

# OPEN COURSE

## SYLLABUS

### HISTORY I

76

#### GENERIC ELECTIVE COURSE 02

#### 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 – Bhगत 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.

#### **Essential Readings:**

Bipan Chandra, *India's Struggle for Independence*

-----, *Modern India*

-----, *Nationalism and Colonialism in Modern India*

A.R. Desai, *Social Background of Indian Nationalism*

Sumit Sarkar, *Modern India 1885- 1947*

R.C. Majumdar, *History of Freedom Movement in India*

Jawaharlal Nehru, *Discovery of India*

**Marks including choice: 30**

**Maximum marks: 20**

Unit	Marks
I	10
II	10
III	10

## GENERIC ELECTIVE COURSE 01

### 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-

#### Essential Readings:

A Sreedhara Menon, *Survey of Kerala History*

-----, *Kerala History and its Makers*

P. Govinda Pillai, *Keralathile Samuhiya Navodhana Prasthanam*

M.K.Sanoo, *Sree Narayana guru*

P.K.Velayudhan, *SNDP YOGAM charitam*

T.K.Ravindran, *Asan and social revolutions in Kerala*

-----, *Vaikom Satyagraha and Gandhi*

P.J. Cherian, *Perspectives on Kerala History*

P.Govinda Pillai, *Keralathile samuhiya Navodhana Prasthanam*

P K. Gopalakrishnan, *Keralathinte samskarika Charithram*

EMS Namboothiripad, *Keralacharithram Marxist Veekshanathil*

PK Balakrishnan, *Jathivyavasthayum Keralacharithravum*

**Marks including choice: 30**

**Maximum marks: 20**

Unit	Marks
I	6
II	12
III	12

# ECONOMICS 1

## GENERIC ELECTIVE COURSE 02: DEVELOPEMNT ISSUES OF INDIAN ECONOMY

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D 02ECO/ DEV ECO	2	2	2

### COURSE OUTCOME

1. Students will be able to develop a comprehensive perspective on the development issues confronted by Indian economy.
2. Students will be able to apply economic theories and concepts for understanding contemporary development issues.

### Module 1 Poverty in India:

Poverty; meaning, absolute poverty and relative poverty, causes of poverty, poverty line, head count index, basic needs approach, capability approach. Extent, magnitude and inter-state comparison of poverty, poverty eradication measures in India since 1991.

### Module 2 Unemployment and Inequality in India:

Unemployment; meaning, causes of unemployment, types of unemployment, NSSO classification of unemployment, extent and magnitude of unemployment, labour force participation rate, informalisation of labour, Inequality; meaning, causes of inequality, extent of inequality, inclusive growth.

### Books for Study

- 1 Misra, S.K and V K Puri(2018): Indian Economy, Himalaya Publishing House.
- 2 Datt, Gaurav and Ashwani Mahajan(2016) Indian Economy, S. Chand and Sons.
- 3 Kapila, U. (Ed.). (2009). *Indian Economy since independence*. Academic Foundation.
- 4 Datt, Ruddar and K P M Sundaram(2017)Indian Economy, S. Chand and Sons.
- 5 Dhingra, I. C. (2013). *The Indian Economy: Environment and Policy*. Sultan Chand & Sons.
- 6 Agrawal, A. N. (2012). *Indian Economy: Problems of Development and Planning*.
- 7 Remesh Singh(2019) Indian Economy, McGraw Hill Private Ltd.

### Books for Reference

- 1 Jalan, B. (2012). *Emerging India: Economics, Politics, and Reforms*. Penguin Books India.
- 2 Uma Kapila(2013)Two Decades of Economic Reforms in India: Towards Faster Sustainable and More Inclusive Growth, 3<sup>rd</sup> edition, Academic Foundation, New Delhi.
- 3 Kaushik Basu (2004) India's Emerging Economy: Performance and Prospects in the 1990s and Beyond, MITP Press.
- 4 Sen, A. (1982). *Poverty and Famines: An Essay on Entitlement and Deprivation*. OUP.

