

NIRMALAGIRI COLLEGE

Generic Elective Courses 2023

(for Vth Semester UG)

SYLLABUS

Sl. No.	Category	Course Code and Name	Offering Department
1	GEC-1	5D03MAT: Linear Programming	Mathematics
2	GEC-1	5D04PHY: Joy of Star Watching	Physics
3	GEC-1	5D03CHE: Environmental Studies	Chemistry
4	GEC-1	5D01BOT: Mushroom Cultivation	Botany
5	GEC-1	5D02ZLG: Apiculture	Zoology
6	GEC-1	5D01HSC: Applied Counselling	Home Science
7	GEC-1	5D01ECO: Basics of Economics	Economics
8	GEC-1	5D01(2) ENG: Film Studies	English
9	GEC-1	5D02HIS: India's Struggle for Freedom	History
10	GEC-1	5D02MAL: സൈബർ സാഹിത്യം	Malayalam
11	GEC-1	5D01COM: Basic Accounting	Commerce
12	GEC-1	5D05PED: Exercise is Medicine	Physical Education
13	GEC-2	5D02MAT: Quantitative Arithmetic and Reasoning	Mathematics
14	GEC-2	5D05PHY: Electricity in Daily Life	Physics
15	GEC-2	5D01CHE: Chemistry in Service to Man	Chemistry
16	GEC-2	5D02BOT: Botany for the Beginners	Botany
17	GEC-2	5D03ZLG: Sericulture	Zoology
18	GEC-2	5D02HSC: Nutrition for Wellness	Home Science
19	GEC-2	5D04ECO: Fundamentals of Budget	Economics
20	GEC-2	5D01(5)ENG: Gender Studies	English
21	GEC-2	5D01HIS: Social Reform Movements in Kerala	History
22	GEC-2	5D03MAL: നോബൽ വായന	Malayalam
23	GEC-2	5D03COM: Principles of Management	Commerce
24	GEC-2	5D01PED: Health and Physical Education	Physical Education

GEC-1

GENERIC ELETIVE COURSE - MATHEMATICS

5D03 MAT Linear Programming

Linear programming is a method to achieve the best outcome in a mathematical model whose requirements are represented by linear relationships. Many fields use linear programming techniques to make their processes more efficient. These are Business, Engineering, Data Science etc.

GENERIC ELECTIVE COURSE 3: LINEAR PROGRAMMING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HOURS	MARKS		
					END SEM EXAM	INTERNAL	TOTAL
V	5D03 MAT	2	2	2	20	5	25

COURSE OUTCOMES

CO1	Understand General linear programming problem – canonical and standard forms of L.P.P, Solutions and fundamental properties of solutions of LPP.
CO2	Understand Graphical solution method, Simplex method, Duality in linear programming, Formulating a dual problem.
CO3	Understand General transportation problem, the transportation tables, Loops in transportation table and solves transportation problem
CO4	Understand Degeneracy in transportation problem, Transportation algorithm (MODI method) and solves problems

5D03 MAT: Linear Programming

Unit I - Linear programming

(20 hours)

Formulation of LPP from daily life situations (simple cases only and there should not be any question from this topic in the End Semester Examination). General linear programming problem – canonical and standard forms of L.P.P, Graphical solution method, Simplex method. (Sections 2.1, 2.2, relevant topics from 2.3 and 2.4, 3.2, 3.4, 3.5, 4.1, 4.3 of the Text. Proofs of all theorems are omitted).

Unit II - Transportation problems (16 hours)

General transportation problem, the transportation tables, Loops in transportation table, Solution of a transportation problem, Finding an initial basic feasible solution, Degeneracy in transportation problem, Transportation algorithm (MODI method). (Sections 10.1, 10.2, 10.5, 10.6, 10.9, 10.12, 10.13 of the Text. Proofs of all theorems are omitted)

Text

K. Swarup, P.K. Gupta and M. Mohan, Operations Research (18th edition), Sulthan Chand and Sons.

References

1. J. K. Sharma, Operations Research Theory and Applications. McMillan
2. G. Hadley, Linear Programming, Oxford & IBH Publishing Company
3. H. A. Thaha, Operations Research, An Introduction (8th edition), Prentice Hall

Marks including choice

Unit	Marks in End Semester Examination	
	Aggregate Marks	Maximum Marks
I	17	20
II	16	
Total	33	

Pattern of Question Paper

Part A - Short answer (5 questions x Mark 1 each = 5)

- *Answer any 4 questions* (4 questions x Mark 1 each = 4)

Part B - Short Essay (10 questions x Marks 2 each = 20)

- *Answer any 6 questions* (6 questions x Marks 2 each = 12)

Part C - Essay (2 questions x Marks 4 each = 8)

- *Answer any 1 question* (1 question x Marks 4 each = 4).

- **Use of Scientific Calculators below 100 functions (that is, upto fx 99) shall be permitted for this courses.**

5D04PHY - JOY OF STAR WATCHING

The open course offered by the department of physics is "Joy of Star Watching." The syllabus is designed for both arts and science students. Additionally, a camp for skywatching will be held on campus for students who are interested. This course will help to appreciate the beauty of the skies better, think scientifically, and understand the difference between science and pseudoscience.

GENERIC ELECTIVE COURSE - PHYSICS 5 D 04 PHY: JOY OF STAR WATCHING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5 D 04 PHY	2	2	2

COURSE OUTCOME

CO 1: Understand Our Universe and its origin

CO2: Understand simple constellations

CO3: Explain the stars in Kerala culture

CO4: Understand the techniques of star watching

Unit I: Astrophysics (12Hrs)

The study of the Universe - Problems and prospects. The Universe - its origin- Galaxies Milkyway. A star is born. The death of a star. The comets—The pole star **(Book 1)**

Unit II: The constellations (2 Hrs)

Orion- Canis major-Taurus—Leo **(Book 2)**

Unit III Stars in Kerala culture (10Hrs)

The origin and expansion of Astrology -Stars and constellations in Kerala culture- **(Book 2)**

Unit IV: Star watching (8 Hrs)

How to experience star watching — For a better view **(Book 2)**

Books for study:

1. The Great Universe- G.K.Sasidharan- S.Chand
2. Joy of star watching – BimanBasu- National Book Trust , India.

Book for reference:

1. Jyothishavum Jyothisasthravum- K. Pappootty-K.S.S.P

GEC in CHEMISTRY – 5D03CHE – Environmental Studies

Environmental studies is an interdisciplinary field where various topics are approached holistically. The field of environment studies includes a number of academic disciplines, including chemistry, physics, biology, medicine, public health, geography, and geology. Physical phenomena in the environment are the subject of this science. This paper focuses mostly on different environmental segments, the causes and effects of different types of environmental pollution, and various controls on environmental pollution. As it gives a general understanding of the numerous environmental challenges, this paper aids in educating students about their responsibilities for environmental conservation.

GENERIC ELECTIVE COURSE Environmental Studies (5D03CHE/PCH)

Contact hours: 36Hrs

UNIT1. Environmental segments (6 Hours)

Environmental segments – Lithosphere: soil formation – components of soils. Hydrosphere: Hydrological cycle- Biosphere - Atmosphere- Structure and composition

UNIT 2. Air Pollution (9 Hours)

Types of pollutants, Air pollution –Sources – pollutants –CO, NO_x, SO_x, Hydrocarbons, Particulates. Effect on ecosystem., Ozone layer –importance, Ozone depletion –Control measures- Acid rain - control of acid rain- Greenhouse effectglobal warming, photochemical smog (Eqns not needed)- effect pollution on plants and human beings. Control of air pollution Noise Pollution – physiological response to noise – biological effects- carbon foot print

UNIT 3. Water Pollution (7 Hours)

Water Pollution – Sources –Industrial effluents- agriculture discharge - oil spills, heavy metal -pesticides-bio magnifications and bioaccumulations, Dissolved oxygen in water, chemical oxygen demand (COD) and Biochemical Oxygen demand (BOD)(Definition only)- control of water pollution- ISI/BIS standards of drinking water

UNIT 4. Soil Pollution (8 Hours)

Soil Pollution - Sources by industrial and urban wastes, radioactive pollutants, plastics heavy metals. Poisoning by heavy metals – Mina- math & Itai-Itai diseases. Control of soil pollution. Solid waste Management -Thermal pollution, definitionsources of thermal pollution, harmful effect of thermal pollution, prevention of thermal pollution.

