Objective: The course is designed to introduce some of the important physics applications in medical physics.	**Course Outcome:** After completing this course, students will be able to understand the interaction of energetic radiation with biological material. Various applications of radiation and nuclear techniques must be clear to them.

Unit-I

Radiation units: exposure, Absorption dose, Rad, Gray, relative biological effectiveness, effective dose—Rem & Sievert, inverse square law. Interaction of radiation with matter: Compton & photoelectric effect, linear attenuation coefficient. Working principle of Radiation Detectors: Geiger Muller counters, Scintillation counters, Solid-State detectors

Unit-II

X-Rays: Electromagnetic spectrum, production of X-rays, X-ray spectra, Brehmsstrahlung, Characteristic X-ray. X-ray tubes & types, Evolution of Medical Imaging, X-ray diagnostics and imaging

Radiography: Filters, grids, cassette, X-ray film, film processing, fluoroscopy. Computed Tomography scanner- principle and function

Unit-III

Physics of nuclear magnetic resonance (NMR), NMR imaging, MRI Radiological imaging, Ultrasound imaging, Physics of Doppler with applications and modes, Vascular Doppler, Gamma camera (Only Principle, function, and display).

Unit-IV

Application of radioactive substances in the diagnosis, Positron Emission Tomography (PET), Nuclear medicine therapy, Interventional Nuclear medicines, Common nuclear medicines and their applications

References:

1. Health Physics: Radiation-Generating Devices, Characteristics, and Hazards, Joseph John Bevelacqua, Wiley-VCH Verlag GmbH & Co. KGaA

2. Radiation Detection and Measurements, G F Knoll

3. Introduction to Health Physics, T.E. Johnson, McGraw-Hill, NY

Semester-II

Multi-Disciplinary Courses

Course ID - 240/PHYP/MD201
PHYSICS IN EVERYDAY LIFE

Marks (Theory): 50 **Credits : 3 (45 lectures)**
Marks (Internal Assessment) : 25 **Time : 3 Hrs**

Note: The paper setter is to set nine questions in all. Question no. 1 (compulsory based on the entire syllabus) will consist of five short answer type questions, each of two marks. The rest of the eight questions are to be set uniformly, with two questions from each unit selected. A student is required to attempt five questions, selecting one from each unit along with compulsory question no 1. The question paper shall contain 20 % numerical problems in the relevant papers.

Course Objective: To introduce some concepts of reflection, refraction, interference, scattering, law of motion, hydroelectric power generation and universe for day to day applications.	**Course Outcome:** After completion of this course, students will be able to apply and visualize the laws of physics to everyday life.

Unit I

Fundamental and derived quantities. Units and dimensions, dimensional analysis, order of magnitude, significant figures, errors. Reflection, refraction, diffraction, interference, scattering (elementary ideas only) – examples from daily life – apparent depth, the blue colour of the sky, twinkling of stars.

Total internal reflection, mirage, sparkling of diamond, Rainbow, Concave and convex mirrors, lenses – focal length, power of a lens, refractive index, prism, dispersion, Human eye.

Unit II

Velocity, acceleration, momentum, Idea of inertia, force - laws of motion. Newton's law of gravitation, acceleration due to gravity, mass and weight, apparent weight, weightlessness.

Unit III

Voltage and current, ohms law. Electric energy, electric power, microwave oven, transformer, generator, hydroelectric power generation – wind power – solar power – nuclear power

Unit IV

Planets, – solar system, moon, lunar and solar eclipses, Different types of stars, Galaxies, Satellites, Artificial satellites, Global positioning system.

References:

1. Fundamentals of Physics with Applications by Arthur Beiser

2. Conceptual Physics by Paul G Hewitt
3. D.S. Mathur, Elements of properties of matter and acoustics, S. Chand & Company Ltd., New Delhi (2010)
4. N. Subramaniyam, Brijlal and M. N. Avadhanulu, A Textbook of Optics S. Chand & Co, New Delhi (2012).

Session: 2024-25	
Part A– Introduction	
Subject	Mathematics
Semester	I
Name of the Course	Introductory Mathematics
Course Code	MDC-1
Course ID	240/MAT/MD101
Course Type: (CC/ MIC/ MDC/VOC/ AEC/ VAC/SEC)	MDC
Pre-requisite for the course (if any)	NA
Course Learning Outcomes(CLOs)	After completing this course, the learner will be able to: 1. Understand various concepts of matrices. 2. Have the knowledge of the basic concepts of complex numbers. 3. Gain the knowledge of the concepts of Arithmetic progression, Geometric progression and Harmonic progression. 4. Have the conceptual knowledge of straight lines, slope of a line and angle between two lines.

	Theory	**Practical**	**Total**
Credits	2	1	3
Contact Hours	2	2	4
Internal Assessment Marks	15	5	20

End Term Examination Marks	35	20	55
Examination Time	3 Hrs	3Hrs	Max. Marks:75

Part B-Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking Course Learning Outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will contain 7 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question.

Unit	Topics	Contact Hours
I	An introduction to matrices and their types, Operations on matrices.	8
II	Complex numbers, Operations on complex numbers, polar form of the complex numbers, Modulus and argument of a complex number.	8
III	Arithmetic progression, Geometric progression, Harmonic progression, Arithmetic mean (A.M.), Geometric mean (G.M.), Relation between A.M. and G.M.	8
IV	Straight lines: Slope of a line and angle between two lines, Different forms of equation of a line: parallel to co-ordinate axes, point-slope form, slope-intercept form, two-point form, general form; distance of a point from a straight line.	8

Practical

The examiner will set 4 questions at the time of practical examination by taking Course Learning Outcomes (CLOs) into consideration. The examinee will be required to solve 2 questions. The evaluation will be done on the basis of practical record, viva-voce and written examination. **Problem Solving- Questions related to the practical problems based on following topics will be worked out and record of those will be maintained in the Practical Note Book:** 1. Problems related to find addition, subtraction or multiplication of the matrices.	30

2. Problems to find nth term of A.P., G.P. and H.P. 3. Problems to find sum of n terms of A.P., G.P. and H.P. 4. Problems to find A.M. and G.M of given numbers. 5. Problems to find modulus and argument of a complex number. 6. Problems to represent solutions of linear inequalities graphically. 7. Problems based on angle between two lines. 8. Problems involving straight lines and their slope.	

Suggested Evaluation Methods	
Internal Assessment: ➢ **Theory 15** ● Class Participation: 4 ● Seminar/presentation/assignment/quiz/class test etc.: 4 ● Mid-Term Exam: 7 ➢ **Practicum 5** ● Seminar/Demonstration/Viva-voce/Lab records etc.: 5	**End Term Examination:** ➢ **Theory 35** Written Examination ➢ **Practicum 20** Lab record, viva- voce, written examination.

Part C-Learning Resources

Recommended Books:

1. C. Y. Young (2021). *Algebra and Trigonometry*. Wiley.
2. S.L. Loney (2016). *The Elements of Coordinate Geometry (Cartesian Coordinates)*(2nd Edition). G.K. Publication Private Limited.
3. Seymour Lipschutz and Marc Lars Lipson (2013). *Linear Algebra.* (4th Edition)Schaum's Outline Series, McGraw-Hill.
4. C.C. Pinter (2014). *A Book of Set Theory*. Dover Publications.
5. J. V. Dyke, J. Rogers and H. Adams (2011). *Fundamentals of Mathematics* (10th Edition), Brooks/Cole.
6. A.Tussy, R. Gustafson and D. Koenig (2010). *Basic Mathematics for College Students*(4th Edition). Brooks Cole.

Session: 2024-25	
Part A – Introduction	
Subject	Mathematics
Semester	II
Name of the Course	Essential Mathematics
Course Code	MDC-2
Course ID	240/MAT/MD201
Course Type: (CC/ MIC/ MDC/VOC/ AEC/ VAC/SEC)	MDC
Pre-requisite for the course (if any)	NA
Course Learning Outcomes(CLOs)	After completing this course, the learner will be able to: 1. Gain the knowledge of set theory, types of sets and operations on sets. 2. Understand the concept of functions with graphical representation. 3. Find derivatives of simple functions and derive its application. 4. Evaluate integral of simple algebraic and trigonometric functions.

	Theory	**Practical**	**Total**
Credits	2	1	3
Contact Hours	2	2	4
Internal Assessment Marks	15	5	20
End Term Examination Marks	35	20	55

Examination Time	3Hrs	3Hrs	Max. Marks: 75

Part B- Contents of the Course

Instructions for Paper- Setter: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking Course Learning Outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will contain 7 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question.

Unit	Topics	Contact Hours
I	Sets and their representations, types of sets, subsets, union and intersection of sets, difference of two sets, complement of a set, Venn-diagram, De-Morgan's laws and their applications.	8
II	Function and its graphical representation.	8
III	The concept of differentiation, Differentiation of simple functions, second order derivative and its Application.	8
IV	Integration of simple algebraic and trigonometric functions.	8

Practical

The examiner will set 4 questions at the time of practical examination by taking Course Learning Outcomes (CLOs) into consideration. The examinee will be required to solve 2 questions. The evaluation will be done on the basis of practical record, viva-voce and written examination. **Problem Solving-Questions related to the practical applications based on following problems will be worked out and record of those will be maintained in the Practical Note Book:** 1. Problems related to union, intersection, difference and complement of sets. 2. Problems based on De Morgan's Laws. 3. Problems related to Venn diagrams. 4. Problems related to graphical representation of simple functions. 5. Problems to find derivatives of simple functions related to commerce and social sciences. 6. Problems to find integration of simple functions related to economic	**30**

problems. **7.** Problems to find maxima of profit function, production, demand function and minima of cost function	

Suggested Evaluation Methods	
Internal Assessment: ➢ **Theory 15** ● Class Participation: 4 ● Seminar/presentation/assignment/quiz/class test etc.: 4 ● Mid-Term Exam: 7 ➢ **Practicum 5** ● Seminar/Demonstration/Viva-voce/Lab records etc.: 5	**End Term Examination:** ➢ **Theory 35** Written Examination ➢ **Practicum 20** Lab record, viva- voce, written examination.

Part C-Learning Resources

Recommended Books:

1. E.T. Dowling(2020). *Schaum outlines of Calculus for Business, Economics and the Social Sciences*. McGraw Hill.
2. S.C. Gupta and V.K. Kapoor (2014). *Fundamentals of Mathematical Statistics*. S. Chand & Sons, Delhi.
3. Seymour Lipschutz and Marc Lars Lipson (2013). *Linear Algebra.* (4th Edition)Schaum's Outline Series, McGraw-Hill.

MULTIDISCIPLINARY COURSE-CHEMISTRY

COURSE DETAILS:

Course Title	**Introductory Chemistry-I**
Semester	**Semester-I**
Course Code	**MDC-1**
Course ID	**240/CHE/MD/101**
Total Credits	**03 (Lecture: 02, Tutorial: 0, Practical: 01)**
Total Marks	**75**
Marks Distribution	**Theory External: 35 Theory Internal: 15** **Practical External: 20 Practical Internal: 05**

COURSE CURRICULUM DELIVERY WEEKLY DISTRIBUTION:

Total Hours per Week: 4	
Lectures (L) Hours per Week: 2	**Practical (P) Hours per Week: 2**

COURSE OBJECTIVES:

- To build foundational knowledge in chemistry for students from various disciplines.
- Illustrate the relevance of chemistry in various fields and everyday life.
- Provide a foundational understanding of the contributions of renowned Indian scientists to the field of chemistry.
- Understand the physical properties of matter and key chemical compounds.
- Examine the significance of soil and fertilizers in agriculture.
- Foster an understanding of chemical nomenclature and the organization of the periodic table.
- Highlight the applications of chemistry in food preservation and the use of artificial sweeteners.

COURSE OUTCOMES:

- Students will gain an appreciation for the historical context and contributions of renowned Indian scientists to the global field of chemistry.
- Develop critical thinking and analytical skills by exploring the classification of matter and understanding atomic structure.
- Enhance knowledge of chemical nomenclature and the periodic table's organization.
- Understand the chemical properties of everyday compounds and their applications in various industries.

- Improve scientific literacy by exploring the role of chemistry in food preservation and the use of artificial sweeteners.