## ECONOMICS 2

**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 8<sup>th</sup> Edition Pearson.
3. Dwivedi,D N(2011) Macro Economics Theory and Policy 5<sup>th</sup> 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

**GENERIC ELECTIVE COURSE IV**  
**വൈക്കം മുഹമ്മദ് ബഷീർ: പാഠവും പഠനവും**  
 (പഠനമണിക്കൂർ -36)

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

മലയാളത്തിലെ പ്രസിദ്ധ എഴുത്തുകാരൻ വൈക്കം മുഹമ്മദ് ബഷീറിന്റെ സർഗാത്മക വൈഭവത്തെ ഉൾക്കൊള്ളുകയും ആസ്വദിക്കുകയും വിലയിരുത്തുകയുമാണ് ഈ കോഴ്സിന് ലക്ഷ്യം. ബഷീർകൃതികളിലൂടെ എഴുത്തുകാരന്റെ ജീവിത വീക്ഷണം, കാഴ്ചപ്പാടുകൾ, ദർശനങ്ങൾ എന്നിവ ഗ്രഹിക്കണം. ബഷീർ രചനകളുടെ ചരിത്രപരവുമായ പ്രാധാന്യത്തെ സമകാല സാമൂഹ്യസന്ദർഭത്തിൽ തിരിച്ചറിയുകയും വേണം

**COURSE OUTCOME**

- CO 1: മലയാളത്തിലെ പ്രതിഭാധനരായ എഴുത്തുകാരെപ്പറ്റി അറിവുണ്ടാക്കുക
- CO2: ബഷീറിന്റെ സമഗ്രമായ സാഹിത്യ സംഭാവനകളെ തിരിച്ചറിയുക.
- CO3: എഴുത്ത് എന്ന പ്രക്രിയയുടെ സാംസ്കാരിക സാധ്യതങ്ങളെപ്പറ്റി മനസ്സിലാക്കുക.
- CO4: ബഷീറിന്റെ കൃതികളിലെ ഭാഷ, മാനവികത, സഹജീവിസന്തേഹം, പാരിസ്ഥിതിക ബോധം എന്നിവയെപ്പറ്റി ബോധ്യമുണ്ടാക്കുക.

**യൂണിറ്റ് 1** (പഠനമണിക്കൂർ -12)  
 ബഷീർ - ജീവ ചരിത്ര കുറിപ്പുകൾ - കാലഘട്ടം - കൃതികൾ - മുഖവുരകൾ - ലേഖനങ്ങൾ- ആഖ്യാനരീതികൾ - ജീവിതദർശനങ്ങൾ - പരിസ്ഥിതിബോധം- രാഷ്ട്രീയം, സാമാന്യ പരിചയം.

- വിശദപഠനം: കഥകൾ**
- 1. പോലീസുകാരന്റെ മകൾ
  - 2. ആൺവേഷ്യ
  - 3. പുവൻപഴം.

**യൂണിറ്റ്-2** (പഠനമണിക്കൂർ -12)  
 നോവൽ/ ആത്മകഥ

- 1. ന്യൂപ്പുപ്പാക്കൊരാനേണ്ടാർന്ന്
- 2. ഓർമ്മയുടെ അറകൾ (ആദ്യത്തെ 6 അധ്യായങ്ങൾ മാത്രം)

**യൂണിറ്റ്- 3** (പഠനമണിക്കൂർ -12)  
 ബഷീർ കൃതികളെക്കുറിച്ചുള്ള പ്രധാന വായനകൾ, ഡോക്യുമെന്ററികൾ, സിനിമ സാമാന്യ അവലോകനം.

- വിശദപഠനം.**
- 1. ആന, ആട്, പുച്ച (ഫാസിസ്റ്റ് കാലത്തെ ബഷീർ -എം.എ.റഫീഖ്)

**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 ആസാദനത്തിനും 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- വിക്ഷണസ്ഥാനം -സാഹിത്യത തുടങ്ങിയവ മുൻനിർത്തിയുള്ളവായനകൾ- സൗന്ദര്യാത്മകവും ആസാദനപരവുമായ 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 ജന)ധിപത്യവൽക്കരണവും- 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

# PHYSICAL EDUCATION

## 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)**

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#### **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)**

# ENGLISH 1

## GENERIC ELECTIVE COURSE III: ENGLISH FOR CAREERS

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

### COURSE OUTCOME

CO 1: Make the students competent in their job-seeking, job-getting, and job-holding needs.

CO2: Develop communicative skills, which will enable the students to prepare for a career.

CO3: Equip the students in oral and written communication to enhance their academic and professional use of language.

CO4: Train them in making effective presentations.

#### **Unit I: Professional communication**

Features of professional communication -- purpose of professional communication; advising, counseling, giving orders, providing instructions, marketing, staffing, making decisions etc... -- forms of communication; verbal, non verbal, interpersonal, intrapersonal, mass and media communication -- communication network in an organization-types of communication flow: horizontal, vertical, crosswise, spiral.