UNIT 5. Sustainable Energy Sources & Technology (6 Hours)

Green energy Sources- Wind-water-solar- use of solar energy in space, Production of electricity using solar energy- Tidal, Biomass and geothermal energy

References:

1. Text book of Environmental Studies for under graduate courses – ErachBhar
2. Essential Environmental studies- S. P. Misra – S. N. Pandey
3. Environmental chemistry and pollution control – S.S Dara (2nd Edition)
4. Environmental chemistry- Peter O' Neill
5. Environmental chemistry – B.K. Sharma
6. Fundamental concepts of environmental chemistry – G.S Sodhi

GEC IN BOTANY-1-

5D01BOT – MUSHROOM CULTIVATION

Highlights

- Enable students to start a part time earning source
- Demonstration of cultivation technique

Module 1. Mycology. 5hrs

Five kingdom classification of organisms. Kingdom fungi. General characters of form, Function, reproduction and relationship with other organisms. Importance of fungi in human Welfare.

Module 2. Mushroom Biology 10hrs

Morphology (range of form, macro-morphology, micro-morphology), life cycle of a typical Mushroom and biological function. Edible, non-edible and poisonous species. Domestication Of mushroom. Importance of mushroom in human nutrition, sustainable livelihood, Ecosystem function and quality of the environment.

Module 3, Applied Mushroom Biology. 12 hrs

Mushroom cultivation and production. Lab scale, pilot plant and large scale cultivation of Commercial species. Crop cycle- spawn, substrate, substrate processing, spawning, spawn Run, cropping, harvesting, environment requirement, post harvest practices, shelf life, Preservation, storage, transport and marketing. Value-added products of mushroom. Constraints and environment management. Economics of mushroom cultivation. Designs of Mushroom facility. Economics of mushroom cultivation and marketing.

Module 4. Mushroom Biotechnology. 9 hrs

Concept. Preparation of flavours, appetizers, nutraceuticals, dietary supplements and Cosmetics. Mushroom bioremediation. Cleaning of polluted sites .Utilization of mushroom Mycelium or enzymes in recycling biological materials. Mycofiltration and applications of The process. Mycorrhiza applications. Biopulping, biobleaching and biotransformations. Biodetergents.

References.

1. Harandar Singh 1991. Mushrooms: the art of Cultivation. Sterling Publishers.
2. Kaul, T.N.2001. Biology and conservation of Mushrooms. Oxford and IBH Publishing Company.
3. Tripathi, M. Mushroom Cultivation. Oxford and IBH Publishing Company.
4. Suman B.C. and Sharma V P.2007. Mushroom Cultivation in India. Eastern Book Corporation. R.Singh and U.C.Singh 2205. Modern Mushroom Cultivation. Agrobios.

GENERIC ELECTIVE COURSE – ZOOLOGY

5D02ZLG – Apiculture

Course Objectives: Apiculture:

1. Develop self-employment capabilities
2. Acquires scientific knowledge of profitable farming

Highlights

Apiculture:

Apiculture is the management and study of domesticated honey bees. Here a beekeeper keeps bees in order to collect honey and other products of the hive including beeswax, pollen, and royal jelly, to pollinate crops, or to produce bees for sale to other beekeepers. The growing market potential for honey and its products has resulted in bee keeping emerging as a viable enterprise. This is a business that is very less expensive and can be used by every class farmer or landless farmer to boost their income. Apart from these, apiculture also plays an important role in increasing agricultural production and horticultural production, as the bee carries out pollination activity in the flowers, which leads to an additional one fourth increase in crop production.

B. Sc. DEGREE PROGRAMME (Theory)

ZOOLOGY

Generic Elective Course

APICULTURE

CODE : 5 D 02 ZLG

Credit:2; Hours:2/week; Total Hours:36

Course outcomes

CO 1 :Develop self-employment capabilities.

CO 2 : Acquires scientific knowledge of profitable farming.

UNIT I (8 Hrs)

Definition, Scope, Classification of bees, Rock bee, Indian bee, Little bee and Dammer bee- their identification and habits, choice of species in Apiculture. Bee colony-Distinctive features (social organization), Identification and Functions of queen, drones and workers, Structure and functions of Legs, mouth parts and sting of worker bee. Development of Honey bee-egg, larva and pupa. Food of the bee- honey and pollen-royal jelly. Artificial feeding. Behaviour of bees-dances.

UNIT II (8 Hrs)

Principles of apiculture, Arranging an apiary, position-space-direction,acquiring bees-care of newly captured colonies-handling the bees. The bee comb and its architecture-Different kinds of cells. Different types of Modern hives (Newton, Langstroth) – Architecture. Appliances used in Apiaries.

UNIT III (8 Hrs)

Swarming-Prevention and control.Uniting stocks-Different methods Queen rearing. Requeening. Feeding methods. Apiary management. Inter-relationships of plants and bees.

UNIT IV (8 Hrs)

Honey bee products. Honey- Collection and Extraction, Preservation and storage –Physical properties,Chemical composition,nutritive value, medicinal values-honey as daliy food. Bee wax- Production , method of extraction-characteristics and uses. Bee venom-method of collection - composition of venom- its uses.

UNIT V (4 Hrs)

Enemies of bees- Mites, Greater wax moth, lesser wax moth, ants, wasps, beetles, birds and their management. Diseases of bees-adult and brood diseases- Bacterial, Fungal, Viral & Protozoan; Prevention and Control measures.

REFERENCES:

1. Bee Keeping in India – Sardar Singh- KAR,Delhi.

HOME SCIENCE GENERIC ELECTIVE COURSES

APPLIED COUNSELLING

Semester	Course Code	Hrs. Per Week	Hrs. Per Semester	Credits	Exam Hours
V	5D01 HSC	2	36	2	2

COURSE OUTCOME

CO 1: To acquaint the students with the concepts counselling.

CO 2: To familiarizes the students with different types and approaches in counselling.

CO 3: To enable the students to understand counselling relationship and skills.

CO 4: To enable the students about the nature and process of counselling

CO 5: To develop awareness among the students about the application of counselling.

Module	Content	Hrs.
I Introduction to Counseling	Definition, goals and features of counselling. – Difference between guidance and counselling. – Characteristics of effective counsellors. Ethical principles of counselling. – Misconceptions regarding counselling.	8
II Approaches to Counselling	Directive counselling – Nondirective counselling – Eclectic counselling – Cognitive therapies – Psychoanalytic therapy Behavioural counselling – Group therapy.	4
III Counselling Relationship	Meaning of counselling relationship. Conditions for helping relationships: Empathy, positive regard, genuineness and concreteness. – Specific skills required in counselling.	6
IV Counselling Process	Stages of counselling process. The first stage: Initial disclosure. – The second stage: In-depth exploration. – The third stage: Commitment to action.	8
V Special Areas in Counselling	Child counselling, premarital counselling, family counselling, academic and school counselling, career counselling, crisis intervention counselling, rehabilitation counselling, post traumatic counselling.	10

Books for Study

1. Welfel, E. R. and Patterson, L.E. (2011), The counselling process, CENAGE Learning India Pvt. Ltd., India
2. Agrawal, R. (2007): Educational Vocational guidance and counselling, Shipra publications, Delhi.
3. Narayana, S. R. (2008), Counselling psychology, Tata MC Graw Hill, New Delhi.

Books for Reference

4. Belkin, G.S. (1988). Introduction to counseling, W.G. Brown Publishers.
5. Nelson, J. (1982). The theory and practice of counseling psychology, Hallt Rinehart and Winston, New York.
6. Vishala, M. (2008), Guidance and counseling, Chand & Company Pvt. Ltd., New Delhi.
7. Patterson, Lewis E (1999) The counselling process 5th edition Cliveland State University, Thomson Asia Pvt Ltd., USA.
8. Windy, D. (1988) (Ed), Counselling in action, Sage publication, New York.