DETAILED CONTENT OF COURSE:

Theory Syllabus: Total Contact Hours: 30

Unit	Topics	Contact Hours
I	**Renowned Indian Scientists:** Brief Biography of Renowned Indian Scientists (Hargobind Khurana, Dr. P.C. Ray, Sir C.V. Raman, Dr. A.P.J. Abdul Kalam, C. N. R. Rao, Dr. Vikram Sara Bhai, Dr. Homi Jahangir Bhabha, Dr. J.C. Bose, Dr. S. N. Bose)	**8**
II	**States of Matter:** Classification of matter: elements, compounds, and mixtures, Physical and chemical properties, Atomic models, Structure of the atom: protons, neutrons, and electrons, Atomic number and mass number, some important compounds (baking soda, washing soda, plaster of Paris, gypsum, glass).	**8**
III	**The Periodic Table:** Periodic table, Organization of the periodic table, Groups and periods, classification of elements, physical and chemical aspects of metals and non-metals, Ore and Minerals of Iron, Copper, Aluminium, alloys	**7**
IV	**Food Preservatives:** Elementary idea of natural and synthetic food preservatives, rancidity, uses and properties, different food preservation processes (pickle, Jam), artificial sweeteners, uses and properties	**7**
V	**Practicals:** 1. Chemical reactions of metals and non-metals with acids and bases 2. To measure the acid value of oil samples as an indicator of rancidity 3. To prepare Plaster of Paris 4. To prepare Potash Alum 5. To study the effect of acid on Baking and washing soda 6. Thermal decomposition of baking soda 7. To perform the action of water on quick lime and identify the nature of reaction (Exo/Endothermic)	**30**

COURSE EVALUATION METHODS

Theory Exams:

Total Marks: 50 (External: 35 + Internal: 15)

Internal Assessment: 15 Marks	• Class Participation: NIL • Seminar/Presentation/ Assignment: 05 Marks • Mid Term Exam: 10 Marks
External Assessment: 35 Marks (03 Hours)	• End Term Exam: 35 Marks

Practical Exam:

Total Marks: 25 (External: 20 + Internal: 5)

Internal Assessment: 05 Marks	• Class Participation: NIL • Seminar/Lab record/Demonstration: 05 Marks
External Assessment: 20 Marks (03 Hours)	• End Term Practical Exam: 10 Marks • Lab record: 05 Marks • Viva Voce: 05 Marks

Instruction for End-Term Theory Exam:

The Examiner is requested to set nine questions in total, selecting two questions from each section. Question-1 will be a compulsory question consisting short answer type questions covering all the units of the syllabus. All questions should carry equal marks. Log table and non-programmable calculator is allowed.

RECOMMENDED BOOKS

1. Chemistry In Daily Life: Third Edition by Kirpal Singh, PHI Learning
2. The Great Indian Scientists Paperback – 1 January 2017, Cengage Learning India
3. "Comprehensive Practical Chemistry for Class 12" by V.K. Ahluwalia, Sunita Dhingra, and Adarsh Gulati
4. NCERT Chemistry Textbook for class 11th and 12th.
5. Laboratory Manual Chemistry of NCERT for class 11th and 12th.
6. Principles of Physical Chemistry by M. S. Pathania, B. R. Puri and L. R. Sharma.

Course Type: Multi-Disciplinary Course (MDC)
Offered by Department of Commerce

Semester: 1

Name of Subject: BASICS OF COMMERCE	**Maximum Marks: 75** **(TI + TE + PI + PE = 25 + 50 + - + -)**
Course ID: 240/COM/MD106	**Time Allowed: 2 Hrs.**
Credits : 3 (L–T–P = 2–1– -)	**Multi-Disciplinary Course**

Instructions for Paper Setter: The question paper shall be divided into two sections. Section 'A' shall comprise five short answer type questions from the syllabus carrying two marks each, which shall be compulsory. The answer to each question should not normally exceed 100 words. **Section 'B' shall comprise eight questions of 10 marks each (2 questions from each unit).** The students will be required to attempt four questions from section B by selecting one question from each unit. All questions will carry equal marks. All the questions must be mapped with Course Outcomes (COs) and specified in the question paper against each question. All questions will carry equal marks.

Course Outcomes: - After completing the syllabus students will be able to**:**

CO1: Understand about Commerce and different components of Commerce.
CO2: Apply E-Commerce in practical life.
CO3: Analyse the concepts of various economic activities
CO4: Evaluate various contemporary business opportunities.

Course Contents:

Unit I: Foundation of Commerce –Economic and Non Economic Activities and their classifications; Business:- Meaning, Characteristics; Profession : Meaning, Characteristics; Employment: Meaning, Characteristics; Industry, Types of Industry, Commerce, Components of Commerce, Trade, Auxiliaries of Trade.
Unit II: Business Organisation-Sole Proprietorship, Hindu Undivided Family(HUF) Business, Partnership, Meaning of Small-Scale Industry, Role of Small Business in Economic Development ,Problems of Small Business in India, Contemporary Business Opportunities:- Network Marketing, Franchising, BPOs.
Unit III: Introduction to E-Commerce- Meaning, Scope, benefits, limitations. Electronic market, traditional retailing and e-retailing, e-services, security in e-commerce, ethics in e- commerce, cyber crimes.
Unit IV: E-Commerce Business Models and Applications**:** B2B model, B2C model, C2C model, C2B model, G2B model and G2C model. Application of E-commerce in manufacturing, wholesale, retail and service sector.

Suggested Readings:

1. "Good to Great" by Jim Collins, Publisher- Random House Business Books
2. "The Lean Startup" by Eric Ries, Publisher - Portfolio Penguin

3. “E-Commerce An Indian Perspective” by S.J. P.T. Joseph. Publisher- PHI Learning Pvt.Ltd., 2019
4. Fundamentals of E-Commerce by Dr. Subhabrata De, Publisher - Arambagh Book House, 2023

Course Type :- Multi-Disciplinary Course (MDC)
Offered by Department of Commerce
Semester: 2

Name of Subject: BANKING AND FINANCIAL AWARENESS	**Total Marks: 75 (TI+TE+PI+PE=15+35+05+20)**
Course ID: 240/COM/MD206	**Time Allowed: 1Hr. 30 Min.**
Credits 3 (L-T-P =2---1)	**Multi-Disciplinary Course**

Instructions for Paper Setter: The question paper shall be divided into two sections. Section 'A' shall comprise seven short answer type questions from the syllabus carrying one mark each, which shall be compulsory. The answer to each question should not normally exceed 50 words. **Section 'B' shall comprise eight questions of 7 marks each (2 questions from each unit**). The students will be required to attempt four questions from section B by selecting one question from each unit. All questions will carry equal marks. All the questions must be mapped with Course Outcomes (COs) and specified in the question paper against each question. All questions will carry equal marks.

Course Outcomes: - After completing the course, students will be able to:
CO1: Remember bank instruments and their types
CO2: Understand the Banking law and its impact on banks and customers. Understand the functions of banks and different types of banks
CO3: Apply the concept of E-Banking and its applications
CO4: Analyze the operations of the Reserve Bank of India and its impact on the economy.

Course Contents:

Unit-I: Banking definition, meaning, Need, Scope and Present Structure of Banking in India. CommercialBanking-Role and its function. Critical evaluation of the banking industry in India.
Unit-II: Central Bank: Structure, Objectives, and Functions. RBI's credit control techniques. BankingOmbudsman: Definition,role and functions.
Unit-III: Various types of bank accounts, their features, and opening procedures. Application of KYC normsin the banking sector. Definition and features of cheques, crossing, bouncing, and endorsement types.Types of loans and advances.
Unit-IV: Digitalization in banking: E-banking, Mobile banking, Internet banking, RTGS, NEFT, Debit cards, Credit cards, Digital payments, ATM, Electronic fund transfer. Impact of computerization on bankingoperations.

Practical Exercise

1. Analytical Report : Various investment options offered by banks including savings accounts, fixed deposits, mutual funds, and government bonds.
2. Project report: Challenges faced by banks in implementing and maintaining online banking systems,
3. Case Studies: Present brief case studies illustrating real-world examples of how the ombudsman rules have been applied to resolve banking-related disputes
4. Assignment Title: Understanding Various Payment Channels in Banking
5.

Suggested Readings:

1. Chabra, T.N , Elements of Banking Law, Dhanpat Rai and sons

2. Bhole, L.M., “Financial Institutions and Markets”, 2009, Tata McGraw Hill.
3. S.Natarajan and Dr.R.Parameswaran (2013), „Indian Banking“, S. ChandPublications, New Delhi
4. Khan, M.Y., “Indian financial System: Theory and Practices”, 2004, Tata McGraw Hill.
5. Indian Institute of Banking and Finance, ‘Principles and Practices of Banking,Mcmillan Education
6. O.P Agarwal, “Modern Banking of India”Himalaya Publishing House,Mumbai,2017.
7. P.N.Varshney Banking Law & Practice (Sultanchand Publishers)
8. A.R.Aryashri, V.V.Ramanamurthy Banking & Financial Systems

MDC-1: FUNDAMENTAL OF COMPUTER SCIENCE

Course code	MDC-1			
Category	Multidisciplinary Course			
Course title	**Fundamentals of Computer Science**			
Course ID	240/CS/MD101			
Scheme and Credits	L	T	P	Credits
	2	0	2	3
Theory Internal	15			
Theory External	35			
Practical Internal	05			
Practical External	20			
Total	75			
Duration of Exam	3 hrs			

Note: The examiner will set nine questions in total. Question one will have seven parts from all units and the marks of first question will be of 20% of total marks of Question Paper and the remaining eight questions to be set by taking two questions from each attempt FIVE questions in all, selecting one question from every unit apart from the Question Number 1.

COURSE OBJECTIVE: Aim is to introduce students to the fundamentals of computers, software types, operating systems, and networking concepts, preparing them for foundational knowledge in IT and computer science disciplines.

UNIT I

Introduction to Computers: Definition of Computers, History and Generations of Computers, Characteristics of computer, Classification of Computers. Fundamental Block diagram of Computer: CPU, Input & Output

UNIT- II

Software: Definition of Software, Types of Software-System software, Application software and Utility software. Types of Computer Languages, Assemblers, Interpreters, Compiler.

UNIT-III

Introduction to Operating Systems: Types of Operating System, Functions of Operating System. Windows: Introduction to Windows, Starting Windows, Desk Top, Task Bar, Opening and closing

applications, iconscreating, renaming and removing. Date and Time setting, Working with files and folders-creating, deleting, opening, finding, copying, moving, and renaming.

UNIT-IV

Networking: Concept, Basic Elements of a Communication System, Data Transmission Media, LAN, MAN, WAN. Introduction of Internet and WWW, Basic working of a Web Browser, Introduction to popular web browsers.

Text Books:

[1] Sinha, P.K. & Sinha, Priti, Computer Fundamentals, BPB.

[2] Dromey, R.G., How to Solve it By Computer, PHI.

Reference Books:

[1] Norton, Peter, Introduction to Computer, McGraw-Hill.

[2] Leon, Alexis & Leon, Mathews, Introduction to Computers, Leon Tech World.

[3] Gill, Nasib Singh: Essentials of Computer and Network Technology, Khanna Books Publishing Co., New Delhi.

FUNDAMENTALS OF WEB TECHNOLOGIES

Course code	**MDC-2**			
Category	Multidisciplinary Course			
Course title	**Fundamentals of Web Technologies**			
Course ID	240/CS/MD201			
Scheme and Credits	L	T	P	Credits
	2	1	0	3
Theory Internal	25			
Theory External	50			
Total	75			
Duration of Exam	3 Hrs			

Note: The examiner will set nine questions in total. Question one will have seven parts from all units and the marks of first question will be of 20% of total marks of Question Paper and the remaining eight questions to be set by taking two questions from each attempt FIVE questions in all, selecting one question from every unit apart from the Question Number 1.

COURSE OBJECTIVES: The aim of the course is to provide knowledge of web as a tool in presenting information. Each and every product in e-world now needs a website, this course will make student knowing about the concept of web design in general.