#### **Unit II: Business and Technical Communication**

Telephoning -- Email --leave application --letter of invitation -- letter accepting and declining a job offer -- memos -- certificates of experience and attendance

#### **Unit III: Job Oriented Skills**

Knowing employable skills --searching for ideal job -- applying for a job -- preparing CV -- cover letter -- attending interviews -- scheduled interviews, telephonic interview, walk-in-interview --- Preparation--knowing the company, know yourself, review common interview questions, using proper verbal and non verbal cues, exhibiting confidence

Group Discussions -- difference between GD and Debate- number and duration- personality traits- dynamics of group behavior/group etiquette and mannerisms--types of GD-Opening of a GD - summarizing a discussion -- tips for GD---Professional etiquette -- learning to greet, art of small talk, dress code in the workplace, telephone and mobile etiquette

## ENGLISH 2

### GENERIC ELECTIVE COURSE IV: ENGLISH FOR COMPETITIVE EXAMINATIONS

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D04FNG	2	2	2

#### COURSE OUTCOME

- CO1: detect confusing words and spellings on English  
CO2: Identify various vocabulary types in English  
CO3: construct correct and meaningful sentences  
CO4: produce coherent and cohesive paragraphs  
CO5: Improve reading comprehension skills of the students

#### **Unit I:**

1. root words, synonyms and antonyms
2. phrasal verbs and idioms
3. one-word substitutions
4. easily confused words, spellings
5. correct use of articles and prepositions

#### **Unit II :**

1. correction of errors in a sentence
2. rearranging words in a sentence
3. completion of sentence
4. rearranging sentences for a meaningful passage

#### **Unit III:**

1. reading comprehension
2. writing short passages on a topic

#### **Books for Reference:**

1. Edgar Thorpe and Showick Thorpe *Objective English for Competitive Exams*. Pearson
2. Bakshi, S P. *Objective General English*. New Delhi; Arihant
3. Wren and Martin. *High School English Grammar & Composition*.

# FORESTRY 1

## GENERIC ELECTIVE COURSES 1- ECOTOURISM

Semester	Course Code	Hours per week	Credit	Exam Hours
V	5D01FOR	2	2	2

### Course Outcomes

1. Understand the different forms and categories of tourism
2. Understand the objectives and principles of ecotourism
3. Evaluate the ecotourism in protected areas
4. Determine the value and carrying capacity of a tourism destination

### Module I

(18Hrs)

Tourism-definition and history- Forms and categories of tourism.Classification of tourism.Dimensions and basic components of tourism.Ecotourism-definition and elements of ecotourism.Principles and objectives of ecotourism.Potential of ecotourism in India.Forms of ecotourism hard and soft ecotourism.Stakeholders in ecotourism. Organizations and NGO's promoting ecotourism. Environmental and social impacts of ecotourism.Ecotourism and sustainable development.

### Module II

(9 Hrs)

Planning ecotourism in protected areas-Carrying capacity and Zoning, Ecotourism in important protected areas of India- Keoladeo National park, Kanha National Park, Sunderbans Tiger Reserve, Jim Corbett National Park, Periyar Tiger Reserve, Wayanad Wildlife Sanctuary, Parambikkulam Tiger Reserve, Thenmala Ecotourism and Bandipur National Park.

### Module III

(9 Hrs)

Ecotourism as a business opportunity- business plan, marketing plan, green consumerism and unique selling points in ecotourism marketing. Economic valuation of ecotourism sites- based on travel cost method. World Ecotourism Summit.

### Suggested Readings

- Hosetti, B.B. 2007.Ecotourism development and management, Pointer publishers, Jaipur. 358 p  
Honey, M. 2008. Ecotourism and Sustainable development.Island Press. 551p.  
Chiranjeev, A. 2008.Ecotourism planning and Development.JnanadaPrakashan.  
Chiranjeev, A. 2008.Ecological, Social and Cultural aspects of Ecotourism.JnanadaPrakashan.  
Chiranjeev, A. 2008.Concept of tourism.JnanadaPrakashan.  
Aaradhana, S. 2009. Indian tourism, Wildlife tourism and Ecotourism.JnanadaPrakashan. 288 p.