Module wise distribution of Marks

Module	Marks
1	4
2	7
3	5
4	6
5	8

Pattern of Questions

- Part A - Short answer** (6 questions x Mark 1 each= 6)
□ *Answer all questions* (6 questions x Mark 1 each = 6)
- Part B - Short Essay** (6 questions x Marks 2 each =12)
□ *Answer any 4 questions* (4 questions x Marks 2 each=8)
- Part C - Essay** (2 questions x Marks 6 each =12)
□ *Answer any 1 question* (1 question x Marks 6 each=6)
□ **Total marks including choice - 30**
□ **Maximum marks of the course - 20**

GENERIC ELECTIVE COURSE 01:

BASICS OF ECONOMICS

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D 01ECO/ DEV ECO	2	2	2

COURSE OUTCOMES:

1. Students will have an understanding of the basic concepts of economics in everyday life
2. Students will be able to get an idea of major economic issues

Module I: Introduction to Economics

Definition of Economics – Nature and scope of economics – Problems of scarcity and choice: The three key economic questions – Opportunity Cost - Micro and Macro economics –Elementary theory of demand: determinants of household demand, market demand, movement along and shift of the demand curve – Elementary theory of supply: determinants of supply, movement along and shift of supply curve – Market equilibrium

Module II Market and Economy

Forms of Market: Features of Perfect competition, Monopoly, Monopolistic Competition and Oligopoly – Characteristics of a good economy - Types of Economy: Features of Capitalist, Socialist and Mixed Economy- Growth and Development- Issues in Economic Development: Causes of Poverty, Unemployment and Inequality – Basic concepts of National income: GNP, GDP, NNP and PI – Functions of Money – Basic concepts: CRR and SLR, Repo rate, Surplus and Deficit Budget

Books for Study

1. Dominick Salvatore(2004) Microeconomics : Theory and Applications, OUP, New Delhi
2. Pindyck Robert and Rubinfeld Daniel (2014) Micro Economics 8th Edition Pearson.
3. Dwivedi,D N(2011) Macro Economics Theory and Policy 5th Edition , McGraw Hill.
4. Fernando, A.C(2010) Indian Economy , Pearson India Education Services Pvt.Ltd
5. Gaurav Datt and Ashwani Mahajan(2016) , Indian Economy, S.Chand New Delhi

Books for Reference

1. Mankiw, Gregory N (2009) Principles of Macroeconomics ‘–Cengage Learning India Pvt. Ltd.
2. Errol D’Souza (2008) Macro Economics – Pearson Education.
3. Ashok Thomas et.al.(2018) Macro Economics, McGraw Hill Education (India) Edition

Department of English
Generic Elective Course 1
5D01(2) ENG: FILM STUDIES

Course Outcomes

1. Understand the major Movements, Genres and Masters in the history of Cinema.
2. Understand the nature of representation on screen and how class, race, caste, ethnicity and gender are represented.
3. Analyse and appreciate film as an art form through close readings of films.

MODULE I INTRODUCTION TO THE CINEMA HISTORY

The Birth of Cinema-The Silent Period - Evolution of Sound Cinema- The Contemporary Period- Studio system- Star system and fan studies- History of exhibition- From theatres to Netflix (OTT platforms).

FILM MOVEMENTS

German Expressionism-Soviet Montage-Italian Neo-realism- French New Wave-Hollywood Cinema-Japanese Cinema-Korean Cinema-Iranian Cinema -Indian Cinema-Malayalam Cinema

MODULE II FILM GENRES

Documentary -Road Movies-Animations-Biopic- War Movies-Sports Movies-Feature films- - Short Films-Digital films

FILM TERMS

Mise-en-scene: Setting, Props, Costume, Performance, Lighting and Colour

Cinematography: Shot-Extreme Long Shot, Long Shot, Medium Shot, Close up, Deep focus Shot, Reverse shot, Over- the- Shoulder Shot, Point-of-view Shot, High Angle shot, Low Angle shot, Canted frame, Masking, Pan, Tilt, Tracking, Crane, Shaking, Zooming,

Editing: Chronological editing, Cross cutting, Montage, Continuity editing, Continuity cuts, Jump cuts, Match cuts, 30 Degree rule, 180 Degree rule -Long Take

Sound: Diegetic and non-diegetic sound effect, Ambient sound, Music, Voiceovers, Parallel and Contrapuntal sound, Sound bridge, Special effects, Sound editing, Spotting, Onscreen sounds, Off screen sounds, Background and Foreground music, Dialogue tracks, Music Tracks

Pre-Production: Idea, Script, Storyboard, Schedule, Budget, Crew, Location, Art Direction, Casting.

Production: Set Preparation, Camera, Sound and Shooting.

Post Production: Visual and Sound Editing, Mixing, Graphics / Animation, Marketing and distribution.

Students should understand the key concepts of pre-production, production and postproduction of film making by visiting film shooting locations and recording studios.

Students should produce a digital/short/mobile film of 3 to 5 minutes as part of their internal assessment where their duties must be divided and assigned as Director, Script writer, Cinematographer, Editor, Actor etc.

It should be a group activity of 6 to 10 students and a screening festival may be conducted in the college level or intercollegiate level.

This can be tested as part of the internal assessment

MODULE III

FILMS FOR ANALYSIS AND APPRECIATION:

1. *The Bow*: Kim Ki-duk.

2 *Virus*: Aashiq Abu

FOR VIEWING AND ANALYSIS -INTERNAL ASSESSMENT

1. Vittorio de Sica: *The Bicycle Thieves*

2. Akira Kurosawa: *Rashomon*

3. *PatherPanchali* : Satyajit Ray

4. *Elipathayam* :Adoor Gopalakrishnan.

5. *Salam Bombay* : Mira Nair

6. *Modern Times* : Charlie Chaplin 7. *The Motorcycle Diaries* : Walter Salles

8. *Thoovanathumbikal* : P Padmarajan.

9. *Kammatipaadam* :RajeevRavi

10. *Chayilyam* : Manoj Kana

11. *A Pestering Journey* : K.R. Manoj

12. *22 Female Kottayam* :Aashiq Abu

Department of History

GENERIC ELECTIVE COURSE

India's Struggle for Freedom

Semester	Course Code	Hours Per Week	Credit Exam	Hours
V	5D02 HIS	2	2	2

Course Outcomes:

Students should be able to

1. Demonstrate factual and theoretical knowledge of India's freedom struggle
2. Understand diverse perspectives of the leaders of freedom struggle
3. Analyze communal politics and its impact on Indian society
4. Interpret the role of national movement in the making of modern India

UNIT I: Towards Organized National Movement Formation of Indian National Congress- Moderate phase of National Movement - Rise of Extremism- Partition of Bengal Swadeshi Movement Formation of Muslim League - Home Rule League Lucknow Pact

UNIT II: Emergence of New Leadership Champaran Sathyagraha - Rowlatt Act - Khilafat and Non-Cooperation Movement - Swarajist Party, Gandhian Method of Agitation - Simon Commission - Nehru Report Formation of HSRA Bhgat Singh

UNIT III: Towards Independence Civil Disobedience Movement - Round Table Conferences - Rise of Leftism in Congress Cripps Mission - Quit India Movement - Subhash Chandra Bose and INA - RIN Mutiny - Jinnah and Two Nation Theory Cabinet Mission - Mountbatten Plan - Independence.

DEPARTMENT OF MALAYALAM
GENERIC ELECTIVE COURSE –
5D02MAL സൈബർ സാഹിത്യം -

പരിണാമിയായ മനുഷ്യനോടൊപ്പം അവന്റെ സർഗാത്മക ഭാവനയും അവ ആവിഷ്കരിക്കപ്പെടുന്ന രീതിയും എങ്ങനെ മാറുന്നു എന്ന് സൈബർ യുഗത്തെ മുൻനിർത്തി അന്വേഷിക്കുന്നത് പ്രസക്തമാണ്. സാങ്കേതിക വികാസവും അതിന്റെ വിന്യാസ രീതികളും നമ്മുടെ പരമ്പരാഗത സാഹിത്യ ശീലങ്ങളെ എപ്രകാരം മാറ്റിയെഴുതി എന്ന അന്വേഷണം വിജ്ഞാന മേഖലയിലെ പുതിയ പഠനശാഖയാണ്. ഓൺലൈൻ കാലത്തെ സാഹിത്യത്തെയും അതിന്റെ രൂപഭാവങ്ങളെയും വിശകലനം ചെയ്യുന്നു.