UNIT – I

Introduction to Internet and World Wide Web (WWW); Evolution and History of World Wide Web, Web Pages and Contents, Web Clients, Web Servers, Web Browsers; Hypertext Transfer Protocol, URLs; Searching and WebCasting Techniques, Search Engines and Search Tools, Scripting Languages.

UNIT – II

Web Publishing: Hosting website; Internet Service Provider; Planning and designing website; Web Content Authoring, Web Graphics Design, Web Programming, Steps For Developing website, Choosing the Contents, Home Page, Domain Names, Creating a Website and Introduction to Mark up Languages (HTML and DHTML).

UNIT – III

Web Development: HTML Document Features, Fundamentals HTML Elements, Creating Links; Headers; Text styles; Text Structuring; Text colour and Background; Formatting text; Page layouts, Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes.

UNIT – IV

Introduction to CSS (Cascading Style Sheets): Features, Core Syntax, Types, Style Sheets and HTML, Style Rule Cascading and Inheritance, Text Properties, CSS Box Model, Normal Flow Box Layout, Positioning and other useful Style Properties; Features of CSS3.

Text Books:

[1] Raj Kamal, Internet and Web Technologies, Tata McGraw-Hill.

[2] Ramesh Bangia, Multimedia and Web Technology, Firewall Media.

Reference Books:

[1] Thomas A. Powell, Web Design: The Complete Reference, Tata McGraw-Hill

[2] Wendy Willard, HTML Beginners Guide, Tata McGraw-Hill.

[3] Deitel and Goldberg, Internet and World Wide Web, How to Program, PHI.

MDC-3: PROGRAMMING WITH PYTHON

Course code	MDC-3			
Category	Multidisciplinary			
Course title	**Programming With Python**			
Course ID	240/CS/MD301			
Scheme and Credits	L	T	P	Credits
	2	1	0	3
Theory Internal	25			
Theory External	50			
Total	75			
Duration of Exam	3 hrs			

Note: The examiner will set nine questions in total. Question one will have seven parts from all units and the marks of first question will be of 20% of total marks of Question Paper and the remaining eight questions to be set by taking two questions from each attempt FIVE questions in all, selecting one question from every unit apart from the Question Number 1.

COURSE OBJECTIVES: The aim of the course is to understand the core principles of the Python Language. This course will make student to design effective GUI applications.

UNIT – I

Introduction to Python: Python Interpreter, Python as calculator, Python shell, Indentation, identifier and keywords, literals, strings, Operators: Arithmetic, Relational, Logical, comparison, Bitwise, Assignment, Identity operator and Membership operator; Input output statement; Control statements: Branching, looping, Conditional statement, Exit function

UNIT – II

String manipulations: Subscript operator, indexing, slicing a string, other functions on strings, string module. Strings and number system: Format functions, converting strings to numbers & Vice Versa. List, Tuples, Sets, Dictionaries: Basic list operators, replacing, inserting, removing an element, searching, Sorting lists, dictionary literals, adding & removing keys, accessing & replacing values, traversing dictionaries

UNIT – III

Array in Python, Design with Functions: hiding redundancy, complexity, arguments & return values; Formal/Actual arguments, named arguments, program structure and design, Recursive functions, scope & Global statements, Importing modules, Math modules & Random modules.

UNIT – IV

Exception Handling: Exceptions, except clause, try and finally clause, user defined exceptions. File Handling: Manipulating files & directories, OS & SYS modules, Reading, Writing text & numbers from/to file. Graphics: Turtle module, drawing colors, shapes, digital images, image file formats.

Text Books:

[1] Python Programming using problem solving approach by Reema Thareja, Oxford University Press. [2] Learning Python by Mark Lutz

Reference Books:

[1] Introduction to Computation and Programming Using Python with application to understanding data by Guttag John V, PHI

[2] Introduction to Computer Science using Python by Charles Diorbach, Wiley.

[3] Programming Python by Mark Lutz

Semester-1
MDC-1 Indian Polity

MDC- 1 Indian Polity (Credits 03)
Course ID: 240/PS/MD101

Maximum Marks: 75
Theory Examination: 50
Theory Internal Assessment: 25
Examination Time: 3 hrs

Course Outcomes

- Understand the fundaments of constitutional democracy.
- Analysis the policy and reforms in the system.
- Develop deep understanding about the important features of the Indian politics.
- Update their knowledge about recent trends and changes in Indian political system. ➢ Develop a perspective to understand and analyze Indian politics.

1. **Seven Questions will be set in all and students will be required to attempt 4 questions.**
2. **Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).**
3. **For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).**

Unit 1
Indian Constitution: Salient Features, Fundamental Rights and Fundamental Duties.

Unit 2
Union Executive: President, Prime Minister and Council of Minister
Union Legislature: Lok Sabha, Rajya Sabha

Unit 3
Judiciary: Supreme Court, Judicial Review, Judicial Activism.

Reading:

1. G. Austin, The Indian Constitution: Corner Stone of a Nation, Oxford, Oxford University Press, 1966.
2. D.D. Basu, An Introduction to the Constitution of India, New Delhi, Prentice Hall, 1994.
3. D.D. Basu and B. Parekh (ed.), Crisis and Change in Contemporary India, New Delhi, Sage, 1994.
4. C.P. Bhambhri, The Indian State: Fifty Years, New Delhi, Shipra,1997.
5. P. Brass, Politics of India Since Independence, Hyderabad, Orient Longman, 1990.
6. R. Kothari, Politics in India, New Delhi, Orient Longman, 1970.
7. W.H. Morris Jones, Government and Politics in India, Delhi, BL Publications, 1974.
8. J.R. Siwach, Dynamics of Indian Government & Politics, New Delhi, Sterling Publishers, 1985.

Semester II
MDC 2 Indian Constitution

MDC 2 Indian Constitution (Credits 03)
Course ID: 240/PS/MD201

Maximum Marks: 75
Theory Examination: 50
Theory Internal Assessment: 25
Examination Time: 3 hrs

Course Outcomes:
After completing this course, the learner will be able to:

- Understand the preamble and features of the India Constitution and develop an understanding of Fundamental Rights and Directive Principles of state policy.
- Develop and understanding of the power, position and functions of the union and the state Executive.
- Comprehend the functioning of the Union and State legislatures and local self-government. ➢ Comprehend the functioning of the Indian judicial system.

1. **Seven Questions will be set in all and students will be required to attempt 4 questions.**
2. **Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).**
3. **For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).**

Unit 1
Indian Constitution: Sources and Features, Preamble, Directive principles of state policy

Unit 2
State Executive- Governor, Chief Minister, Council of Minister.

Unit 3
Union And state legislature: Parliament- Composition and Functions, Speaker of Lok sabha, Amendment Process State Legislature- Vidhan Sabha,

Judiciary- High Courts

Reading:

1. G. Austin, The Indian Constitution: Corner Stone of a Nation, Oxford, Oxford University Press, 1966.
2. D.D. Basu, An Introduction to the Constitution of India, New Delhi, Prentice Hall, 1994.
3. D.D. Basu and B. Parekh (ed.), Crisis and Change in Contemporary India, New Delhi, Sage, 1994.
4. C.P. Bhambhri, The Indian State: Fifty Years, New Delhi, Shipra,1997.
5. P. Brass, Politics of India Since Independence, Hyderabad, Orient Longman, 1990.
6. R. Kothari, Politics in India, New Delhi, Orient Longman, 1970.
7. W.H. Morris Jones, Government and Politics in India, Delhi, BL Publications, 1974.
8. J.R. Siwach, Dynamics of Indian Government & Politics, New Delhi, Sterling Publishers, 1985.

Semester 1

MDC-1:- Understanding Indian Society
Credit-3
240/SOC/MD101 **Maximum Marks –75**
Theory – 50
Internal Assessment – 25
Time – 3 hours

The students will be required to attempt four questions in all. Question No. I will be compulsory comprising of 4 short answer type questions of 2 marks each and will cover the entire syllabus 4X 2 = 8 marks. In addition to it, Question Nos. II to VII will consist of long answer (essay type) questions, two Questions from each Unit with internal choice carrying 14 marks each i.e. 3 X 14 = 42 marks thus making it the total weight age to 50 marks .Three questions to be attempted. One from each unit.

Course Outcomes:

- The Students would be familiarized with Indian society, its linkage and continuity with past and present.
- It would enhance knowledge of the students about the Indian social institutions.
- It would help students to have understanding of processes of social change and their impact on society.

UNIT – I

Evolution of Indian Society: Traditional view of Indian Society; Factors Promoting Unity and Diversity in India; India as Pluralistic Society, Multi-Ethnic; Multi-Religious; Cultural and Lingual

UNIT – II

Indian Social Institutions: Kinship, Family, Marriage; Caste and its Changing Dimensions.

UNIT – III

Processes of Social Change in India: Sanskritization, Westernization, Parochialization and Universalization

Readings:

Ahuja, Ram (1997): Society in India: Concept, Theories and Recent Trends, Jaipur: Rawat Publication.

Beteille, Andre (1992): Backward Classes in Contemporary India, New Delhi: OUP.

Dube, S.C.(1991): Indian Society, New Delhi : National Book Trust.

Ghurye, G.S. (1968): Social Tension, Bombay: Popular Prakashan.

Karve, Iravati (1961): Hindu Society: An Interpretation, Pune: Daccan College.

Mandelbaum, D.G. (1970): Society in India, Bombay: Popular Prakashan.

Sharma K.L.(ed.) (1994): Caste and Class, Jaipur, Rawat Publication.

Srinivas, M.N.(1980): India's : Social Structure, New Delhi : Hindustan Publication.

Srinivas, M.N.(1985): Social Change in Modern India, New Delhi : Orient Longman.

India: 2010 Govt. of India, New Delhi, Govt. of India publication division.

Semester-2

MDC-2:- Rural Development and Change
Credit-3
240/SOC/MD201

Maximum Marks –75
Theory – 50
Internal Assessment – 25
Time – 3 hours

The students will be required to attempt four questions in all. Question No. I will be compulsory comprising of 4 short answer type questions of 2 marks each and will cover the entire syllabus 4X 2 = 8 marks. In addition to it, Question Nos. II to VII will consist of long answer (essay type) questions, two Questions from each Unit with internal choice carrying 14 marks each i.e. 3 X 14 = 42 marks thus making it the total weight age to 50 marks .Three questions to be attempted. One from each unit.

Course Outcome:

- Students would be acquainted with rural social structure.
- It will provide an understanding of rural economy and trends of change in rural society.
- Students will understand rural political structure & status of women in rural society.

UNIT – I

Rural Social Structure: Caste and Class in Rural Set Up, Inter Caste Relations and Jajmani System, Rural Family and Changing pattern

UNIT – II

Rural Economy: Land Tenure, Land Reforms, Green Revolution and Its Impact, Bonded and Migrant Labourers, Trends of Change in Rural Society

UNIT – III

Rural Political Structure: Traditional Caste Panchayats, Panchayat before and after 73rd Amendment, New Panchayati Raj and Empowerment of Women

Readings :

Jain , P.C. (2021), Rural Sociology: Indian Context, Jaipur: Rawat Publication
Beteille, A. (1974), Studies in Agrarian Social Structure, Delhi: Oxford University Press.
Desai, A.R. (1969), Rural Sociology in India, Bombay : Popular Prakashan.
Dube, S.C.(1955), Indian Village, London : Routledge and Kegan Paul.
Doshi, S.L. and P.C.Jain (1999), Rural Sociology, Jaipur : Rawat Publication.
Jodhka, S.S. (1995), Debt, Dependence and Agrarian Change, Jaipur : Rawat Publication.
Sharma, K.L. (1997), Rural Society in India, Jaipur : Rawat Publication

Semester I

Introduction to Hospitality Management (240/BACA/MD-105)

L	T	P	L	T	P	Credits	MARKS				
(Hrs)			Credits				TI	TE	PI	PE	Total
1	-	4	1	-	2	3	5	20	15	35	75

Course Description:
This introductory course provides an overview of the hospitality industry with an emphasis on food and beverage, its growth and development, market segments and their distinguished characteristics, trends, and current concerns. The course encourages exploration of history, current trends, and future challenges of the industry. The course emphasizes the development of essential management skills needed to succeed in the fast-paced and dynamic environment.