#### • Marks Including Choice

Unit	Marks
Module I	10
Module II	10
Module III	10

# FORESTRY 2

## GENERIC ELECTIVE COURSE 4 - CLIMATE CHANGE IMPACT AND MITIGATION

Semester	Course Code	Hours per week	Credit	Exam Hours
V	5D04FOR	2	2	2

### Course Outcomes

1. Understand the composition of atmosphere and weather parameters
2. Knowledge on global climate change issues and impacts
3. Knowledge on the functions of global bodies and treaties related to climate change
4. Design the climate change mitigation measures

### Module I: Climate change -Introduction (9Hrs)

Structure and composition of atmosphere - weather elements- Climate and weather- scales of climate - Radiation balance, Role of Ozone, Green house gases and their global warming potential , Sustainable development goals and Climate change

### Module II: Climate change impacts (9Hrs)

Climate change causes, Impacts on water, agriculture, livestock, forest, wildlife, human health and poverty, livelihoods, rural and urban areas. Extreme events of climate change with respect to India and Kerala.

### Module III: Climate change-Mitigation and Adaptation (18Hrs)

National mitigation targets, National adaptation targets, Community interest in climate change adaptation, Green building concepts, Alternative fuel measures, Renewable energy related initiatives, Plantation, afforestation, reforestation and protection of forests, Waste management measures and Carbon capture, Role of global initiatives like UNFCCC, IPCC, WMO, Kyoto protocol, CDM, Paris agreement etc.

### BOOKS FOR REFERENCE

1. Forestry-Principles and applications, Antony Joseph Raj and S B Lal
2. Global climate change and Biodiversity, Shyam S khinchi and MeenuTanwar
3. Climatology: Atmosphere, Weather and Climate, K Siddhartha
4. Micro level people's perception on Climate change, Kailash Chandra Malhotra, Saroj K barik and Brajesh K Tiwari
5. Climate change and India: Vulnerability Assessment and Adaptation, EdsShukla P R
6. Global climate change: causes and Consequences, M.Z.A Khan and SonalGangawala
7. Climate change, Vulnerability and Migration, S IrudayaRajan and R B Bhagat
8. Climate change and Agriculture, Pawan Kumar Bharti and AvnishChauhan

### MODEL QUESTION PAPER

Unit	Marks
Module I	8
Module II	7
Module III	15

# ARABIC 1

## GENERIC ELECTIVE COURSE I ARABIC FOR TOURS AND TRAVELS

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
5	5D01ARB	2	2	2

### COURSE OUTCOME

#### CO 1:

To enable the undergraduate students to converse in Arabic fluently by doing all the given exercises.

#### CO 2:

To familiarize the target group the common usages and jargons of Arabic language in Arab speaking nations.

#### CO 3:

To train and confirm the target group that the phrases and structures are normally and correctly used.

### **Course Outline**

- Unit.1** Some basic expressions – arrival (page 16 to 28)
- Unit.2** Hotel and other accommodation – eating out – what is Ramadan  
(Page 28 to 40)
- Unit.3** Eating out – hungry – appetizers – salad – cheese – soup – meat – game and fowl. (Page 40 to 51)
- Unit.4** Vegetables – food – fruits – seeds, nuts, dried – fruits – desert the bill – drinks – (eating light snacks (page 52 to 64)

## ARABIC 2

### GENERIC ELECTIVE COURSE II

#### SPOKEN ARABIC

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
5	5D02ARB	2	2	2

#### COURSE OUTCOME

##### CO 1:

To enable the undergraduate students to converse in Arabic fluently by doing all the given exercises.

##### CO 2:

To familiarize the target group the common usages and jargons of Arabic language in Arab speaking nations.

##### CO 3:

To train and confirm the target group that the phrases and structures are normally and correctly used.

#### **Course Outline**

##### **Unit.1**

Chapter 3: As-salaamualaykum! – Greetings and Introductions

Chapter 4: Getting to know you – Making small talk

##### **Unit.2**

Chapter 6: Going shopping

Chapter 7: Around town

##### **Unit.3**

Chapter 9: Talking on the phone

Chapter 10: At the office and around the House

### Environmental Studies

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	SD03CHE/PCH	2	2	2

Contact hours:36Hrs

#### Course Outcome

On successful completion of this course, students should be able to

CO 1) Differentiate the environmental segments and understand the importance of environmental segments

CO 2) Identify the types of environmental pollution and the various sources of the pollution

CO 3) Understand the consequences of environmental pollutions

CO 4) Explain the measures of control of environmental pollution

CO 5) Recognise various sustainable energy sources

**UNIT 1.** 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, NOx, Sox, Hydrocarbons, Particulates. Effect

on ecosystem., Ozone layer –importance, Ozone depletion-Control measures- Acid rain-

control of acid rain- Green house effect-global 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-biomagnifications and bioaccumulations

[Type text]

Dissolved oxygen in water, chemical oxygen demand (COD) and biochemicalOxygendemand(BOD)(Definition only)- control of water pollution- ISI/BIS standards of drinking water

**UNIT 4.** Soil Pollution8 Hours

Soil Pollution - Sources by industrial and urban wastes, radioactive pollutants, plastics

heavy metals.Poisoning by heavy metals – Mina- matha&itai-Itai diseases.