GENERIC ELECTIVE COURSE II:

സൈബർ സാഹിത്യം

(പഠനമണിക്കൂർ-36)

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5 D 02 MAL	2	2	2

നവമാധ്യമങ്ങളുടെ പ്രചാരം മനുഷ്യന്റെ ജീവിതപരിസരങ്ങളെ ആകെ ബാധിക്കുന്നതരത്തിൽ ഇന്ന് മാറിയിരിക്കുന്നു. നിത്യജീവിതത്തിന്റെ ഭാഗമായി സാങ്കേതികോപകരണങ്ങളും മാറിയിരിക്കുകയാൽ യഥാർത്ഥലോകമെന്നും വെർച്വൽ ലോകമെന്നും പണ്ടുണ്ടായിരുന്ന വേർതിരിവ് ഇന്ന് സാധ്യമല്ലാതായിരിക്കുന്നു. അവ രണ്ടും ഇഴചേർന്ന ഒരു ജീവിതമാണ് ഇന്ന് മനുഷ്യൻ ജീവിക്കുന്നത്. എഴുത്തിടമെന്ന രീതിയിലും കൂടെ നവസാമൂഹ്യ മാധ്യമങ്ങളെ ഉപയോഗപ്പെടുത്താൻ രൂപകല്പനയോടെ അവ നമ്മുടെ സമകാല സാഹിത്യരംഗത്തുണ്ടാക്കിയ ചലനങ്ങൾ പരിചയപ്പെടുന്നു.

COURSE OUTCOME

- CO1. മാറുന്ന സാങ്കേതികസംസ്കാരത്തെയും അവ സാഹിത്യത്തിലും സംസ്കാരത്തിലുമുണ്ടാക്കിയ മാറ്റങ്ങളെയും പരിചയപ്പെടുക
- CO2. നവസാമൂഹിക മാധ്യമങ്ങളെ ജീവിതത്തിൽ ഗുണപരമായി പ്രയോജനപ്പെടുത്താൻ പ്രേരണ നൽകുക.
- CO3. സാങ്കേതികവികാസം സാഹിത്യ- സംസ്കാര പഠനരംഗത്തെ മികവു വർദ്ധിപ്പിക്കാനായി സാങ്കേതികവിദ്യ പ്രയോജനപ്പെടുത്താൻ ശീലിപ്പിക്കുക.
- CO4. സർഗാത്മകതയിൽ സാങ്കേതികവിദ്യ പ്രയോജനപ്പെടുത്താൻ ശീലിപ്പിക്കുക.
- CO5. ഓൺലൈൻകാല സാഹിത്യമാതൃകകൾ പരിചയപ്പെടുകയും പഠനവിധേയമാക്കുകയും ചെയ്യുക.

യൂണിറ്റ് ഒന്ന്

(പഠനമണിക്കൂർ -12)

നവസാമൂഹ്യമാധ്യമങ്ങൾ- സാമാന്യപരിചയം- നിർവചനം- എഴുത്തിന്റെ ഇന്റർനെറ്റ് വിനിമയങ്ങൾ- ആവിഷ്കരണസാധ്യതകൾ- സ്വയംപ്രസാധനം- ഹൈപ്പർലിങ്ക്- പ്രധാന സാമൂഹ്യശൃംഖലകൾ, സൈബർ സംസ്കാരം- വെർച്വൽ റിയാലിറ്റി സൈബർ നെറ്റിക്സ്- സൈബോർഗ്.

യൂണിറ്റ് രണ്ട്

(പഠനമണിക്കൂർ -12)

സൈബർ ഇടം- കൂട്ടായ്മകൾ- പുതുസമൂഹനിർമ്മിതികൾ- എഴുത്തിടങ്ങൾ- ഓൺലൈൻ പത്രങ്ങൾ, ആനുകാലികങ്ങൾ.
 വെബ്മാഗസിനുകൾ-മലയാളത്തിലെ വെബ് അധിഷ്ഠിത പ്രസിദ്ധീകരണങ്ങൾ.
 ഇ-മലയാളം- ഓൺലൈൻ മാഗസിനുകളുടെ വളർച്ച.
 ഇ-ബുക്ക്- ഗ്രന്ഥശാലകൾ- വികസിപ്പിച്ചെടുത്ത - മലയാളംവികസിയുടെ വളർച്ചയും വികാസവും.

യൂണിറ്റ് മൂന്ന്

(പഠനമണിക്കൂർ -12)

സൈബർ സാഹിത്യം- ആദ്യകാലബ്ലോഗുകൾ- അഗ്രിഗേറ്ററുകൾ- ബുലോക്കുകവിത സാങ്കേതികവിദ്യയും സാഹിത്യവും- സാധ്യതകൾ- ഉപയോഗം- കവിതയിലെ പുതുവഴികൾ - കഥയിലെ പുതുവഴികൾ- ഭാഷ- ആഖ്യാനം- പ്രമേയം എന്നിവ പരിചയപ്പെടുക.

Marks including choice:

Unit	Marks
I	12
II	9
III	9

ചോദ്യമാതൃക

പാർട്ട് എ - കുറിപ്പ് തയ്യാറാക്കുക 6 ചോദ്യത്തിന് 1 മാർക്ക് വീതം. (6×1=6)

പാർട്ട് ബി -ആരെണ്ണത്തിൽ നിന്ന് ഏതെങ്കിലും നാലെണ്ണത്തിന് ഒരു പേജിൽ കവിയാതെ ഉത്തരമെഴുതുക- ഓരോന്നിനും രണ്ട് മാർക്ക് വീതം (4×2=8)

പാർട്ട് സി- രണ്ടെണ്ണത്തിൽ നിന്ന് ഏതെങ്കിലും ഒന്നിന് മൂന്നു പേജിൽ കവിയാതെ ഉത്തരമെഴുതുക- ആറ് മാർക്ക് (1×6=6)

- Total marks including choice -30
- Maximum marks of the course-20

Department of Commerce
GENERIC ELECTIVE COURSE I –
5D01COM: Basic Accounting

Course outcome:

After studying the course, students shall be able to;

- Describe the basic accounting concepts
- Record the business transactions in the proper books of accounts
- Prepare financial statements of a sole trading concern

The course's main objective is to enable the students to acquire knowledge of accounting principles and practice. Learning accountancy is helpful to everyone because every individual performs some kind of economic activity daily. Accountancy helps to keep systematic records of financial transactions. It helps us to ascertain our financial positions. It will help the students to make familiar with accounting terminologies, and it provides essential knowledge for preparing accounts. It also helps students to attend interviews or tests, especially in the banking and corporate sector.

GENERIC ELECTIVE COURSE I:

BASIC ACCOUNTING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D01 COM	2	2	2

COURSE OUTCOME

After studying the course, students shall be able to;

CO 1: describe the basic accounting concepts

CO 2: record the business transactions in the proper books of accounts CO

3: prepare financial statements of a sole trading concern

Unit I

Introduction: Basic Accounting concepts - Kinds of Accounts – Double Entry Book Keeping – Rules of Debit and Credit.

[6 Hours]

Unit II

Recording of Transactions: – Preparation of Journal and Ledger Accounts- Simple problems.

[8 Hours]

Unit III

Subsidiary books - cash book – types of cash book – problems (single column and two column only) -purchase book - sales book - sales return - purchase return books –Journal proper

[6 Hours]

Unit IV

Trial balance – Meaning and purpose-Preparation of trial balance

[6 Hours]

Unit V

Financial Statements –Trading and Profit & Loss Account – Balance sheet (of sole trading concern) – Simple Problems

[10 Hours]

(Theory and problems may be in the ratio of 30% and 70% respectively)

Reference Books:

1. Grewal, T.S: Double Entry Book Keeping
2. Jain and Narang: Advanced Accountancy
3. Shukla and Grewal: Advanced Accountancy
4. Gupta and Radhaswamy: Advanced Accountancy
5. Gupta R.L: Advanced Accountancy

Department of Physical Education
Generic elective course - 1
5D05PED - Exercise is Medicine

This syllabus helps the students to understand the means and method to develop health and different types of physical tests that is used as an entire test to help assess one's health. Yoga and meditation, lifestyle disease and its management and injury management is also included in the syllabus. Practical training session on Yoga and Meditation, Injury management, Physical tests and fitness is also handled in this course.