Course Objectives:
The objective of this course is to
CO1: To Understand the structure of the food and beverage industry.
CO2: To Understand the food and beverage trends.
CO3: To Understand outlet ownership models.

Units (Theory):
Unit I: Introduction to the Hospitality Industry
- Introduction and Scope of Hospitality & Tourism Industry
- Different types of Hospitality and Tourism Establishments – hotels, resorts, restaurants, airlines, cruise lines, tour operators, entertainment, recreation and attractions.
- Hierarchy in Hospitality Establishments

Unit II: Food and Beverage Establishments
- Introduction to the Food and Beverage Establishments
- Restaurant and Bar Classification
- Organization Structure of a Food and Beverage Outlet
- Analysis of the Food & Beverage Outlet Functions

Unit III: Food and Beverage Trends
- Overview of Food and Beverage Trends
- Current Food and Beverage Trends Globally
- Future Trends
- Analysis of the Food & Beverage Trends

Unit IV: Outlet Ownership and Structure
- Introduction to the Food and Beverage Outlet Ownership and Structure
- Types of Ownerships
- Advantages and Disadvantages of Various Outlet Ownerships
- Analysis of the Outlet Ownership

Units (Practical):
Unit I: Introduction to the Hospitality Industry
- Introduction and Scope of Hospitality & Tourism Industry
- Different types of Hospitality and Tourism Establishments – hotels, resorts, restaurants, airlines, cruise lines, tour operators, entertainment, recreation, and attractions.
- Hierarchy in Hospitality Establishments

Unit II: Food and Beverage Trends

- Current Trends
- Future Trends
- Farm to Table

Unit III: Food and Beverage Retail

- Retail Products and Awareness
- Customer Awareness and Sensitization
- Reading Labels

Unit IV: Influence of Restaurant Aggregators

- Worldwide Scenario of Restaurant Aggregators
- Leveraging Data

Suggested Readings:

- John R. Walker. (2016). Introduction to Hospitality Management. Pearson Publication
- R, Singaravelavan. (2016). *Food & Beverage Service*. Oxford

Introduction to Hospitality Management											
CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**
CO 1	3	-	-	-	-	-	-	-	-	-	-
CO 2	3	-	-	3	3	1	-	2	2	3	2
CO 3	3	2	-	-	-	1	-	2	2	-	2

Semester II

Inclusive HR Practices (240/BACA/MD-205)

L	T	P	L	T	P	Credits	MARKS				
(Hrs)			Credits				TI	TE	PI	PE	Total
2	1	-	2	1	-	3	25	50	-	-	75

Course Description:
This course explores the intersection of human resources management and diversity within the global workspace. It examines the role of HR practices in promoting diversity, equity, and inclusion, while also addressing challenges and opportunities faced by organizations operating in diverse environments. Through theoretical frameworks and practical case studies, students gain insights into how HR strategies can effectively manage diverse workforces and foster a culture of inclusivity.

Course Objectives:
The objective of this course is to
CO1 To Understand the principles of Human Resources Management and Diversity
CO2 To Implement Inclusive Staffing and Cultural Management Strategies
CO3 To Demonstrate skills in Staffing, Culture Management, and Performance Metrics

Units (Theory):
Unit I: Overview to Human Resources and Diversity
- Principles of Human Resources Management
- Conceptualizing Global Workplace Diversity
- HR's Influence on Diversity and Inclusion Initiatives
- Navigating Legal and Ethical Issues in Diversity
- Theoretical Foundations of Global Human Resources

Unit II: Staffing and Process
- Understanding Human Resources Management
- Effective Recruitment Strategies
- Recognizing and Addressing Bias in Selection Processes
- Techniques for Diverse and Inclusive Interviewing
- Assessing and Evaluating Candidate Selection

Unit III: Managing Culture
- Exploring Human Resources Management
- Cultivating Inclusive Workplace Cultures
- Navigating Conflict Resolution within Teams
- Promoting Employee Resource Groups and Diversity Initiatives
- Advancing Training and Development Programs

Unit IV: Diversity and People Performance
- Assessing Diversity and Inclusion
- Connecting Diversity Metrics to Business Performance
- Diversity Scorecards and Reporting
- Continuous Improvement in Diversity Practices

Suggested Readings:

- Dessler, G. (2017). Human Resource Management. 15th ed. Harlow – Essex. Pearson Education
- (Barak, 2022) Managing Diversity: Toward a Globally Inclusive Workplace" by Michalle E. Mor Barak

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO 1	3	1	-	-	3	1	1	3	-	2	2
CO 2	2	2	2	1	3	3	3	2	1	2	2
CO 3	3	2	1	-	2	3	2	3	1	1	2

Semester I

Fundamentals of Bakery & Patisserie (240/BBAHM/MD105)

L	T	P	L	T	P	Credits	MARKS				
(Hrs)			Credits				TI	TE	PI	PE	Total
-	-	6	-	-	3	3	-	-	25	50	75

Course Description:
This course is designed to give students the basic idea of fundamentals in bakery and patisserie. Students will be introduced to basic ingredients, tools and equipment. Students will explore the science behind bakery and patisserie by applying those aspects through various techniques and methods. This course will enable them to understand various applications that build the basic grounds of bakery and patisserie. Students will learn about cookies, travel cakes, Brownies, Blondies and various Basic breads that built the foundation for Bakery and Pastry fundamentals.

Course Objectives:
The objective of this course is to
CO1 To Understand the basics of Pastry and Bakery.
CO2 To Identify various tools, equipment, and ingredients.
CO3 To Select the right ingredients, measuring and weighing them accurately
CO4 To Prepare various cookies, cakes and breads using different methods and techniques.

Units (Practical):
Unit I: Cookies
- Chocolate chip, Spritz, Biscotti
- Almond oats, Scottish sable
- Sandwich, Jam drop, soft center
- Florentine

Unit II: Muffins and Cupcakes:
- Choco chip muffin, Vanilla muffin
- Berry crumble, Cupcakes
- Chocolate ganache, Buttercream
- Piping techniques

Unit III: Travel Cakes, Brownies and Blondies:
- Pound cake, Yellow Butter Cake
- Fudgy Brownie, Gooey Brownies
- Banana Walnut Cake, Carrot Cake
- Caramelized milk Cake, White Chocolate Blondie

Unit IV: Basic breads:
- Soft rolls, Hard rolls
- Pita, Lavash, Grissini
- Focaccia.

Suggested Readings:

- Bachour, A. (2017). Bachour The Baker. The Chefs Connection.
- Gisslen, W. (2016). Professional Baking. John Wiley & Sons Inc.
- Notter, E. (2011). The Art of the Chocolatier. John Wiley & Sons Inc.
- Suaz, M. (2008). Advanced Bread and Pastry. Delmar Cengage Learning.

Fundamentals of Pastry and Bakery												
CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**
CO1	2	-	-	-	2	3	-	2	-	-	2	-
CO2	-	-	2	-	-	3	-	-	1	-	1	-
CO3	1	-	1	-	-	-	-	-	2	-	-	-
CO4	3	-	2	2	1	3	-	-	1	1	2	-

Semester II

Human Resources and Diversity in the Global Workspace (240/BBAHM/MD205)

L	T	P	L	T	P	Credits	MARKS				
(Hrs)			Credits				TI	TE	PI	PE	Total
2	1	-	2	1	-	3	25	50	-	-	75

Course Description:
This course explores the intersection of human resources management and diversity within the global workspace. It examines the role of HR practices in promoting diversity, equity, and inclusion, while also addressing challenges and opportunities faced by organizations operating in diverse environments. Through theoretical frameworks and practical case studies, students gain insights into how HR strategies can effectively manage diverse workforces and foster a culture of inclusivity.

Course Objectives:
The objective of this course is to
CO1 To Understand Diversity Management and its dimensions and implications in human resources.
CO2 To Recognize the different recruitment strategies, bias awareness techniques, and inclusive interviewing methods necessary for managing diverse workforces effectively.
CO3 To Understand the impact of diversity on organizational dynamics and performance.
CO4 To Apply Diversity Metrics for Performance Enhancement

Units (Theory):
Unit I: Introduction to Human Resources and Diversity
- Understanding Human Resources Management
- Conceptualizing Diversity in the Global Workspace
- The Role of HR in Promoting Diversity and Inclusion
- Legal and Ethical Considerations in Diversity Management
- Global HR Theories

Unit II: Recruitment and Selection
- Recruitment Strategies
- Bias Awareness in Selection Processes
- Interviewing Techniques for Ensuring Diversity
- Evaluating Candidate Selection

Unit III: Managing Workplace
- Creating Inclusive Work Cultures
- Conflict Resolution in Teams
- Employee Resource Groups and Diversity Initiatives
- Training and Development

Unit IV: Diversity Metrics and Organizational Performance
- Measuring Diversity and Inclusion
- Linking Diversity Metrics to Business Outcomes

- Diversity Scorecards and Reporting
- Strategies for Continuous Improvement in Diversity Practices

Suggested Readings:

- Dessler, G. (2017). Human Resource Management. 15th ed. Harlow – Essex. Pearson Education
- (Barak, 2022) Managing Diversity: Toward a Globally Inclusive Workplace" by Michalle E. Mor Barak

Human Resources and Diversity in the Global Workspace												
CO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PSO1**	**PSO2**	**PSO3**	**PSO4**
CO1	3	1	-	-	3	1	1	3	3	-	2	1
CO2	2	2	2	1	3	3	3	2	2	-	3	1
CO3	3	2	1	-	2	3	2	3	2	1	1	1
CO4	2	1	2	2	2	-	1	3	3	2	2	2

Housekeeping Operations
Course ID – 240/HHA/MD105

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
2	1	-	3	25	50	-	-	__ Hours

Type of Course: - Multidisciplinary Course

Core Course (CC)	Minor Course (MIC) including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship
		√				

Introduction to the Course:
The course aims to provide basic knowledge and understanding of housekeeping operations in a hotel. It equips learners with the knowledge of the various duties and responsibilities and areas within the department and the hotel that come under the purview of a housekeeper's responsibilities. As cleanliness sets a first impression for quality and demonstrates the standards of the hospitality establishment, particular emphasis is put on making learners competent in a range of housekeeping functions.
Course Outcome: - After completing the course learners will be able to:
CO1. Understand the scope/breadth of the housekeeping department and its scope in other organizations.
CO2. Recognize the purpose, role and areas of responsibility of the housekeeping department in a hotel unit.
CO3. Explain the importance of cleanliness and hygiene and identify the guest room layouts, status codes, and the standard contents of a guest room.

Detailed Syllabus:
Unit-I
Understanding Housekeeping-Importance and scope of housekeeping in hotels and other organizations; different levels of hierarchy and their duties and responsibilities; various sections, areas and layouts in the housekeeping department; different types of Guest rooms and their components.
Unit-II
Housekeeping Control desk - importance and functions in housekeeping, and its coordination with other departments; Daily Routines and Systems in Housekeeping - activities, operational procedures, and shifts in 'The housekeeping day'; control desk procedures- different types of keys, key control and underline the purpose and procedure of gate pass, room move, and lost and found; situation handling - practice and demonstration of handling guest inquiries, requests, and complaints.
Unit-III
Cleaning of Guestrooms and Public Area-Classification and Selection of Housekeeping Inventories i.e., equipment, agents, and linens and its control; Linen identification (guest room linen, F&B linen, health club linen) and the SOPs of Bed Making; Types of Soil and Standards of Cleaning; Science and frequencies of cleaning; Cleaning of Public Areas.

TEXTBOOK
- Raghubalan, G. and Raghubalan, S., (2015) *Hotel housekeeping: Operations and*

Management, Oxford University Press, New Delhi

OTHER RECOMMENDED TEXTS

- Andrews, S., (2008) Hotel Housekeeping Operations and Management, McGraw Hill Education, New Delhi
- Aggarwal, D. K, (2006) Housekeeping management, Aman Publications, New Delhi
- Jones, T.J.A, (2005) Professional Management of Housekeeping Operations (4th edn), John Wiley, New Jersey

Final Assessment (FA)

Theory Internal **(TI)**	**25%**
Theory External **(TE)**	**50%**
Final Assessment (FA) = (TI+TE)	**75%**

Theory Internal (TI): The **(TI)** will be done through in-class tests/ coursework/presentations/journals or assignments.
Theory External (TE): The **(TE)** will be done through the end-term theory examination.