Control of soil pollution.- Solid waste Management -Thermal pollution

definition-sources 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:

**GENERIC ELECTIVE COURSE****DRUGS - USE & ABUSE**

<b>SEMESTER</b>	<b>COURSE CODE</b>	<b>HOURS PER WEEK</b>	<b>CREDIT</b>	<b>EXAM HRS</b>
<b>V</b>	<b>5D02CHE/PCH</b>	<b>2</b>	<b>2</b>	<b>2</b>

**Contact hours:36Hrs**

**Credit 2**

Course Outcome

**On successful completion of this course, students should be able to**

- CO 1) Familiarise the classes of drugs and their examples
- CO 2) Distinguish prescription drugs and over the counter drugs
- CO 3) Understand the routes of administration of drugs and their importance
- CO 4) Familiarise various synthetic drugs and their uses
- CO 5) Understand the consequences of misuse of antibiotic
- CO 6) Recognise the drugs of abuse and understand the consequences of drug abuse

**INTRODUCTION(5HRS)**

Drugs- Definitions, Classifications – Prescription drugs and Over the Counter drugs- examples of drugs- Routes of drug administrations, Enteral, parenteral and topical routes. Bioavailability of drugs -Advantage and disadvantage of various routes of administrations-

**PHARMACOKINETICS**

**(10HRS)**

Definition of Pharmacokinetics- A brief explanation of Absorption, Distribution- Metabolism (Biotransformation) and Excretion . First pass metabolism, Therapeutic index . Drug tolerance, Placebo , Adverse drug reactions .

**SYNTHETIC DRUGS (8HRS)**

Examples of Antipyretics , analgesics and anti inflammatory agents . A brief explanation of their mode of action .Anti biotics- Discovery and its importance. Examples of antibiotics - Antibiotic misuse .Anti histamines- examples , Antacids , anti- ulcer drugs . Drugs acting on Central Nervous System, Cardiovascular drugs classification and examples.

[Type text]

# MATHEMATICS 1

## GENERIC ELECTIVE COURSE 2: QUANTITATIVE ARITHMETIC AND REASONING

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HOURS	MARKS		
					END SEM EXAM	INTERNAL	TOTAL
V	SD02 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

### SD02 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.

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### 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.

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HOURS	MARKS		
					END SEM EXAM	INTERNAL	TOTAL
V	5D05 MAT	2	2	2	20	5	25

## COURSE OUTCOMES

CO1	Understand the concept of Limit and continuity, methods of finding limits definition, Differentiation- rules of differentiation, Parametric function logarithmic differentiation.
CO2	Understand the Successive differentiation, Local maximum and local minimum and solves problems
CO3	Understand the Rules of integration, Some standard results, Consumer's surplus, Producer's surplus, Consumer's surplus
CO4	Understand rate of interest, Continuous compounding, Compound interest, Present value, interest and discount, Rate of discount, Equation of value, Depreciation and solves problems

## 5D05 MAT: Business Mathematics

### Unit I

(18 hours)

Functions, Limit and continuity: Constants and variables, functions, Limit of a function, methods of finding limits definition, Differentiation- rules of differentiation, Parametric function logarithmic differentiation, Successive differentiation, Local maximum and local minimum, (except concavity, convexity and points of inflexion), solved examples. (Sections 3.1 to 3.2, 3.6, 4.1, 4.3, 4.4, 4.7,4.8, 5.2,5.3)

### Unit II

(18 hours)

Integral Calculus: Rules of integration, Some standard results, Consumer's surplus, Producer's surplus, Consumer's surplus under pure competition, Consumer's surplus under monopoly. Nominal rate of interest, Effective rate of interest, Continuous compounding, Compound interest, Present value, interest

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and discount, Rate of discount, Equation of value, Depreciation. (Sections 6.1 to 6.2, 6.4, 7.2 to 7.5, 8.1 to 8.9)

### Text

B. M. Aggarwal, Business Mathematics and Statistics, Ane Books Pvt. Ltd.

### References

1. A. C. Chiang and K. Wainwright, Fundamental Methods of Mathematical Economics
2. Knut Sydestar and Peter Hammond with Arne Storm, Essential Mathematics for Economic Analysis, Fourth Edition, Pearson

### Marks including choice

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

- 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 course.