GENERIC ELECTIVE COURSE V: EXERCISE IS MEDICINE

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5 D 05 PED	2	2	2

COURSE OUTCOME

- CO – 1 Understand methods for the development and maintenance of health related physical fitness components.*
- COI - 2 Acquire knowledge of different exercise modalities for different age and sex categories.*
- CO - 3 Understand the role of life style, diet and exercise on hypo kinetic disease prevention.*
- CO - 4 Recognize mind- body relations and summarize the benefits of yoga and meditation on health*
- CO – 5 Familiarize the process of conditioning, warm up and cooling down*
- CO - 6 Classify injury management and rehabilitation*

Unit I :

- 1.1 Definition of health
 - 1.2 Means and methods for development and maintenance of health related physical fitness components.
 - 1.3 Testing–AAPHERD, 1 STAR
 - 1.4 Exercise modules for different age and sex
- (9 Hrs)**

Unit II :

- 2.1 Define hypo kinetic diseases
 - 2.2 Explain Obesity, diabetics, hypertension, CVDs, Osteoporosis, and Cancers
 - 2.3 Role of Life style, diet and exercise in hypo kinetic diseases prevention.
 - 2.4 BMI (Body Mass Index) ,BMR (Basal Metabolic Rate)
- (9 Hrs)**

Unit III:

- 3.1 Yoga and meditation.
 - 3.2 Health benefits of yoga and meditation
 - 3.3 Body and mind relation.
 - 3.4 Exercise Prescription
- (9 Hrs)**

Unit IV:

- 4.1 Conditioning-Warm up- Cooling Down
 - 4.2 Safety measures in sports participation
 - 4.3 Injury management and Rehabilitation
- (9 Hrs)**

GEC-2

GENERIC ELECTIVE COURSE MATHEMATICS

5D02 MAT Quantitative Arithmetic and Reasoning

Quantitative aptitude checks the accuracy, analytic skills, efficiency with numbers, problem solving and reasoning ability of a person. So, this paper useful in the quantitative aptitude section of many competitive examinations.

GENERIC ELECTIVE COURSE 2: QUANTITATIVE ARITHMETIC AND REASONING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HOURS	MARKS		
					END SEM EXAM	INTERNAL	TOTAL
V	5D02 MAT	2	2	2	20	5	25

COURSE OUTCOMES

CO1	Understand average, Problems on ages, Profit and loss and solves problems
CO2	Understand Profit and loss, Ratio and proportion, Chain rule
CO3	Comprehend Time and work, Time and distance and solves problems
CO4	Comprehend Problems on trains, Boats and streams, Calendar, Clocks

5D02 MAT: Quantitative Arithmetic and Reasoning

Unit I

(18 hours)

Average, Problems on ages, Profit and loss, Ratio and proportion, Chain rule (Chapters 6, 8, 11, 12, 14 of the Text).

Unit II

(18 hours)

Time and work, Time and distance, Problems on trains, Boats and streams, Calendar, Clocks (Chapters 15, 17, 18, 19, 27, 28 of the Text).

Text

R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S. Chand.

Marks including choice

Unit	Marks in End Semester Examination	
	Aggregate Marks	Maximum Marks
I	17	20
II	16	
Total	33	

Pattern of Question Paper

Part A - Short answer (5 questions x Mark 1 each = 5)

- *Answer any 4 questions* (4 questions x Mark 1 each = 4)

Part B - Short Essay (10 questions x Marks 2 each = 20)

- *Answer any 6 questions* (6 questions x Marks 2 each = 12)

Part C - Essay (2 questions x Marks 4 each = 8)

- *Answer any 1 question* (1 question x Marks 4 each = 4)

- Use of Calculators shall not be permitted for this course.

GENERIC ELECTIVE COURSE - PHYSICS
5 D05PHY: ELECTRICITY IN DAILY LIFE

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5 D05PHY	2	2	2

COURSE OUTCOME

CO 1: Understand the sources of Electricity CO2: Explain the production of Electricity
CO3: Understand the basic concepts of electricity auditing

Unit I (12Hrs)

What is Electricity-Different sources of electricity- non conventional and conventional sources

Unit II (12Hrs)

Methods to produce electricity - How electricity is generated and transmitted- Uses and misuses of electricity -Methods of electricity conservations-How to save electricity

Unit III (8Hrs)

Electricity Auditing

Books for reference

Hand books on Electricity conservation and Electricity auditing by EMC of Govt of Kerala

MARKS INCLUDING CHOICE:

Unit	Marks
I	10
II	10
III	101 10

Part A	Short answer	(6 questions x Mark 1 = 6)
	Answer all questions	(6 questions x Mark 1 = 6)
Part B	Short Essay	(6 questions x Marks 2 each =12)
	Answer any 6 questions	(4questions x Marks 2 each=8)
Part C	Essay	(2questions x Marks 6 each =12
	Answer any 4 questions	(1question x Marks 6 each=6)
Total marks including choice -30		
Maximum marks of the course-20		

GEC in CHEMISTRY

5D01CHE – Chemistry in Service to Man

Chemistry in Service to Man focuses mostly on the chemistry we use in our daily lives. The chemistry of numerous polymers, fertilisers, insecticides, cosmetics, cement, and glass is being studied in this paper.

GENERIC ELECTIVE COURSE CHEMISTRY IN SERVICE TO MAN (5D01CHE/PCH)

Unit 1. PLASTICS & POLYMERS(10hrs) Polymers- Types of polymers natural & synthetic polymers-characteristics and examples. General characteristics and applications of polymers such as Polythene (LDPE & HDPE), polypropylene, PVC, Poly styrene. Artificial fibers - examples Plastics- Thermoplastics and thermosetting plastics- Characteristics and examples.. Elastomers Natural and synthetic rubbers-Vulcanization(mention only. Biodegradable polymers .examples. benefits of biodegradable plastics. Importance of plastic recycling.

Unit 2. FERTILIZERS & INSECTICIDES(7hrs) Natural , synthetic mixed and NPK fertilizers – examples. -Impact of excessive use of fertilizers on environment – Bio fertilizers –Pesticides and their classification- examples. Excessive use of pesticides. Environmental hazards.Safe handling of pesticides. Insect repellants

Unit 3. FUELS, CELLS & BATTERIES(7hrs) Definition and classification of fuels – Characteristics of good fuel – Combustion - Calorific value – wood- coal - petroleum-origin – different fractions, their composition & uses. Natural gas, Biogas & LPG – their composition and uses. Pollution due to burning of fossil fuel -Batteries and fuel cells – Different types – Applications in modern life.

Unit 4 CEMENT & GLASS(6hrs) Cement- Classification – Portland cement – Raw materials – manufacture – setting and hardening – Glass – Different types – manufacture – raw materials – manufacture of ordinary glass

5. COSMETICS(6hrs) Cosmetics – Cleansing cream, cold cream, bleaching & vanishing creams, perfumes, talcum powder, tooth paste, deodorants , lipstick – ingredients. Harmful chemicals in cosmetics

References:-

1. J Barrett: Chemistry in your environment-User friendly, Simplified Science.
2. Howard L White: Introduction to Industrial Chemistry

3. David M Targarden: Polymer Chemistry – Introduction to an indispensable science.
4. M.S.Yadav: Synthetic drugs
5. Samuel Delvin: Dyes and Pigments
6. Alexander Findlay: Chemistry in the service of man
7. S. K Honda: Principle of pesticide chemistry
8. M.M.Chakrabarty: Chemistry and Technology of oils and fats
9. ShaliniSareen: Chemotherapeutic agents
10. P.K.Ray: Pollution and health
11. Vanessa Good ship: Introduction to plastic recycling
- 12.RandySchmetter and Perry Romanowski: Beginning cosmetic chemistry.
13. V Jain: Organic polymer chemistry
- 14.V K Selva raj: Advanced polymer chemistry
15. Jr Charles E Carraher: Introduction to polymer chemistry
16. Shashi Chawla: A Text Book of Engineering Chemistry
17. Jain &Jain : Engineering Chemistry

GEC IN BOTANY 2: 5D02BOT -BOTANY FOR THE BEGINNERS

Module -1: Living World 10 hrs.

Concept of Living and Non Living: Viruses, Bacteria, Fungi, Plants and Animals; Five kingdom Classification- Classification Of plants- Eichler's system — general characters Of groups- An introduction to the Life cycle of plants. Cell Structure-Prokaryote and eukaryote

Module - 2: Morphology of Angiosperms 8 hrs

Typical angiosperm plant: Functions of each organ viz. Root, Stem, leaves, inflorescence, flowers, fruit and seed.