The question paper pattern for the end-term examination will be **50 Marks** and will follow the following pattern:

Question 1	Questions No. One (1) will have eight (8) MCQs (All Compulsory).	**8*1=8 marks**
Question 2	Questions No. Two (2) will have six 6) brief answer questions/options. (The learner has to answer four (4) out of the six (6).	**4*2=8 marks**
Question 3	Question No. Three (3) will have five (5) descriptive questions/options (The learner has to answer three (3) out of the five (5).	**3*6= 18 marks**
Question 4	Question No. Four (4) will have Three (3) descriptive questions/options (The learner can answer Two (2) out of the Three (3).	**2*8= 16 marks**
	Total Marks	**50 marks**

Mapping Matrix of Course

Table 1: CO-PO Matrix for the Course

COURSE OUTCOMES	PO1	PO2	PO3	PO4
CO1	3	3	2	2
CO2	3	3	2	2
CO3	2	2	1	1
Average	2.66	2.66	1.66	1.66

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	2
CO2	3	3	2	2
CO3	2	2	1	1
Average	2.66	2.66	1.66	1.66

SEMESTER 1

Food Production and Culinary Art-I
Course ID - 240/HHA/CC101

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
2	-	4	4	15	35	15	35	__ Hours

Type of Course: Core Course

Core Course (CC)	Minor Course (MIC) including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship
√						

Introduction to the Course:
The course aims to give learners a theoretical and practical understanding of Food Production and Culinary Arts. Learners are trained to prepare different kinds of food and presentations, along with an understanding of basic concepts, technical knowledge and competencies. With comprehensive exposure to the working conditions of a kitchen, learners will be able to understand, organize, and perform the various functions which are critical to the success of a hotel.

Course Outcome: - After completing the course learners would be able to:
CO1. Understand the culinary department and its scope in the Hospitality Industry.
CO2. Identify roles and responsibilities of the professional kitchen.
CO3. Explore food commodities, equipment, characteristics and uses.
CO4. Learn and apply different types of cooking techniques through culinary workshops.

Detailed Syllabus:
Unit-I
Introduction to cookery- attitude, behaviour and personal hygiene; kitchen department and its role; classical brigade, organizational structure of the kitchen, duties and responsibilities of personnel; classification of stocks and its uses; preparation of various soups.
Unit-II
Introduction to sauces, their classification and uses; overview of vegetable cookery, effects of heat on vegetables, pigment and colour change; classification of various types of fish and shellfish, cuts and storage of fish and shellfish.
Unit-III
Cooking methods and ways of heat transference; equipment used in various methods; classification of poultry and storage; application of cooking methods; commodities used in bakery and pastry, different types of flour, raising agents, fats and oils.
Unit-IV
Classification and uses of egg, structure, grading and types; introduction to salads - composition, types, salad dressing, method of preparation; understanding of baking, ingredients

used in bread making and principles of bread making.

TEXTBOOK

- Bali, P.S. (2017), *Food Production Operations*, Oxford, New Delhi

OTHER RECOMMENDED TEXTS

- Foskett, D., Paskins, P. and Rippington, N. (2019), *Practical Cookery* (14th edn), Hodder Education, UK
- Motarjemi, Y., Moy, G. and Todd, E.C.D. (2014), *Encyclopaedia of food safety*, Apple Academic Press, Amsterdam
- Arora, K. (2008), *Theory of Cookery*, Frank Bros & Co., New Delhi

Final Assessment (FA)

Theory Internal **(TI)**	**15%**
Theory External **(TE)**	**35%**
Practical Internal **(PI)**	**15%**
Practical External (**PE)**	**35%**
Final Assessment (FA) = (TI+TE+PI+PE)	**100%**

Theory Internal (TI): The **(TI)** will be done through in-class tests/coursework/presentations/journals or assignments.
Theory External (TE): The **(TE)** will be done through the end-term theory examination.
Practical Internal (PI): The **(PI)** will be done through in-class continuous assessment.

The question paper pattern for the end-term examination will be **35 Marks** and will follow the following pattern:

Question 1	Questions No. One (1) will have five (5) MCQs (All Compulsory).	**5*1=5 marks**
Question 2	Questions No. Two (2) will have six (6) brief answer questions/ options. (The learner has to answer five (5) out of the six (6).	**5*2=10 marks**
Question 3	Question No. Three (3) will have three (3) descriptive questions/ options. (The learner has to answer two (2) out of the three (3).	**2*5= 10 marks**
Question 4	Question No. Four (4) will have Two (2) descriptive questions/ options. (The learner can answer one (1) out of the Two (2).	**1*10=10 marks**
	Total Marks	**35 marks**

Mapping Matrix of Course

Table 1: CO-PO Matrix for the Course

COURSE OUTCOMES	PO1	PO2	PO3	PO4
CO1	2	3	2	2
CO2	3	3	2	2
CO3	3	2	2	2
CO4	2	2	2	2
Average	2.5	2.5	2	2

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4
CO1	2	3	2	2
CO2	3	3	2	2
CO3	3	2	2	2
CO4	2	2	2	2
Average	2.5	2.5	2	2

Food and Beverage Service Operations-I
Course ID - 240/HHA/CC102

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
2	**-**	**4**	**4**	**15**	**35**	**15**	**35**	**__ Hours**

Type of Course: - Core Course

Core Course (CC)	Minor Course (MIC) including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship
√						

Introduction to the Course:
The course aims to give the learner excellent knowledge of the duties, roles and responsibilities of a food and beverage server. The module will also build the practical knowledge of the learner to understand the different aspects of service. The hospitality industry has high standards of work and operational practices which need to be reflected in the curriculum.

Course Outcome: - After completing the course learners will be able to:
CO1. Explain the purpose, role and areas of responsibility of a food and beverage department in a hotel unit.
CO2. Explain the topography of the food and beverage service industry.
CO3. Understand the sequence of service.
CO4. Understand the term 'Menu' and its importance as a sales tool.

Detailed Syllabus:
Unit-I
Width of the food and beverage service industry; styles and types of catering; recognition of different F&B equipment and their uses; understanding the role of the food and beverage department; F&B hierarchy; attributes of a good server; mise-en-scene and mise-en-place, food & beverage service etiquette.
Unit-II
Ancillary sections - still room; silver room, wash-up, hot plate; pantry & linen store; introduction to the menu; styles of service - waiter service, self-service and assisted service; menu in

Syllabus

Name of Subject: **Introduction to Travel and Tourism**	Maximum Theory Marks:75 (TE+TI+PE+PI=50+25+0+0)
Course ID: 240/TTM/MDC101	Time Allowed: 3 Hours
Credits 3 (L-T-P = 2+1+0)	**Multi-Disciplinary Courses**

Instructions for paper setter: Examiner is requested to set **one compulsory and eight other questions, two from each unit.** The compulsory question should be of 10 marks and should cover entire syllabus. Student should attempt four other questions i.e. one from each unit.

Course Outcomes: - After completing the course, students will be able:

CO1: To Explain the meaning, definition, and types of tourism.
CO2: To Identify and describe different tourism products and tourist classifications.
CO 3: To Apply key tourism-related terms in the hospitality industry.
CO4: To evaluate factors influencing tourism growth and career opportunities.

COURSE CONTENTS:

Unit 1:
Meaning, definition, characteristics, importance, and types of Tourism. Elements & Components of Tourism. Tourism products typology & features. Tourism as an industry.
Unit 2:
Explaining of the terms- Tour, Tourist, Visitor, Traveler, Travel, Transfer, Sightseeing, Excursionist, Leisure, Pleasure, Recreation, Resources, and Attraction & Hospitality. W.T.O. classification of Tourists and its significance. Problem and Prospects of Tourism.
Unit 3:
Factors influencing the growth of Tourism: push & pull forces. Travel Motivations and travel barriers. Approaches to the study of Tourism. Career opportunities in Travel Trade.
Unit 4:
Tourism through ages. Linkages of tourism with other industries. Impacts of tourism (Economic, Socio-cultural, and Environmental both positive and negative).

Suggested Readings:

- Anand, M.M., Tourism and hotel Industry ii1 India, Prentice Hall, New Delhi, 1976.
- Bhatia, A. K., International Tourism, Sterling Publishers, New Delhi.
- Bhatia, A. K., Tourism development: Principles, Practices and Philosophies, SterlingPublishers, New Delhi
- McIntosh, Robert, W. Goldner, Charles, Tourism: Principles, practices andphilosophies, John Wiley and Sons Inc. New York1990 (9th Edition).

MAPPING MATRIX OF COURSE:

Table: CO's - PO's, and CO's - PSO's Matrix for the Course: Introduction to Travel & Tourism

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1	3	2	3	1	1	1	2	2	2
CO2	3	2	2	1	1	2	2	2	2
CO3	2	2	2	1	2	2	2	2	2
CO4	3	2	3	2	1	1	2	2	2
Average	2.75	2.00	2.50	1.25	1.25	1.50	2.00	2.00	2.00

Syllabus

Semester 2

Name of Subject: **Tour Package Management and Destinations**	Maximum Theory Marks:75 (TE+TI+PE+PI=50+25+0+0)
Course ID: **240/TTM/MD201**	Time Allowed: 3 Hours
Credits 3 (L-T-P = 2+1+0)	**Multi-Disciplinary Courses**

Instructions for paper setter: Examiner is requested to set **one compulsory and eight other questions, two from each unit.** The compulsory question should be of 10 marks and should cover entire syllabus. Student should attempt four other questions i.e. one from each unit.

Course Outcomes: - After completing the course, students will be able:

CO1:- To Design and develop effective itineraries for various tourist circuits, considering essential requirements and challenges.
CO2:- To Formulate and design package tours, considering seasonality, target market, and budget, and classify and market tour packages effectively.
CO3:-To calculate tour costs and prices, considering various factors and ethical issues, and prepare cost sheets for different types of tours.
CO4:- To operate package tours efficiently, confirming and reconfirming arrangements, distributing customized itineraries, and following standard procedures for pickup, drop, check-in, and check-out.

COURSE CONTENTS:

Unit 1:
Travel Agency and Tour Operator: History, growth, definition, types and present status of Travel agency, Organizational structure and working of travel agency, Differentiation between travel agency and tour operation business, Process for approval of travel agency in India. Itinerary preparation, travel Retailing and operations, preparation of tour packages, source of Income- commission, service charges and mark up on tours.
Unit 2:
Tour Package Management: Concept, nature, features and methods. Types of tours, tour package pricing – Nature, need and determination, Formulation, Printing and distribution of tour package brochure. Itinerary Planning and Their costing and communicating with clients and principles.
Unit 3:
Tourism resources of Himachal Pradesh, Rajasthan and Leh-Laddakh with accessibilities & accommodation facilities along with itineraries and Map work.
Unit 4:
Tourist Attractions of USA, Switzerland and England with accessibilities & accommodation facilities along with itineraries. VISA process for USA & Canada.

Suggested Readings:

- Holloway, J. c., The Business of Tourism (1983), Mac Donald and Events.
- Plymouth. Syratt Gwenda, Manual of Travel Agency Practice.
- Butterworth Heinmann, London, 1995.
- Stevens Laurence, Guide to Starting and Operating Successful Travel.
- Agency, Delmar Publishers Inc., New York. 1999.
- Gee, Chuck and Y. Makens, Professional Travel Agency Management.
- Prentice Hall, Nt.: York, 1990.

MAPPING MATRIX OF COURSE:

Table: CO's - PO's, and CO's - PSO's Matrix for the Course: Tour Package Management and Destinations

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1	2	3	1	2	1	2	3	3	2
CO2	2	3	2	3	2	2	2	3	2
CO3	3	3	2	3	2	2	3	3	3
CO4	2	2	1	2	2	2	3	2	2
Average	2.25	2.75	1.50	2.50	1.75	2.00	2.75	2.75	2.75

MDC-1:- Philosophy of Gandhi
Credits: 03
Maximum Marks:-75
240/PHILM/MD101

Internal Assessment Marks:-25
End Term Exam Marks:- 50
Time:-3hrs.

