Multidisciplinary Course - Physical Education
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	Health, Wellness and Yoga	240/PE/MD102	2		2	2		1	3	15	35	5	20	75

By the end of this course, students will:

1. Understand the principles of physical, mental, and emotional well-being.
2. Learn basic yoga postures, breathing techniques, and meditation.
3. Explore the connection between yoga and overall health.
4. Develop strategies for managing stress through mindfulness and physical activity.
5. Gain knowledge about nutrition and healthy lifestyle habits.
6. Cultivate a personal wellness routine incorporating yoga and other health-promoting activities.

For Paper Setter: Set Eight questions in all. Question one is small answer type questions from all units. Each question of Seven marks.
For Students: Attempt any Five questions. Question One is compulsory. All questions carry equal marks.

I. **Introduction to Health, Wellness & Yoga**

- Definitions of health and wellness.
- The holistic nature of wellness: Physical, mental, and emotional health.
- The history and philosophy of yoga.
- Importance and Benefits of regular physical activity.

Practical Session: Yoga asanas to improve flexibility and strength (Surya Namaskar and basic postures), Introduction to basic yoga postures (Asanas) and breathing techniques (Pranayama).

II. **Components of physical health: Cardiovascular endurance, flexibility, strength.**

- The importance of flexibility and muscle strength.
- Key yoga poses for building strength in the core, arms, and legs.
- The role of balance in yoga practice.
- Role of Diet and Nutrition, The yogic diet: Sattvic, Rajasic, and Tamasic foods

Practical Session: Dynamic yoga sequences (Vinyasa flow) focusing on cardiovascular strength.

III. **Component of Mental Health and Emotional Well-being**

- Mental health as a key component of overall wellness.
- Emotional intelligence and mindfulness.
- Yoga and its benefits for mental clarity and emotional balance.
- Creating a personal yoga and wellness routine.

Practical Session: Introduction to meditation (Dhyana) and guided mindfulness practices.

Suggested Reading

- William J. Broad “The Science of Yoga"
- B.K.S. Iyengar. "Light on Pranayama"
- George Mumford "The Mindful Athlete"
- Ryanne Cunningham "Yoga for Athletes"
- Sharma L. Benefits of Yoga in Sports-A Study
- B.k.s Iyenger, Yoga for Sports: A journey toward Health
- *The Heart of Yoga: Developing a Personal Practice* by T.K.V. Desikachar
- *The Yoga Sutras of Patanjali* by Swami Satchidananda

COURSE TYPE: MULTIDISCIPLINARY COURSE(MDC)
OFFERED BY DEPARTMENT OF MANAGEMENT

SEMESTER-1

Name of Subject: INTRODUCTION TO MARKETING	**Maximum Theory Marks: 75 (TE+TI+PE+PI=50+25+0+0)**
Course Code :240/BBA/MDC101	**Time Allowed: 3 Hrs**
Credits 3 (L-T-P =3-0-0)	**Core Course: MDC**

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 ten marks each (2 questions from each unit). The students will be required to attempt four questions by selecting one question from each unit. All questions will carry equal marks.

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

CO1. Understand the key principles and concepts of marketing.
CO2. Explain market dynamics and consumer behaviour in current business scenario.
CO3. Evaluate the components of the marketing mix using marketing theory and frameworks
CO4.Evaluate the components of the price of the product.

COURSE CONTENTS:

Unit-I Introduction to marketing - definition, process, importance, scope, evolution, marketing management, marketing strategy, key elements and concepts; micro and macro environment- marketing environment, factors, product life cycle, adopters and its categories.
Unit-II Market Segmentation, targeting and positioning- introduction, explanation, pestle; environmental scanning- definition, process, requirements; STP process- aim, identification, benefits, types, approach, purpose, criteria; consumer market, business market and international market
Unit-III Marketing mix 7P's- introduction to 7P's; Product: Meaning; product classifications; concept of product mix; branding, packaging and labelling;
Unit-IV Price concept and significance; factors affecting price of a product; pricing policies and strategies; channel distribution management; intermediaries

SUGGESTED READINGS:

- Brassington, F. and Pettitt, S. (2007), *Essentials of Marketing* (2nd edn), FT Prentice Hall, London
- Kotler, P. and Armstrong, G. (2010), *Principles of Marketing* (13th edn), McGraw Hill, New Delhi
- Baines, P., Fill, C., Page, K. and Sinha, P.K. (2013), *Marketing*, Oxford University Press, New Delhi
- Lamb, C.W., Hair, J.F., Sharma, D., and McDaniel, C. (2012), *MKTG: A South Asian Perspective*, Cengage Learning, New Delhi

MAPPING MATRIX OF COURSE: 240/BBA/MDC101

Table 1: CO-PO & CO-PSO Matrix for the Course: INTRODUCTION TO MARKETING

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1	2	1	2	1	2	2	1	2	2
CO2	3	2	2	2	3	2	2	3	2
CO3	3	3	3	3	3	2	2	3	3
CO4	3	2	2	2	3	2	2	3	3
Average	2.75	2.0	2.25	2.0	2.75	2.00	1.75	2.75	2.50

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*

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.

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.

Multidisciplinary courses

COURSE ID: 240/PSY/MD101

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:

The students will be required to attempt four questions in all. Question No. I will be compulsory comprising of 5 short answer type questions of 1 mark each and will cover the entire syllabus 1X 5 = 5 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 10 marks each i.e. 3 X 10 = 30 marks thus making it the total weight age to 35 marks. Three questions to be attempted. One from each unit.

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.

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

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

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

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.

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.

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).