Flower: Basic structure - essential and non essential whorls.

Module - 3: Origin and Evolution of Life 8 hrs

Definition, Ancient Concepts and Modern Concepts. Origin Of Life — Geological Time scale — Variation in Hydrosphere. Lithosphere, Atmosphere and Biosphere from Pre Cambrian to Coenozoic era. Darwin's Natural Selection theory and Modern evidences at molecular and organismic level in support of Darwin's theory

Module- 4: Interaction between plants and animals 10 hrs

General concept on Interaction between plants, microbes and animals.

Ecological Significance Of Plants — Solar energy fixing Producers. Nitrogen fixation. biofertilisers. biopesticides. Symbiotic relationships-Mutualism, Commensalism, Protocooperation, Parasitism. Plants and Animals for pollination and seed/fruit dispersal Pollination- Entomophily. Chiropterophily, Myrmecophily Seed Dispersal: Zoochory. Specific case studies on examples for co evolution- Dodo and Calvaria, Butterflies and plants: Wasps and Ficus. mimicking for pollinators.

Medicinal uses of plants — traditional knowledge and scientific knowledge — a brief account

References.

1. Agarwal, S. K. (2009). Foundation Course in Biology, Ane Books Pvt. Ltd., New Delhi.
2. Datta, A C Class book of Botany
3. Mamatha Rao, Microbes and Non flowering plants-impacts and applications, Ane Books, Pvt Ltd, New Delhi.
4. Pandey, B. P. 2001. College Botany, Vol. I: Algae, Fungi, Lichens. Bacteria, Viruses, Plant Pathology, Industrial Microbiology and Bryophyta. S. Chand & Company Ltd, New Delhi.
5. Prithipal Singh (2007), An introduction to Biodiversity- Ane Books India, New Delhi
6. Raven, P.H; Johnson, G. B; Losos. J.B; Singer, S.R (2005), Biology, seventh edition. Tata McGraw-Hill, New Delhi
7. Robert A Wallace. Biology, The world of life. Harper Collins Publishers

GENERIC ELECTIVE COURSE – ZOOLOGY

5D03ZLG – Sericulture

Course Objectives

1. Develop self-employment capabilities
2. Acquires scientific knowledge of sericulture

Highlights

Sericulture is an agro-based industry. It involves cultivation of host plants and rearing of silkworms for the production of cocoon to produce raw silk. Sericulture assumed importance in the socioeconomic structure of the developing countries as it could be practiced during the free time of the farmer while raising other crops. Thus, it is more suitable to women who can rear silkworms in the house alongside their housework. The practice of sericulture is beneficial to the rural population in many ways and its importance is because of following motives:

1. High employment potential
2. Important agro-based enterprise adding value in villages
3. Low gestation, low investment and high returns
4. Women friendly occupation
5. Ideal programme for weaker sections of the Society
6. Eco-friendly activity
7. Could be started with low investment

Could be practiced with minimum technical skill

B. Sc. DEGREE PROGRAMME (Theory)
ZOOLOGY
Generic Elective Course
SERICULTURE
CODE : 5 D 03 ZLG
Credit:2; Hours:2/week; Total Hours:36

Course outcomes

CO 1 :Develop self-employment capabilities.

CO 2 : Acquires scientific knowledge of sericulture

UNIT I (2 Hrs)

Importance of sericulture, sericulture industry in India, sericulture as cottage industry, role of Central Silk Board.

UNIT II (6 Hrs)

Moriculture - Mulberry varieties - Diseases of mulberry – fungal diseases –Bacterial diseases – Viral disease –Neematode disease - one example each - Pests of mulberry – leaf eating insect pests and borer pests - one example each.

UNIT III (9 Hrs)

Biology of silkworm. Life history of *Bombyxmori*. Morphology of larva; silk glands, spinnerets, silk proteins. Uni, bi and multivoltine breeds. Non mulberry silk worms.

UNIT IV (9 Hrs)

Rearing of silkworm: Rearing house – Rearing appliances – Rearing operation – Disinfection – Brushing – Maintenance of optimum conditions, Feeding – bed cleaning – spacing. Rearing of young ages – Chawki rearing - Rearing of late age larva: Shelf rearing. Floor rearing. Application of sampoorana. Mounting: Methods – precautions, Harvesting and sorting of cocoons.

UNIT V (8 Hrs)

Silk reeling: cocoon stifling – types, sorting, boiling and deflossing – brushing, Process of reeling: Different methods, silk waste and byproducts of silk reeling. Raw silk and marketing. Uses of silk.

UNIT VI (2 Hrs)

Diseases of silkworm. Muscardine, Pebrine, Flacherie. Prevention and control. Pests of silkworm. Uzi fly, ants and rodents. Control measures.

REFERENCES:

1. Ganga, G. and I. SulochanaChetty, An introduction to Sericulture.Oxford& IBH Publishing Company Private Limited,S -155,Panchshila Park,NewDelhi.
2. Ganga,G. Comprehensive Sericulture,Volume – 2 Silkworm Rearing and Silk Reeling. Oxford & IBH Publishing Company Private Limited, S -155,PanchshilaPark,New Delhi.
3. Dandin, S.B, Jayant Jayaswal and K. Giridhas, Hand Book of Sericultural Technologies, Central Silk Board, Madivala, Bangalore –68.
4. KamileAfifa. S and Masoodi M. Amin, Principles of Temperate Sericulture,Kalyani Publishers, B

HOME SCIENCE GENERIC ELECTIVE COURSES

NUTRITION FOR WELLNESS

Semester	Course Code	Hrs. Per Week	Hrs. Per Semester	Credits	Exam Hours
V	5D01 HSC	2	36	2	2

COURSE OUTCOME

CO 1: To enable students to gain basic knowledge about foods and nutrition.

CO 2: To familiarizes the students with different methods of the assessment of nutritional status.

CO 3: To enable the students to understand about the modified diets

CO 4: To enable the students know about the dietary management and its importance.

CO 5: To develop awareness among the students about the functional foods and its role.

Module	Content	Hrs.
I Introduction to Nutrition	Classification of foods (based on chemical composition, predominant function, nutritive value, ICMR Food Groups). – Relation of food and health. – Food and its functions. – Introduction to nutrients. –Recommended dietary allowances.	10
II Assessment of Nutritional Status	The methods of assessment of nutritional status. – Direct Methods: Anthropometry, Biochemical changes, Clinical examination of signs, Dietary analysis.	4
III Modified Diets	Introduction. – Purpose of diet therapy. – Classification of modified diets. – Diets for selected disorders: Diabetes mellitus, Typhoid fever, Cardiovascular diseases (Atherosclerosis, hypertension), Peptic ulcer, Cirrhosis of liver, Glomerulonephritis, Renal calculi.	16
IV Weight Management (Obesity, Underweight)	Introduction. – Aetiology, assessment and principles of dietary management. – Dietary guidelines.	4
V Functional Foods and its Role	Phytochemicals - Sources, benefits and its function.	2

Books for Study

1. Sreelakshmi B, Dietetics , New Age International (p) Ltd,Publishers, New Delhi, 2010
2. Sreelakshmi B. Nutrition Science , New Age International (p) Ltd,Publishers, New Delhi, 2010.

Books for Reference

1. Insel P, Turner E.R and Ross D, Discovering Nutrition, American Dietetic Association, Jones and Bartlett Publishers, London, 2003

2. Smolin L.A and Grosvenor M.B, Nutrition Science and its Applications, Second edition, Saunders College Publishing, New York, 1997
3. Park K, Park's Textbook of Preventive and Social Medicine, 20th Edition, Banarsidas Bhanot Publishers, Jabalpur, India, 2009
4. Joshi S.A, Nutrition and Dietetics, third Edition, Tata McGraw Hill Education Pvt.Ltd, New Delhi, 2010.
5. Gopalan C, Ramasastri, B.V and Balasubramanian S.C, Nutritive value of Indian Foods, NIN, Hyderabad 2007.