Course Learning Outcomes (CLO):

After completing this course, the learner will be able to know/ understand:

104.1The basic ideas of Gandhian philosophy

104.2The basic concepts of Gandhi about Swadeshi, Ahinsa and Satyagraha

104.3*. The key ideas of Gandhi ji

104.4. Relevance of Gandhian philosophy

Instructions for Paper-Setter

The paper-setter is requested to set Nine questions in all i.e., One Compulsory Objective Type Question (7x1) without any choice, equitably distributed over the whole syllabi and Two QuestionsfromEach Unit equitably spread over the concerned unit.The examinees will have to attempt Five questions in all, selecting one question from each unit. All questions carry equal marks.

Unit: I

Introduction to the Sources of Philosophy of Gandhi; Gandhi's views on differrent living religions; Cardinal Virtue

Unit: II

Social Philosophy of Gandhi: God and Truth; Ahimsa (NonVoilence); Satyagraha

Unit III

Political Philosophy of Gandhi: SwaraJ; Swadeshi; Sarvodya

Unit: IV

Moral Philosophy of Gandhi : Sarva samaj sambhava; Communal Harmony; Trusteeship

Recommended Books/e-resources/LMS:

1. Krishna Kripalani : Gandhi: A Life , Published by National Book Trust India

2.M K Gandhi: Mahatma Gandhi " The Man and His Philosophy" , Published by Shrishti Publications,New Delhi

3. MK Gandhi: Hind Swaraj, Published by Navajivan Publishing House Ahmedabad

4.B K Lal : Contemporary Indian Philosophy (Hindi Version also available) , published by Motilal Banarasi Das ,New Delhi 5 MKGandhi : My Experiments with truth

MDC-2:- Yoga and Meditation
Credits:- 03
Maximum Marks:-75
240/PHILM/MD201

Internal Assessment Marks:-25
End Term Exam Marks:-50
Time:-3hrs.

Course Learning Outcomes(CLO):

After completing this course,the learner will be able to know/understand:

204.1.	The basic concepts of Yoga system
204.2.	The basic concepts of meditation
204.3.	The basic steps of Asana
204.4.	The relevance of yoga philosophy

Instructions for Paper-Setter

The paper-setter is requested to set Nine questions in all i.e., One Compulsory Objective Type Question (7x1) without any choice, equitably distributed over the whole syllabi and Two Questions from Each Unit equitably spread over the concerned unit. Theexaminees will have to attempt Five questions in all, selecting one question fromeach unit. All questions carryequal marks.

Unit I

Meaning, Definition and nature of yoga
according to Maharishi Patanjali;
Chitta , Cittavratti and Chittabhumi

UnitII

Types of Yoga: Karma yoga; Gyana Yoga , Bhakti Yoa

Unit III

Astanga Yoga (Yam,
Niyama, Aasan,
Pranayam,Pratyaahar,
Dharna, Dhayan and Smadhi);

Unit IV

Methods,
Precautions an Merit of the following Aasanas:
Vajrasana; Sirshasana:
Makarasana; Bhujangasana etc

Recommended Books/e-resources/LMS:

1.Acharya Yatendra: Yoga and Stress management, Published by Fingerprint Publishing, ,Prakash books India Pvt Ltd,New Delhi
2.Swami Vivekananda: Patanjali Yoga Sutras, Srishti publication,New Delhi

3.Swami Vivekananda: The complete Book of Yoga, Karma Yoga, Bhakti Yoga, Raja Yoga, Jnana Yoga, published by Fingerprint Publishing, Prakash books India Pvt Ltd, New Delhi ,2019
4. Swami Rama : Meditation and Its practice, Published by Himalayan Institute Press, 1999
5.Ram Dev: Yoga Sadhana Evam Yoga Chikitsa Rahasya,Divya Prakashan, Haridwar,2004.

Food Production and Culinary Art
Course ID – 240/HHA/MD205

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
1	-	4	3	15	35	5	20	__ Hours

Type of Course: - Multidisciplinary Course

Core Course (CC)	Minor Course (MIC) including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship
		√				

Introduction to the Course:
The course aims to give learners a theoretical and practical understanding of Food Production and Culinary Art. Learners are trained for the preparation of different kinds of food and presentations, along with an understanding of basic concepts, technical knowledge and competencies. With comprehensive exposure to the working conditions of a kitchen, learners will be able to understand, organize, and perform the various functions that are critical to the success of a hotel.

Course Outcome: - After completing the course learners would be able to:
CO1. Learn about the various kinds of herbs and spices, and the philosophy behind them.
CO2. Recognize the fundamental design and specifications of a five-star hotel's breakfast menu setup.
CO3. Explore food commodities, equipment, characteristics and uses.
CO4. Analyze the preparation, application, and storage of various gravies.

Detailed Syllabus:
Unit-I
Herbs and spices - types, usage, characteristics and storage precautions; classification of equipment, selection criteria; fuel used in the kitchen - advantages, cost, availability, safety and efficiency.
Unit-II
Introduction to rice, cereals and pulses - types, impact of cooking on these commodities, selection and storage criteria; breakfast cookery - introduction, breakfast and its importance, types and building better breakfast.
Unit-III
Theory - Menu planning - definition, importance, types and requirements, concept of menu balancing and modern trends of menu planning; basic sponges and cakes - principles, steps involved, role of different ingredients and usage of equipment.

TEXTBOOK
- Bali, P.S. (2017), Food Production Operations, Oxford, New Delhi

OTHER RECOMMENDED TEXTS
- Foskett, D., Paskins, P. and Rippington, N. (2019), Practical Cookery (14th edn), Hodder Education, UK
- Motarjemi, Y., Moy, G. and Todd, E.C.D. (2014), Encyclopaedia of food safety, Apple Academic Press, Amsterdam
- Arora, K. (2008), Theory of Cookery, Frank Bros & Co., New Delhi

Final Assessment (FA)

Theory Internal **(TI)**	**15%**
Theory External **(TE)**	**35%**
Practical Internal **(PI)**	**5%**
Practical External (**PE)**	**20%**
Final Assessment (FA) = (TI+TE+PI+PE)	**100%**

Theory Internal (TI): The **(TI)** will be done through in-class tests/ coursework/presentations/journals or assignments.

Theory External (TE): The **(TE)** will be done through the end-term theory examination.

Practical Internal (PI): The **(PI)** will be done through in-class continuous assessment.

The question paper pattern for the end-term examination will be **35 Marks** and will follow the following pattern:

Question 1	Questions No. One (1) will have five (5) MCQs (All Compulsory).	**5*1=5 marks**
Question 2	Questions No. Two (2) will have six (6) brief answer questions/ options. (The learner has to answer five (5) out of the six (6).	**5*2=10 marks**
Question 3	Question No. Three (3) will have three (3) descriptive questions/ options. (The learner has to answer two (2) out of the three (3).	**2*5= 10 marks**
Question 4	Question No. Four (4) will have Two (2) descriptive questions/ options. (The learner can answer one (1) out of the Two (2).	**1*10=10 marks**
	Total Marks	**35 marks**

Mapping Matrix of Course

Table 1: CO-PO Matrix for the Course

COURSE OUTCOMES	PO1	PO2	PO3	PO4
CO1	2	3	2	2
CO2	3	3	2	2
CO3	3	2	2	2
CO4	2	2	2	2
Average	2.5	2.5	2	2

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4
CO1	2	3	2	2
CO2	3	3	2	2
CO3	3	2	2	2
CO4	2	2	2	2
Average	2.5	2.5	2	2

Introduction to HACCP
Course ID - 240/ICA/MD105

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
2	-	2	3	15	35	5	20	__ Hours

Type of Course: - Multidisciplinary Course

Core Course (CC)	Minor Course (MIC including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship	Research Project / Dissertation
		√					

Introduction to the Course:

The main goal of the course is to give students a thorough foundation in HACCP and food sanitation principles.
Additionally, to educate them on food law and regulation information, microbiological characteristics, and the
hygienic handling of food.

Course Outcome: - After completing the course learners will be able to:
CO1. After completion of the subject a student will be able to:
CO2. Understand Food Microbiology, Food Contamination and Spoilage;
CO3. Follow sanitary procedure during food handling;
CO4. Understand the importance of personal hygiene

Detailed Syllabus:
Unit-I
Causes of foodborne diseases, need to control foodborne disease, history and emergence food safety system, role of urbanization and industrialization, HACCP in the context of good manufacturing and hygienic practices, definition of food hygiene, assurance of food safety and quality; traditional method of food control, importance of system in food safety management define Safe food, use of HACCP and principles of HACCP.
Unit-II
Benefits of HACCP system, analyse HACCP application, explore the preferred portfolio of channels; attain basic knowledge to apply HACCP, classification of microorganism; define the objectives of food technologies, describe the different food techniques used, food technologies used to control the development of microbiological hazard; origin of natural hazard, importance of raw materials, potential hazards in raw material, sanitation and cleaning.
Unit-III
Principle of food hygiene, hygienic manufacturing practice; guidelines of HACCP, application of HACCP system,
defining CCP, methods of monitoring; monitoring, critical limit, potential corrective actions, method of monitoring, methods of sanitation.
Unit-IV

Difference between validation and verification, food safety confirmation, effectiveness of CCP, importance of
sanitation and cleaning; aspects & implementation of HACCP, techniques & execution of HACCP.

TEXT BOOK

- Mortimore, S and Wallace. C., 2021. “HACCP: A Practical Approach”. 2nd Edition. Kulwer
  Academic/Plenum Publishers.

OTHER RECOMMENDED TEXTS

- Sprenger R. A., 2020. “HYGIENE FOR MANAGEMENT: A TEXTBOOK FOR FOOD SAFETYCOURSE”.
  11 th edition.Highfield.co.uk.limited,
- Nations, U. 2019. Food Quality and Safety Systems: A Training Manual on Food Hygiene and the Hazard.
  Food and Agriculture Org.
- Donald A. Corlett, J.R. 2020. HACCP User’s Manual. Aspen Publishers, Inc, Gaithersburg, Maryland.
- HACCP Concepts, 2nd Ed. 2018. CIFT, ICAR, Cochin, Kerala, India.

Final Assessment (FA)

Theory Internal **(TI)**	**15 Marks**
Theory External **(TE)**	**35 Marks**
Final Assessment (FA) = (TI)+(TE)	**50 Marks**

- **Theory Internal (TI):** The **(TI)** will be done through in-class continuous assessment/in-class test/ coursework/presentation & Assignment.
- **Theory External (TE):** The **(TE)** will be done through end term theory exam.
- **The question paper pattern** for the end term examination will be **50 Marks** and will follow the following pattern:

Question 1	Questions No. One (1) will have eight (8) MCQs (All Compulsory).	**8*1=8 marks**
Question 2	Questions No. Two (2) will have six 6) brief answer questions/options. (The learner has to answer four (4) out of the six (6).	**4*2=8 marks**
Question 3	Question No. Three (3) will have five (5) descriptive questions/options (The learner has to answer three (3) out of the five (5).	**3*6= 18 marks**
Question 4	Question No. Four (4) will have Three (3) descriptive questions/options (The learner can answer Two (2) out of the Three (3).	**2*8= 16 marks**

	Total Marks	**50 marks**

Mapping Matrix of Course

Table 1: CO-PO Matrix for the Course

COURSE OUTCOMES	PO1	PO2	PO3	PO4
CO1	2	2	2	2
CO2	2	2	2	2
CO3	2	2	2	3
CO4	2	3	2	2
Average	2	2.25	4	2.25

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	2	2
CO2	2	2	3	2
CO3	2	2	2	3
CO4	3	2	2	2
Average	2.25	2	2.25	2.25

Slow Food & Gastronomic Practices
Course ID - 240/ICA/MD205

L	T	P	Credits	TI	TE	PI	PE	Time Allowed
2	-	2	3	15	35	5	20	__ Hours

Type of Course: - Multidisciplinary Courses

Core Course (CC)	Minor Course (MIC including Vocational Courses (VOC)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Courses (SEC)	Value Addition Courses (VAC)	Internship	Research Project / Dissertation
		√					

Introduction to the Course:

Introduction to the Course:

The module aims to provide theoretical and analytical idea about Gastronomy and Slow food. It encompasses various aspects of food, including its taste, appearance, and cultural significance. Gastronomy combines culinary techniques, creativity, and knowledge of ingredients to create unique and memorable dining experiences, Slow food on the other hand is a term in Gastronomy that we will focus on to make sure the students understand the various Sustainable practises that are required to produce equitable food system by celebrating local food traditions, supporting small-scale producers, and encouraging individuals to make conscious and responsible food choices.