# BOTANY I

## FIFTH SEMESTER DEGREE PROGRAMME GEC IN BOTANY 4: 5D04BOT- MEDICINAL PLANTS

**Module I** **8 Hours**  
Ethnobotany- definition- categories-major tribes of south India- regional studies  
ethnomedicinal plants- wild food plants- socio-economic status.

**Module II** **6 Hours**

Importance and conservation of medicinal plants – *Insitu, exsitu*, sacred groves. Role of ICAR, IMPB, BSI, NBPGR and FRLHT in conservation and cultivation of medicinal plants. IPR issues.

**Module III** **8 Hours**  
Pharmacognosy – definition and scope – ancient and modern science (*sidha, ayurveda unani and homeopathy*), Classification of vegetable drugs, identification of drugs (taxonomical, anatomical, and chemical).

**Module IV** **8 Hours**  
A general account of the methodology of cultivation of medicinal plants. Rhizome – *Curcuma*, Ginger; Tuber- *Allium cepa* ; Root – *Asparagus, Hemidesmis, Acorus calamus* ; Twigs- *Adhathoda vasica, Catharanthus roseus, Phyllanthus amarus, Andrographis paniculata* ; Leaves – *Aloe vera, Centella asiatica*.

**Module V** **6 Hours**  
Major ayurvedic preparations – Kashayam, Arishtas, Asavas, Lehyam, lepanams, choornam, Gulikas and Vataka. Composition and preparation of Drugs- Dasamoolarishtam, Chyavanprasad, Dhanwantharam gulika, Rasnadi Kashayam and Ashtachurnam- Adulteration of drugs.,

### Practicals

1. Familiarize with at least 5 folk medicines and report the source cultivation and extraction.
2. Visit to an Ayurveda college or Arya Vaidya sala.
3. Identification of the medicinal plants in **module IV**.

### REFERENCES

1. Anil K Dhiman.2003. Sacred Plants and their medicinal uses. Daya publishing house New Delhi.
2. Eidi Board, Handbook of Ayurvedic Preparations with formulations,
3. Jain S K 1981. Glimpses of Indian ethnobotany. Oxford and IBH New Delhi.
4. Jain S K 1990. Contribution Indian ethnobotany. Scientific publishers Jodhpur
5. Jain S K.1996. Ethnobotany in human welfare. Deep publishers. New Delhi
6. Jyothiprakash E J 2006. Medicinal botany and pharmacognosy. Emkay Publishers New

# BOTANY II

## FIFTH SEMESTER DEGREE PROGRAMME GEC IN BOTANY - 3: 5D03BOT- PLANT PROPAGATION

### Module 1. Plant propagation 10 Hrs

Seed propagation – Seed dormancy, seed treatment, conditions for successful propagation, rising of seed beds, care of seedling, transplanting techniques.

Vegetative propagation: Natural – general account Types of vegetative propagules- Bulbs, bulbils, buds, Cutting (stem, roots). Artificial methods - Grafting (approach, cleft), Budding (T-budding, patch), Layering (simple, air)

Hybridisation- General principles and basic steps – brief account.

Micro propagation- Basic steps and techniques in Tissue culture.12 hrs.

### Module 2. Steps in Plant cultivation 12 hrs

Selection of Substratum- Soil, water, vermiculite, Potting mixture and others- Culture media- in tissue culture and microbial culture. Properties of soil, plant –Soil- atmosphere interactions.

Preparation of substratum- different and specific methods when plants grown in different pots and substratum- Potting, Depotting, Repotting,

Addition of nutrients -Chemical fertilizers: types, application, merits and demerits. Organic manure; types, application, merits and demerits

Irrigation – Surface, spray, drip irrigation, sprinklers.