Module wise distribution of Marks

Module	Marks
1	7
2	7
3	10
4	4
5	2

Pattern of Questions

- Part A - Short answer** (6 questions x Mark 1 each = 6)
☐ *Answer all questions* (6 questions x Mark 1 each = 6)
- Part B - Short Essay** (6 questions x Marks 2 each = 12)
☐ *Answer any 4 questions* (4 questions x Marks 2 each = 8)
- Part C - Essay** (2 questions x Marks 6 each = 12)
☐ *Answer any 1 question* (1 question x Marks 6 each = 6)
- ☐ **Total marks including choice - 30**
☐ **Maximum marks of the course - 20**

ECONOMICS
GENERIC ELECTIVE COURSE 04:
FUNDAMENTALS OF BUDGET

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D 04 ECO/ DEV ECO	2	2	2

COURSE OUTCOME

1. Students will get an idea about budget and the basic concepts, apart from budgetary procedures
2. Students will acquire basic knowledge about the sources of revenue and expenditure of govt.

Module I. Budget

Meaning and objectives of budget- Principles of budgeting - Budgetary procedure (preparation of the budget, presentation of the budget in the parliament, execution of the budget and parliamentary control over the budget)- Balanced ,surplus and deficit budgets- Performance budget and Zero Based Budget- Consolidated fund and contingency fund- - Major deficit concepts (Revenue deficit, fiscal deficit, primary deficit)- Major highlights of the current year's Budget.

Module II. Public expenditure and revenue

Public expenditure – Meaning- classification (Revenue and capital expenditure, plan and non-plan expenditure), reasons for the growth of public expenditure in India.

Public revenue - Sources (Tax revenue and non-tax revenue)- Tax (meaning and features)- Direct and indirect taxes- progressive, proportional, regressive and digressive taxes- Tax evasion and tax avoidance – Finance commission and functions.

Books for Study

1. Jha, R. (1998), Modern Public Economics, Routledge, London
2. Mithani, D.M: Modern Public Finance: Theory and Practice
3. Musgrave, R.A. and P.B. Musgrave(1976) Public Finance in Theory and Practice, McGraw Hill
4. Rana, K.C & Varma, K.N: A Study in Public Finance.

Books for Reference

1. Hajela, T.N (2010): Public Finance, Ane Books
2. Herber, B.P. (1967) Modern Public Finance, Richard D. Irwin, Homewood.
3. Andley,K.K and K. P. M. Sundharam(1966) Public Finance and Public Economics: With Special Reference to Underdeveloped Countries, Ratan Prakashan Mandir,
4. Singh S K (2010): Public Finance: Theory and Practice, S Chand.

Department of English
Generic Elective Courses
5D01(5) ENG: Gender Studies

Course Outcomes

- Understand and engage with central debates in the field of Women's and Gender studies.
- Apply a variety of methods of analysing gender in society, drawing upon both primary and secondary sources.
- Apply concepts and theories of Women's and Gender studies to life experiences and historical events and processes.
- Communicate effectively about gender issues in both writing and speech, drawing upon Women's and Gender studies scholarship and addressing a public audience.

Module I Key terms

Sex, gender, gender dysphoria, masculinity, femininity, patriarchy, other, stereotypes, identity, transgender

Module II

- 1.Speech on Gender Equality : Emma Watson
- 2.Mein Maa Hoon; Journey of Transgender Mother (interview): Gauri Sawant

Module III

- 1.Tara (play): MaheshDattani
- 2.The Day I Become a Woman (film): Marzich Mishkini
- 3.My Life in Pink (film) : Alain Berliner

Short fiction

- 1.Boys and Girls: Alice Munro
- 2.Lihaaf : IsmatChughtai
- 3.Hijra: Kamala Das

Department of History
GENERIC ELECTIVE COURSE

Social Reform Movements in Kerala

Semester	Course Code	Hours Per Week	Credit Exam	Hours
V	5D01 HIS	2	2	2

Course Outcomes:

Students should be able to:

1. Understand the role of Western education, missionary activities and indigenous reform movements in the making of modern Kerala
2. Evaluate the ideas, programmes and tactics of social reformers
3. Promote critical thinking about various social and religious issues in Kerala
4. Analyze and explain secular foundations of Kerala society

UNIT I: Reflections of Westernization Concept of Colonial Modernity - Introduction of English education Missionary Contributions

UNIT II: Kerala Renaissance Sree Narayana Guru - Chattampi Swamikal- Ayyankali - Vakkom Abdul Khader Moulavi Vagbhadanandan- Brahmananda Sivayogi - Ananda Teerthan - V.T.Bhatathirpad - Sahodaran Ayyapan - C. Krishnan- Growth of caste organizations: SNDP, NSS, Yogashema Sabha

UNIT III: Reform Movements and their Impact Agitations against untouchability: Vaikom and Guruvayoor Stayagrahas - Temple entry proclamation - Impact of the reform movements - New trends in literature - Vallathol- Uloor Kumaran Asan

GENERIC ELECTIVE COURSE III

നോവൽ വായന

(പഠനമണിക്കൂർ 36)

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5 D 03MAL	2	2	2

COURSE OUTCOME

- CO1. ഒരു സാഹിത്യഗണമെന്ന നിലയിലും ആഖ്യാനരൂപമെന്ന നിലയിലും നോവൽ എന്ന സാഹിത്യവിഭാഗത്തെ സമഗ്രമായി ഉൾക്കൊള്ളാനും വിശകലനം ചെയ്യാനുമുള്ള ശേഷി വികസിപ്പിക്കുക.
- CO2. നോവൽ എന്ന ജനുസ്സ് രൂപം കൊടുത്ത പുസ്തക സംസ്കാരത്തിന്റെ/വായനാ സംസ്കാരത്തിന്റെ, വായനാ സമൂഹത്തിന്റെ സ്വഭാവം പരിശോധിച്ചറിയുക.
- CO3. സമൂഹത്തിന്റെയും ഭാഷയുടെയും ആധുനികീകരണയുക്തികളെ നോവലുകൾ സ്വാംശീകരിച്ചതെങ്ങനെയെന്നു വിശകലനം ചെയ്യുക.
- CO4. നോവൽ വായനകളുമായി ബന്ധപ്പെട്ട സിദ്ധാന്തങ്ങളെയും സമീപനങ്ങളെയും പറ്റി അവബോധമുണ്ടാക്കുക.
- CO5. നോവൽ ഉൾപ്പെടെയുള്ള സാഹിത്യകൃതികളുടെ ആസ്വാദനത്തിനും വിമർശനാത്മകമായ വിശകലനങ്ങൾക്കും പര്യാപ്തമായ സിദ്ധാന്തങ്ങളും സമീപനരീതികളും വികസിപ്പിക്കുക .

യൂണിറ്റ് 1

(പഠനമണിക്കൂർ -12)

നോവൽ ഒരു ആഖ്യാനരൂപം- വായന എന്ന രാഷ്ട്രീയം. നോവൽ എന്ന ജനുസ്സ് രൂപം കൊടുത്ത പുസ്തകസംസ്കാരം- വായനാസമൂഹത്തിന്റെ സ്വഭാവം- കേരളീയ ആധുനികതയുടെ സ്വാംശീകരണം നോവൽ സാധ്യമാക്കിയതെങ്ങനെയെന്ന വിശകലനം എന്നിവ ആമുഖ ചർച്ചയിൽ ഉൾപ്പെടുത്തണം.

പരമ്പരാഗതവും ആധുനികവുമായ നോവൽ വായനകളുടെ സാമാന്യസ്വഭാവം ചർച്ച ചെയ്യണം.കഥ,

ഇതിവൃത്തം- കഥാപാത്രങ്ങൾ- സംഭാഷണം- വർണ്ണന, ഭാഷാശൈലി- ആഖ്യാനകല- വീക്ഷണസ്ഥാനം -സാഹിത്യത തുടങ്ങിയവ മുൻനിർത്തിയുള്ളവായനകൾ- സൗന്ദര്യാത്മകവും ആസ്വാദനപരവുമായ വായനകൾ- സൈദ്ധാന്തികവായനകൾ-ദേശസ്വത്വത്തിന്റെ ആവിഷ്കാരമെന്ന നിലയിലുള്ള സമീപനങ്ങൾ- ചരിത്രത്തിന്റെ ഭാവനാരൂപങ്ങളെന്ന നിലയിൽ. നാടോടിവിജ്ഞാനപരമായ വായനകൾ- സാമൂഹികത, പ്രദേശികത, സംസ്കാരികാംശങ്ങൾ തുടങ്ങിയവയിലൂന്നിയ വായനകൾ- പ്രത്യയശാസ്ത്ര വായനകൾ- രാഷ്ട്രീയവായനകൾ-അധികാരവായനകൾ-മനോവിജ്ഞാനീയ വായനകൾ- മതാത്മക വായനകൾ- സ്വത്വവായനകൾ- ദലിത്- സ്ത്രീ- പരിസ്ഥിതിവായനകൾ-രൂപപരവും മാധ്യമപരവുമായ പരീക്ഷണങ്ങളെ മുൻനിർത്തിയുള്ള വായനകൾ- ജനകീയ ചരിത്രമാവിഷ്കരിക്കുന്ന ആഖ്യാനമെന്ന നിലയിലുള്ള വായനകൾ- പാഠാന്തര വായനകൾ- അന്തർവൈജ്ഞാനിക വായനകൾ ഇത്തരത്തിലുള്ള വായനാ സാധ്യതകളെ സാമാന്യമായി മനസ്സിലാക്കിയാൽ മാത്രം മതി.