Course Outcome: - After completing the course learners will be able to:
CO1. Understand the significance of effective planning and utilization of natural resources within the context of the Farming, Fishing and Composting.
CO2. Understand, analyze and critically evaluate: The practices that are essential for the production of Slow food
CO3. Learn and implement the skill required to analyse the Bourdieu's Stance.
CO4. Explain the various factors that influence the Gastronomical practices for the Production of Food.

Detailed Syllabus:

Unit-I
Theory - Overview of the concept of gastronomy, Identify some of the main ideologies around the development of the taste. Discuss the factors that influence the construction of taste. Understand the concept of industrialization of food. Discuss the emergence and need for industrialization and commercialization.
Unit-II
Theory - Recognize the global trends in gastronomic tourism. Understand and analyse the emergence of gastronomic tourism. Define and understand the key relationship between food

and tourism. Understand the key elements of media and taste. Understand the relationship between media and its impact on the construction of taste.

Unit-III

Theory - Understand the concept of fast and slow food. Develop an understanding of the originality of regional and seasonal food. Recognize the global presence of slow food organizations. Define and understand key terms around slow food. Explore the concept of sustainability and sustainable development. Understand sustainable value chains, with a focus on food systems and industrial manufacturing systems

Unit-IV

Theory - Understand the key elements of traditional Indian food. Be able to explain and understand Indian food and culture. Realize the current state of Slow food in India. Analyze the future of slow food in the Indian context. Analyze the practices implemented by various hospitality organizations. Evaluate the role of humans and technology in planning and implementing various practices. Identify potential areas for research and development.

TEXT BOOK

- Petrini, C. B, Watson et.al. (2001). Collected Thoughts on Taste, Tradition, and the Honest Pleasure of Food, Slow Food, Chelsea green publishing company. USA.
- Petrini, C, Padovani, G. (2005). Slow Food Revolution, A New Culture for Eating and Living. Rizzoli., ublication. USA.
- Sloan D (ed.) (2004) Culinary Taste: Consumer Behaviour In the International Restaurant Sector Oxford Butterworth Heinemann.

OTHER RECOMMENDED TEXTS

- Munjal S., Bhushan S., (eds.) 2017. Chapter 11: Culinary Innovation in Indian Hotels & Building Cost Efficiencies that Spur Profitability Growth. The Indian Hospitality Industry: Dynamics and Future Trends Advances in Hospitality and Tourism. Apple Academic Press.
- Sandeep Munjal & Sanjay Sharma, (2022) Food and Beverage Hospitality Industry in India, CRC Press.

Final Assessment (FA)

Theory Internal **(TI)**	**15%**
Theory External **(TE)**	**35%**
Practical Internal **(PI)**	**5%**
Practical External **(PE)**	**20%**
Final Assessment	**75%**

Theory Internal (TI): The **(TI)** will be done through in-class continuous assessment/in-class test/ coursework/presentation/journal & assignment.

Theory External (TE): The **(TE)** will be done through the end-term theory exam.

The question paper pattern for the end-term examination will be **70 Marks** and will follow the following pattern:

Question 1	Questions No. One (1) will have eight (5) MCQs (All Compulsory).	**5*1=5 marks**

Question 2	Questions No. Two (2) will have six (6) brief answer questions/options. (The learner has to answer five (5) out of the six (6).	**5*2=10 marks**
Question 3	Question No. Three (3) will have five (3) descriptive questions/options (The learner has to answer two (2) out of the three (3).	**2*5= 10 marks**
Question 4	Question No. Four (4) will have Two (2) descriptive questions/options (The learner can answer one (1) out of the Two (2).	**1*10= 10 marks**
	Total Marks	**35 marks**

Mapping Matrix of Course

Table 1: CO-PO Matrix for the Course

COURSE OUTCOMES	PO1	PO2	PO3	PO4
CO1	2	2	2	2
CO2	2	2	2	2
CO3	2	2	2	3
CO4	2	3	2	2
Average	2	2.25	4	2.25

Table 2: CO-PSO Matrix for the Course

CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	2	2
CO2	2	2	3	2
CO3	2	2	2	3
CO4	3	2	2	2
Average	2.25	2	2.25	2.25

UG A1: Multidisciplinary Course
Semester- 1
MDC 1-Basics of Public Administration

MDC 1-Basics of Public Administration (Credits 03) **Maximum Marks: 75**
Course ID- 240/PAM/MD101 **Theory Examination: 50**
Theory Internal Assessment: 25
Examination Time: 3 hrs

Course Outcomes:

After the successful Completion of this course, the learners will be able to:
CO1: Awareness about the evolution and growth of the discipline of Public Administration.
CO2: Learning of Basic principles of Organization
CO3: Theoretical clarification of basic the themes of CVC, Lokpal, Public relation and public grievance redressal

1. **Seven Questions will be set in all and students will be required to attempt 4 questions.**
2. **Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks). 3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).**

Unit-I: Introduction
(a) Public Administration: Meaning, Evolution, Nature and Scope.
(b) Significance and its relationship with Political Science, Economics and Law. (c) Public and Private Administration.

Unit-II: Principles of organization
(a) Organization: Meaning and its bases.
(b) Principles of Organization: Hierarchy, Span of Control and Unity of command.
(c) Principles of organization: Co- ordination, Supervision, Communication and Decentralization.

Unit-III: Citizen and State Interface

(a) Citizens' Grievances Redressal Institutions and Mechanisms. (b) Institutional Mechanism for Prevention of Corruption.
(c) Central Vigilance Commission; Lok Pal and Lok Ayukta. (d) Politician and Civil Servant relationship.

Suggested readings

1. A.R. Tyagi (1992), Public Administration-Principles and Practices, Atma Ram & Sons (6th Ed.) Delhi.
2. Avasthi and Maheshwari (1988), Public Administration, Laxmi Narain Aggarwal, Agra,.
3. C.P. Bhambhari (1992), (Ed.) Public Administration-Theory and Practice, Jaiparkash Nath Publishers, Meerut,.
4. D.R. Prasad, V.S. Prasad & P. Satya Narayana (2011) (Ed.), Administrative Thinkers, Sterling Publishers Pvt. Ltd., New Delhi.
5. D.R. Sachdeva and Meena Sogani (1989), Public Administration: Concept and Application, Associated Publishing House, New Delhi,.
6. Likert (1961), New Patterns of Management, Tata McGraw Hill, New York.
7. M.P. Pinto (1989), Management Thinkers, Allied Pub. Ltd. , New Delhi.
8. M.P. Sharma and B.L. Sadana (2003), Public Administration in Theory and Practice, Kitab Mahal, Allahaba,.
9. Mohit Bhattacharya (1991), Public Administration, World Press (2nd Ed.) Calcutta,.
10. Nicholas J. Henry (1975), Public Admn. And Public Affairs, (3rd ed.) Prentice Hall, Englewood Cliffs, New Jersey.
11. Nisa Ali (1998), Administrative Thinkers, Associated Pub., New Delhi.
12. R.A. Sharma (1985), Organisational Theory and Behaviour, Tata McGraw Hill Pul, New Delhi.
13. S.L. Goel (2003), Public Administration: Theory & Practice, Deep & Deep Publications, New Delhi.
14. S.R. Maheshwari (1998), Administrative Thinkers, Macmillan, New Delhi.
15. Pardeep Sahni and Etakula Vayunandan (2010), Administrative Theory, PHI, New Delhi.
16. R.K. Sapru (2011), Administrative Theories and Management thought, PHI, New Delhi.
17. Chakrabarty, Bidyut and Chand, Prakash, Indian Administration: Evolution and Practice, Sage, New Delhi. 18. Chakrabarty, Bidyut (2020), Public Administration in a Globalizing World, Sage, New Delhi

UG A1: Multidisciplinary Course
Semester- 2
MDC 2 Indian Administration

MDC 2 Indian Administration (Credits 03) **Maximum Marks: 75**
Course ID- 240/PAM/MD201 **Theory Examination: 50**
Theory Internal Assessment: 25
Examination Time: 3 hrs

Course Outcomes:

After the successful completion of this course, the student will be able to

CO 1- Understand the role and main features of Indian Administration
CO 2- Know the constitutional framework and important positions in Indian Administration CO
3- Understand the organization of various ministries and commissions

1. **Seven Questions will be set in all and students will be required to attempt 4 questions.**
2. **Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks). 3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).**

UNIT 1

British Legacies over Indian Administration.
Features of Indian Administration.
Role of Indian Administration in Socio-Economic Development.
Fundamental Rights and Duties.

UNIT 2

President: Election, Impeachment, Powers and Position.
Prime Minister & Council of Ministers: Appointment, Powers and Role.
Central Secretariat and Cabinet Secretariat: Organisation, Role and Functions

UNIT 3

Ministry of Home Affairs: Organisation and Role
Ministry of Finance: Organisation and Functions
Ministry of Personnel, Public Grievance and Pension: Organisation and Functions Ministry of Defence: Organisation and Functions

Suggested Readings

1. Indian Administration – Hoshiar Singh & Pankaj Singh ,Pearson's Publication(2012)
2. Bhartiya Prashasan (Hindi) – Hoshiar Singh & Pankaj Singh ,Pearson's Publication
3. Avasthi A. 1980. Central Administration: Tata Mc graw Hill: New Delhi.
4. Chanda Ashok: 1967. Indian Administration: Allen and Unwin: London.
5. Jain, R. B., 1976. Contemporary Issues in Indian Administration, Vishal Publications: New Delhi.
6. Johari, J.C., 1977. Indian Government and Politics : Vishal Publications: Delhi.
7. Khera, S.S. 1975. The Central Executive. Orient Longman: New Delhi.
8. Maheshwari, S.R., 2007. Indian Administration (English & Hindi). Orient Longman: New Delhi.
9. Misra B.B., 1970. The Administrative History of India; Oxford University Press: London.
10. Muttalib, M.A. 1967. Union Public Service Commission, I.I.P.A.: New Delhi.
11. Puri, K.K., 1985, Indian Administration, Bharat Prakashan, Jalandhar.
12. Prasad, Bishwanath 1968. The Indian Administrative Service; S. Chand & Company: Delhi.
13. Singh Hoshiar and Singh Mohinder, 1989. Public Administration in India: Theory and
14. Practice; Sterling Publishers Private Ltd., New Delhi.
15. Subramaniam, Malathi, 1987, Management of Public Administration, Deputy Publications:Delhi.
16. Subramaniam, V. 1971. Social Backgrouond of India's Administrators, Publication Division Government of India: New Delhi.

UG A1: Multidisciplinary Course
Semester- 3
MDC 3 Financial Administration

MDC 3 Financial Administration (Credits 03)

Course ID- 240/PAM/MD301

Maximum Marks: 75
Theory Examination: 50
Theory Internal Assessment: 25
Examination Time: 3 Hrs

Course Outcome:

After the successful Completion of this course, the learners will be able to:
CO 1: Gain knowledge about the budgetary system in India
CO 2: Understand financial markets and their influence on organizational financial strategies CO
3: Develop ability to evaluate investment opportunities and make informed decisions

1. **Seven Questions will be set in all and students will be required to attempt 4 questions.**
2. **Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks). 3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).**

Unit 1
Financial administration: Meaning, Scope and Significance
Budget: Meaning and Principles
Budgetary Process: Preparation, Enactment and Execution

Unit 2

Finance Commission: Composition, Functions And Role
Finance Ministry: Organisation and Functioning
Comptroller and Auditor General of India

Unit 3

Centre – State Financial Relations
Legislative Control over Public Finance in India
Parliamentary Committees

Suggested Readings

1. Laxmikanth, M., (2012). Public Administration, New Delhi, Tata McGraw-Hill Publishing Company Ltd.
2. Financial Administration and Management by Michael J.Worth.
3. Laxmikanth, M., 2012 Indian Polity.