Plant protection: Biological, Physical and mechanical, Chemical and biopesticides

### Module 3. Cultivation of plants 14 hrs

Vegetable gardening- General account,- Types of vegetable cultivation-, Polyhouses, Growbag, Roof Gardening, Kitchen gardening.Cultivation of Long bean, Brinjal, Ladies Finger, Cucurbits with an emphasis on major improved varieties

Mushroom cultivation- Brief account on steps and procedures used in mushroom cultivation,, harvesting and storage

Bonsai- Steps used in creation of Bonsai; Coconut and Banana Cultivation with an emphasis on the local varieties available for cultivation; Lawn making; Orchid and *Anthurium* cultivation. Organic farming basic concepts

### References

1. Andiance and Brison. 1971. Propagation Horticultural Plants.
2. Chanda, K.L. and Choudhury, B. Ornamental Horticulture in India.
3. George Acquah, Horticulture: Principles and Practices. Pearson Education, Delhi.
4. Hudson, T. Hartmann, Dale K. Kester, Fred T. Davies, Robert L. Geneve, Plant Propagation, Principles and Practices.
5. Katyal, S.C., Vegetable growing in India, Oxford, New York.
6. Kumar, U.: Methods in Plant Tissue Culture. Agrobios (India), Jodhpur.
7. Prakash, R, and K. Raj Mohan, Jaivakrishi Organic farming, State Institute of Languages, Trivandrum.

# ZOOLOGY 1

B. Sc. DEGREE PROGRAMME (Theory)  
ZOOLOGY  
Generic Elective Course  
**WILDLIFE CONSERVATION AND MANAGEMENT**  
CODE : 5 D 01 ZLG  
Credit:2; Hours:2/week; Total Hours:36

#### Course outcomes

- CO 1 : Develop interest in conservation of nature  
CO 2 : Acquire knowledge in wildlife conservation strategies

#### UNIT 1. Introduction (3hrs)

Definition of wildlife History and tradition of conservation in India. Importance of conservation – Ecological, Educational, Scientific, Ethical, Commercial, Aesthetic, Recreational

#### UNIT 2. Threats to Wildlife (5hrs)

Factors leading to endangered status – habitat destruction (qualitative and quantitative), isolation of population and inbreeding depression, hunting, competition. Wildlife trade. Exotic species as threat to native species a) animals (Tilapia and African catfish as examples) b) plants (mention weeds like Lantana, Mikania). Extinction. Examples of some extinct species and reasons for extinction –

Cheetah, Dodo, Passenger pigeon.

#### UNIT 3. Conservation Methods (5 hrs)

In-situ Conservation (Protected Areas): Wildlife Sanctuaries, National parks, Biosphere Reserves. Protected areas in Kerala. Mention major forest types (Evergreen, Semi evergreen, MCF, CDF and Shola forests). Ex-situ conservation – Zoos – captive breeding; Modern zoo concept – safari, nocturnal zoo. Gene banks

#### UNIT 4. Techniques for Wildlife Study (4hrs)

Study of animal evidence in the field (Animal signs) – impression of foot on soil, droppings, feeding signs, calls, scent mark, wallows, shelter. Marking and tagging of animals. Radio telemetry, Remote sensing, Wildlife photography

#### UNIT 5. TRIBALS AND WILDLIFE (3hrs)

Tribal groups in Kerala. Role of tribals in wildlife conservation - Joint Forest Management

#### UNIT 6 Wildlife policy and legislation (3 hrs)

Indian Board of Wildlife; Wildlife Protection Act 1972; ITES, IUCN; Red Data Book (Criteria for treating a species as endangered); Convention on Biodiversity.

#### UNIT 7. Conservation projects (3 hrs)

Project Tiger, Project elephant, Gir lion sanctuary project, Crocodile breeding project

#### UNIT 8. Conservation organizations (3 hrs)

UNEP, IUNDP, FAO, WWF, BNHS. Mention Chipko movement and Silent Valley movement

#### UNIT 9. WILDLIFE MANAGEMENT (5 hrs)

Conventions related to Wet and management, Ramsar sites in India, Zoo management- Zoo layout and exhibition of animals, Captive breeding, Safari parks. Healthcare and disease management. Disease monitoring and control, surveillance of disease. Zoonosis

#### UNIT 10. Ecotourism (2 hrs)

Tourism and Wildlife - Importance of Tourism in Wildlife conservation

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#### REFERENCES

- Aron N H : Wildlife Ecology; Freeman & Co.  
Nagi, S.S. (1993): Biodiversity and its conservation in India. Indus Publishing Co., New Delhi.  
Nagi, S.S. Manual for Wildlife Management in India.  
Rajesh Gopal: Fundamentals of Wildlife Management; Justice Horna.