വിശദപഠനം

ജനപ്രിയസാഹിത്യവും മലയാളനോവൽ ഭാവനയുടെ ജനധിപത്യവൽക്കരണവും- ഷാജി ജേക്കബ്. (നോവലിലെ ചരിത്രഭൂപടങ്ങൾ)

യൂണിറ്റ് 2

1. ഖസാക്കിന്റെ ഇതിഹാസം-ഒ.വി.വിജയൻ
2. ആടുജീവിതം -ബെന്യാമിൻ

അധിക വായനയ്ക്ക്

1. ഖസാക്ക് പഠനങ്ങൾ- കെ.ജി കാർത്തികേയൻ, എം. കൃഷ്ണൻനമ്പൂതിരി.
2. ആടുജീവിതപഠനങ്ങൾ - അജേഷ് കടന്നപ്പള്ളി

സഹായകഗ്രന്ഥങ്ങൾ

1. മലയാള നോവൽ ഭാവനയുടെ രാഷ്ട്രീയം- ഷാജി ജേക്കബ്
2. പൊതുമണ്ഡലവും മലയാളഭാവനയും - ഷാജി ജേക്കബ്
3. മലയാളനോവൽ : ദേശഭാവനയും രാഷ്ട്രീയഭൂപടങ്ങളും- ഷാജി ജേക്കബ്
4. ആധുനികാനന്തര മലയാളനോവൽ - ഷാജി ജേക്കബ്
5. മലയാളനോവലിന്റെ ദേശകാലങ്ങൾ- ഇ.വി.രാമകൃഷ്ണൻ
6. മലയാളനോവലും ദേശീയതയും - എം. ആർ. മഹേഷ്
7. അന്ധനായ ദൈവം- പി.കെ.രാജശേഖരൻ
8. ഏകാന്തനഗരങ്ങൾ- പി.കെ.രാജശേഖരൻ
9. ഇന്ദുലേഖ :വായനയുടെ ദിശകൾ- എഡി.ഇ.പി.രാജഗോപാലൻ
10. നോവൽ പ്രശ്നങ്ങളും പഠനങ്ങളും - എം. അച്യുതൻ
11. മാറുന്ന മലയാളനോവൽ -കെ.പി.അപ്പൻ
12. നോവൽവായനകൾ- വി.സി.ശ്രീജൻ
13. ദേശീയതകളും സാഹിത്യവും - ഇ.വി.രാമകൃഷ്ണൻ
14. പത്തൊമ്പതാം നൂറ്റാണ്ടിലെ മലയാളനോവൽ - ജോർജ്ജ് ഇരുമ്പയം
15. അജ്ഞാതദേശങ്ങളുടെ ആഖ്യാനങ്ങൾ- എൻ. സന്തോഷ്കുമാർ
16. മലയാള നോവൽ സാഹിത്യചരിത്രം - കെ.പി.തരകൻ
17. നോവൽ സാഹിത്യം - എം.പി.പോൾ

Marks including choice:

Unit	Marks
I	12
II	18

COMMERCE

GENERIC ELECTIVE COURSE II:

5D 03 COM: PRINCIPLES OF MANAGEMENT

Course outcome:

After studying the course, the students shall be able to;

- Understand the basic concept of management
- Describe the functions of management

GENERIC ELECTIVE COURSE III: PRINCIPLES OF MANAGEMENT

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D03COM	2	2	2

COURSE OUTCOME

After studying the course, the students shall be able to;

CO 1: understand the basic concept of management

CO2: describe the functions of management

Unit 1-

Introduction to Management: - Meaning and definition, scope, importance, Management and administration. (4 Hrs)

Unit 2-

Planning: - Meaning, objectives, types of plans, steps in planning and limitations of planning. (8 Hrs)

Unit 3-

Organising: - Concept, significance, types- formal and informal, line and staff and functional, centralisation, decentralisation. (10 Hrs)

Unit 4 -

Staffing: - Importance, sources of recruitment and selection, training and development. (Conceptual framework only). (8 hrs)

Unit 5 –

Directing and Controlling: - Meaning and elements of direction -Controlling- Meaning – steps. (6 Hrs)

References;

1. Koontz.O. Donnel, Principles of management, Tata Mc grawhill, publishing co, New Delhi.
2. L. M. Prasad, Principles of Management, Sultan Chand & sons, New Delhi.
3. R.C. Bhatia, Business organisation and management, Ane books, P. Ltd. New Delhi.
4. Tripathy Reddy, Principles of Management Tata Mc Graw Hill Publishers, New Delhi.

Marks including choice:

Unit	Marks
I	4
II	8
III	8
IV	8
V	4
Total	32

Generic elective course - Department of Physical Education
5D 01 PED Health and Physical Education

The aim of the course is to create an understanding about the means and method to develop physical fitness via nutrition, balanced diet, major and minor games. The roles played by yoga and lifestyle disease, effect of exercise of different body system and first aid is also discussed in this syllabus.

Practical training on Yoga, First aid and Physical fitness will also be dealt with.

GENERIC ELECTIVE COURSE I: HEALTH AND PHYSICAL EDUCATION

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5 D 01 PED	2	2	2

COURSE OUTCOME

- CO - 1 *Familiarize the concept of health and physical education.*
- CO - 2 *Create awareness among the basic nutrition, hypo kinetic and life style diseases.*
- CO - 3 *Acquire the ability to apply life saving techniques of first aids during emergencies*
- CO - 4 *Familiarized to modalities of fitness development and maintenance.*
- CO - 5 *Execute Common fitness test and evaluation*
- CO - 6 *Examine the posture and postural deformities and prescribe necessary corrective measures*
- CO - 7 *Demonstrate five yogasanas and its therapeutic effect leading to wellness*

Unit I : Physical Education

- 1.1 Physical Education- Meaning,
- 1.2 Need and Importance of Physical Education. Concept of Sports
- 1.3 Major and Minor games, Mass Sports and Recreational games.
- 1.4 Intramural and Extramural competitions
- 1.5 Career opportunities in Sports

(9 Hrs)**Unit II : Health and Fitness**

- 2.1 Meaning and factors affecting Health.
- 2.2 Health Related Physical Fitness.
- 2.3 Test, evaluation and development of physical fitness (AAHPER Youth Physical fitness test, BMI and One-star standard test)
- 2.4 Health benefits of Physical Exercise, Benefits of Yoga practice -stress management.
- 2.5 Aerobic and anaerobic exercise.
- 2.6 Effect of exercise on Circulatory, Respiratory and Muscular system

(9 Hrs)**Unit III: Nutrition and Life Style diseases**

- 3.1 Nutrition and health
- 3.2 Balanced diet and mal nutrition.
- 3.3 Drug abuse and side effect
- 3.4 Hypo kinetic Diseases- Dietary and Exercise Interventions

(9 Hrs)**Unit IV: First Aid and Posture**

- 4.1 First Aid – Definition, Aims and principles, ABC in first Aid and CPR.
- 4.2 Management of fracture Dislocation, Wounds, Sprain, Strain, Cramps, Fainting,
- 4.3 First aid for Burns, Bleeding, Electric shock, Chocking and Fainting
- 4.4 Posture - Congenital and acquired postural deformity.
- 4.5 Corrective measures/interventions

(9 Hrs)