MDC-1

240/URDM/MD101

Urdu Zaban ka taaruf

Max Marks: 50

اردو زبان کا تعارف

Objective:

اس پرچے کا مقصد یہ ہے کہ:

۱۔اردو ادب کی تاریخ سے واقف ہو جائے۔

۲۔مختلف زبانوں میں اردو کے مقام کو سمجھ سکے۔

Course Outcome:

اس کورس کی مکمل تدریس کے بعد طلباء اس قابل ہو جائیں گے کہ:

۱۔اردو ادب کے آغاز وارتقاء کی تاریخ کیا ہے۔

۲۔مختلف زبانوں کے درمیان اردو نے اپنا کیا مقام قائم کیا ہے۔

unit-1

اردو زبان کا آغاز وارتقاء

unit-2

اردو کی پیدائش کے سلسلے میں محققین کے نظریات

unit-3

دنیا کی زبانوں میں اردو کا مقام

unit-4

اردو اور ہندوستان کی مشترکہ تہذیب

کتب برائے مطالعہ

۱۔اردو زبان کی تاریخ، مرزا خلیل احمد بیگ، ایجوکیشنل بک ہاؤس، علی گڑھ

۲۔اردو زبان ولسانیات، گوپی چند نارنگ، رام پور رضا لائبریری

۳۔زبان اور اردو زبان، کتاب گھر اردو بازار، کراچی

Instructions to the Paper-Setter and Students:

All questions are compulsory to attempt.

Unit-1 There will be two questions of which one is to be opted of 10 marks.

Unit-2 There will be two questions of which one is to be opted 10 marks.

Unit-3 There will be two questions of which one is to be opted 15 marks.

Unit-4 There will be two questions of which one is to be opted 15 marks.

MDC-2

Urdu ki Sheri Asnaf Max Marks: 50

اردو کی شعری اصناف

Objective:

اس پرچے کا مقصد یہ ہے کہ:

۱۔اردو ادب میں شعری اصناف کا علم ہو جائے۔

۲۔اردو شاعری میں چند غزلوں اور نظموں کے حوالے سے اردو شاعری کے موضوعات کا علم ہو سکے۔

۳۔حالی، اقبال، مومن غالب کے فن سے اگاہی اور موضوعات کا علم ہو سکے۔

Course Outcome:

اس کورس کی مکمل تدریس کے بعد طلباء اس قابل ہو جائیں گے کہ:

۱۔مومن اور مرزا غالب کی شاعری کے حوالے سے اس دور کا مطالعہ کر سکیں گے۔

۲۔اردو شاعری میں وقت کے ساتھ موضوعات کو کس طرح جگہ دی جاتی ہے جان سکیں گے ساتھ ہی ساتھ اس بات کا بھی علم ہو گا کہ شاعری کا دامن موضوعات کے لحاظ سے بہت وسیع ہے۔حالی اور اقبال کی نظم نگاری سے آگاہی ہو گی۔

unit-1

غزل کی تعریف، فن ارتقاء

unit-2

غالب: نقش فریادی ہے کس کی شوخئ تحریر کا

مومن: وہ جو ہم میں تم میں قرار تھا

unit-3

نظم کی تعریف فن ارتقاء

unit-4

حالی: امید

اقبال: شعاع امید

کتب برائے مطالعہ

۱۔کلیات مومن۔ڈاکٹر عبادت بریلوی، کتابی دنیا

۲۔دیوان غالب۔غالب انسٹی ٹیٹ دہلی

۳۔اصناف ادب اردو، سرسید ڈپو، علی گڈھ

۴۔کلیات حالی، جدید کتاب گھر، بلی ماران دہلی

Instructions to the Paper-Setter and Students:

All questions are compulsory to attempt.

Unit-1 There will be two questions of which one is to be opted of 15 marks.

Unit-2 There will be two couplets one from each ghazal for explanation .Each explanation will carry 5 marks . 2X5=10

Unit-3 There will be two questions of which one is to be opted 15 marks.

Unit-4 There will be two couplets one from each ghazal for explanation .Each explanation will carry 5 marks . 2X5=10

MDC-3

Urdu ki Nasri Asnaaf Max Marks: 50

اردو کی نثری اصناف

Objective:

اس کورس کا مقصد یہ ہے کہ:

۱۔طلبا اردو کی نثری اصناف سے واقف کرانا۔

۲۔افسانہ اور ڈرامہ کے فن سے آگاہی۔

۳۔اردو کے نامور نثر نگاروں کی نثر کا مطالعہ۔

Course Outcome:

اس کورس کی مکمل تدریس کے بعد طالب علم اس قابل ہو جائیں گے کہ:

۱۔افسانوی نثر کی اصناف کا علم ہو جائے گا۔

۲۔افسانہ اور ڈرامہ کے فن اور اس کے ارتقاء کو جان جائیں گے۔

۳۔پریم چند کی افسانہ نگاری ان کے فن اور موضوعات کی سنجیدگی کو سمجھنے کا موقع ملے گا۔

۴۔امتیاز علی تاج کی ڈرامہ نگاری اور اردو ڈرامے میں ان کی پہچان سے واقفیت ہو جائے گی۔

unit-1

افسانہ کی تعریف،فن،ارتقاء

unit-2

کفن: پریم چند

unit-3

ڈرامہ کی تعریف،فن ارتقاء

unit-4

انارکلی (ایک سین): امتیاز علی تاج

کتب برائے مطالعہ

۱۔اصناف ادب اردو،سرسید ڈپو علی گڈھ

۲۔انارکلی،سید امتیاز علی تاج،اتر پردیش اردو اکادمی لکھنؤ

۳۔مجموعہ منشی پریم چند،افسانے،سنگ میل پبلکیشنز،لاہور

Instructions to the Paper-Setter and Students:

All questions are compulsory to attempt.

Unit-1 There will be two questions of which one is to be opted of 15 marks.

Unit-2 There will be two questions of which one is to be opted 15 marks.

Unit-3 There will be two questions of which one is to be opted 10 marks.

Unit-4 There will be two questions of which one is to be opted 10 marks.

Multidisciplinary Course from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-1	Stop Motion Animation	240/ ANI/ MD101	2	0	2	2	0	1	3	15	35	05	20	75

Name of Subject: Stop Motion Animation	Maximum Theory marks: 50 (35+ 15)
Course ID: 240/ANI/MD101	Maximum Practical Marks: 25 (05+20)

Objectives: This course aims to equip students with foundational knowledge and skills in stop motion animation. Students will explore various materials and methods to create engaging animations, with a focus on mastering technical skills and harnessing creative storytelling techniques.

Course Outcomes:

By the end of this course, students will be able to:

- **Grasp the principles and historical context of stop motion animation.**
- **Apply stop motion techniques to produce short animated films.**
- **Design and animate characters and scenes using diverse materials.**

COURSE CONTENTS:

Unit 1: Introduction to Stop Motion Animation	

1.1 Significance and fundamentals of stop motion animation 1.2 Historical evolution and milestones in stop motion 1.3 Overview of various stop motion techniques and materials 1.4 Core principles of animation: timing, spacing, and movement	
Unit 2: Techniques and Materials	
2.1 Exploring different types of stop motion: claymation, cut-out, object, and puppet animation 2.2 Designing and constructing stop motion characters 2.3 Setting up a stop motion studio: equipment and software essentials 2.4 Techniques for frame-by-frame shooting, timing, and sequencing	
Unit 3: Storytelling and Animation	
3.1 Crafting compelling stories for stop motion animation 3.2 Storyboarding and planning scenes 3.3 Techniques for animating character expressions, lip-sync, and movement 3.4 Principles of scene composition and set design 3.5 Creating and animating props and backgrounds	
Unit 4: Production and Final Project	
4.1 Techniques for shooting and capturing frames 4.2 Editing stop motion animation: importing frames, timing adjustments, and sound integration 4.3 Post-production processes: color correction, visual effects, and final edits 4.4 Final project: creating and polishing a short stop motion animation	

Suggested Readings:

- "The Art of Stop-Motion Animation" by Ken A. Priebe
- "Stop Motion: Craft Skills for Model Animation" by Susannah Shaw
- "The Advanced Art of Stop-Motion Animation" by Ken A. Priebe

Multidisciplinary Course from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-2	Photo Editing	240/ANI/MD201	2	0	2	2	0	1	3	15	35	05	20	75

Name of Subject: Photo Editing	Maximum Theory marks: 50 (35+ 15)
Course ID: 240/ANI/MD201	Maximum Practical Marks: 25 (05+20)

Objectives: To equip students with advanced photo editing skills using industry-standard software, enabling them to enhance, manipulate, and creatively transform images for professional applications.

Course Outcomes:

By the end of this course, students will be able to:

- Understand digital image processing and editing principles.
- Proficiently use advanced photo editing software.
- Apply various editing techniques to enhance and manipulate images.

COURSE CONTENTS:

Unit 1: Introduction and Basic Editing Techniques	

1.1 Overview of photo editing and its industry significance 1.2 Digital image formats, resolution, and color spaces 1.3 Introduction to editing software (e.g., Adobe Photoshop, Lightroom) 1.4 Basic tools: cropping, resizing, brightness, contrast, exposure, and color correction 1.5 Removing blemishes and imperfections, working with layers and masks	
Unit 2: Advanced Editing Techniques and Creative Manipulation	
2.1 Advanced color correction and grading 2.2 Retouching portraits: skin smoothing, eye enhancement, hair adjustments 2.3 Creating composites and using advanced selection techniques 2.4 Working with RAW files, non-destructive editing, and artistic effects 2.5 Digital art, surreal imagery, advanced filters, and text integration	
Unit 3: Final Project	
3.1 Planning and executing a comprehensive photo editing project 3.2 Presenting and showcasing edited images 3.3 Critique sessions for feedback and improvement 3.4 Preparing images for digital platforms and print	

Suggested Readings:

- "Adobe Photoshop Classroom in a Book" by Andrew Faulkner and Conrad Chavez
- "The Adobe Photoshop Lightroom Classic Book" by Martin Evening
- "Photoshop for Photographers: A Complete Guide for Photographers" by Martin Evening
- "The Photographer's Eye: Composition and Design for Better Digital Photos" by Michael Freeman

Multidisciplinary Course from the department for pool of the Courses in the University

(These courses are to be offered to students of different discipline/Subject)

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-3	Introduction to 2D Animation	240/ANI/MD301	2	0	2	2	0	1	3	15	35	05	20	75

Name of Subject: Introduction to 2D Animation	Maximum Theory marks: 50 (35+ 15)
Course ID: 240/ANI/MD301	Maximum Practical Marks: 25 (05+20)

Objectives: To introduce students to the foundational principles and techniques of 2D animation, enabling them to create engaging animations using industry-standard tools and methods.

Course Outcomes:

By the end of this course, students will be able to:

- Understand the basic principles and history of 2D animation.
- Use industry-standard software for 2D animation.
- Create character designs, storyboards, and animated sequences.

COURSE CONTENTS:

Unit 1: Foundations of 2D Animation	

1.1 Overview of 2D animation and its historical context 1.2 Principles of animation: squash and stretch, anticipation, staging, straight ahead and pose-to-pose, follow-through, and overlapping action 1.3 Introduction to animation software (e.g., Adobe Animate, Toon Boom Harmony) 1.4 Basic drawing and sketching techniques for animation	
Unit 2: Character Design and Storyboarding	
2.1 Designing characters for animation: proportions, expressions, and movement 2.2 Creating model sheets and turnaround views 2.3 Storyboarding: visual storytelling, shot composition, and sequence planning 2.4 Developing an animation script and storyboard	
Unit 3: Animation Techniques and Final Project	
3.1 Techniques for creating smooth motion: keyframes, inbetweens, and timing 3.2 Working with layers and backgrounds 3.3 Adding audio with animation	

Suggested Readings:

- **"The Animator's Survival Kit" by Richard Williams**
- **"The Illusion of Life: Disney Animation" by Frank Thomas and Ollie Johnston**
- **"Cartoon Animation" by Preston Blair**