# ZOOLOGY 2

**B. Sc. DEGREE PROGRAMME (Theory)**

**ZOOLOGY**

**Generic Elective Course**

**NUTRITION AND DIETETICS**

**CODE : 5 D 04 ZLG**

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

## **Course outcomes**

**CO 1: Acquire general awareness regarding the real sense of health.**

**CO 2 : Understand the role of balanced diet in maintaining health.**

## **Unit 1: Food and Nutrition: Basic Concepts (6)**

**Food, Nutrition, Health, Fitness, Primary Health Care and Nutritional Status .**

**Food : Functions and Constituents of food**

**Food Groups : Basic concepts**

**Digestion, Absorption, and Requirements of Carbohydrate, proteins and lipids.**

**Recommended Dietary allowances and RDA for Indians (ICMR 2010) and their uses in planning diets.**

**Balanced diet (concept and guidelines in planning balanced diets)**

## **Unit 2: Nutrition through the Life Cycle (10):**

**Nutrition during Infancy (0-1 years) and Preschool years (1-6 years): Infancy, preschool period (critical from Growth, development view point, nutrient requirements - Infant and Young \ Child Feeding practices, planning balanced diet for infants, preschoolers and special considerations for feeding young children.**

**Nutrition during Childhood and Adolescent: Growth, Development, Nutrient needs, meeting nutrient needs through planning balanced diets, packed lunches factors influencing food and nutrient needs during adolescence (peer pressure, body image, media, stress, fasting)**

**Nutrition during Adulthood and Old Age: Factors influencing nutrient requirements (age, gender, activity level-sedentary, moderate, heavy) Nutrient needs (RDA) and meeting requirement by planning balanced diets.**

# JOURNALISM 1

## Generic Elective Course: 3

### Mobile Journalism

Semester	Course Code	Hours per week	Credit	Exam Hours
V	5D 03 BMC	2	2	2

### Course Outcomes

1. To have a basic knowledge on media communication via mobile
2. To have a background idea about MOJO
3. To familiarize with various tools for MOJO
4. To understand the potential of MOJO

### Unit 1:

What is MOJO- what is mobile photography-various methods in mobile photography.

### Unit 2:

Who is a mobile journalist? -tools and skills for a mobile journalist

### Unit 3:

MOJO: for radio, print and television.

## Unit 4:

Future of MOJO-challenges in mobile journalism.

### Assignment:

Create a mobile video news story / mobile video short film / mobile video documentary

## Pattern of Questions:

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### Part A –Short answer

**Answer all questions** (6 questions x Mark 1 each= 6)

### Part B - Short Essay

*Answer any 4 questions* (4questions x Marks 2 each=8)

### Part C – Essay

*Answer any 1 question* (1 question x Marks 6 each =6)

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

# **JOURNALISM 2**

Generic Elective Course: 2

## **Freelance Journalism**

<b>Semester</b>	<b>Course Code</b>	<b>Hours per week</b>	<b>Credit</b>	<b>Exam Hours</b>
<b>V</b>	<b>5 D 02 BMC</b>	<b>2</b>	<b>2</b>	<b>2</b>

### **Course Outcomes**

1. To get a basic knowledge on journalistic practices.
2. To have an idea about the potential of freelancing.
3. To familiarize with various genres of journalistic writing
4. To know about various media houses.

### **Unit 1:**

Freelance journalism-definition-Freelance writing and photographing.

### **Unit 2:**

Various freelance writings: feature, special news story, online content writing.

### **Unit 3:**

Sources for a freelance journalist/ photographer: folk media, other media, contacts –nose for news-seasonal journalism.

## Unit 4:

Scope , future and challenges of freelance journalism - media contacts- rapport with editors- connection with media syndicate houses.

### Assignment:

Write a news report / feature story or create a photo essay based on a topic assigned by tutor.

### Pattern of Questions:

---

#### **Part A –Short answer**

**Answer all questions** (6 questions x Mark 1 each= 6)

#### **Part B - Short Essay**

*Answer any 4 questions* (4questions x Marks 2 each=8)

#### **Part C – Essay**

*Answer any 1 question* (1 question x Marks 6 each =6)

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

**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	10

# COMMERCE 1

## 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

**Marks including choice:**

Unit	Marks
I	4
II	6
III	8
IV	4
V	10
Total	32

# COMMERCE 2

## GENERIC ELECTIVE COURSE III: PRINCIPLES OF MANAGEMENT

SEMESTER	COURSE CODE	HOURS PER WEEK	CREDIT	EXAM HRS
V	5D03 COM	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.