



*To Be substituted bearing same number and date*

## INDIRA GANDHI UNIVERSITY, MEERPUR, REWARI

(A State University Established under Haryana Act No. 29 of 2013)

No. : IGU/Acad./BOS/52/2019/.....

Dated: .....

### NOTIFICATION

In continuation of this office letter No. 2432-2456 dated 25.10.2017, No. 283 dated 13.03.2018 and No. 1940-60 dated 18.09.2018, a combined list of Open Elective Papers offered by various Teaching Departments is notified for all concerned as under. The students of all PG programmes under CBCS (w.e.f. 2016-17) are required to study one open elective paper as per the Scheme of Examination of their course/programme. They may choose any one out of the following papers (excluding the courses offered by their own departments):

Even Semester:

Sr. No.	Department	Name of Paper
1	Physics	Source of Energy – I
2	Commerce	Tax Planning for Individuals (MC.OEC-1)
3	C.S.E.	Computer and Network Security
4	Commerce	MC.OEC-2 – Indian Financial System
5	Management	MBA 404 – Personality Development
6	Geography	Geography of India
7	Environmental Science	Population Explosion & Sustainable Development

Odd Semester:

Sr. No.	Department	Name of Paper
1	Physics	Source of Energy – II
2	C.S.E.	Introduction to Computer
3	Botany	Plant Resource Utilization



4	Zoology	Wildlife and Conservation
5	Mathematics	Basics of Vedic Mathematics
6	Management	Communication Skills
7	Yoga	Fundamental of Yoga
8	Environmental Science	Environmental Issues in India
9	Law	Fundamental Rights and Duties
10	English	Communication Skills
11	Geography	Fundamentals of Geography
12	Economics	Principals of Economics
13	Political Science	Human Rights in India
14	History	Brief History of India's Freedom Struggle

sd/-  
Deputy Registrar (Acad.)

Endst No. IGU/Acad./BOS/52/2019/2458-2461

Dated: 16/01/19.....

Copy of the above is forwarded to the followings for information and necessary action: -

- 1 O.S.D. to Vice- Chancellor (for kind information of the Vice- Chancellor), I.G.University, Meerpur.
- 2 Controller of Examination, I.G.University, Meerpur.
- 3 Incharge University Website, I.G.University, Meerpur alongwith syllabus of aforesaid Open Elective Papers to upload the above notification on the University Website.
- 4 Superintendent, College Branch, I.G.University, Meerpur with request to circulate the above notification in all affiliated colleges of Rewari & Mahendergarh districts.

sd/-  
Deputy Registrar (Acad.)



**M.Sc. Physics Semester II**  
**Open Elective – I**  
**Sources of Energy – I**

Theory Marks: 80  
Internal Assessment: 20  
Time: 3 hours

**Unit I**

**Introduction**

Limitation of conventional energy sources, need and growth of alternative energy sources, basic scheme and application of direct energy conservation.

**Solar Cells:**

Solar energy: Introduction, The characteristics of the sun, Definitions related to solar radiations, solar radiation geometry, Estimation of daily solar radiation. Theory of solar cells. Solar cell materials, solar drying, solar furnaces, Solar cooking, solar green house technology, solar thermal power generation, solar cell array.

**Unit II**

**Solar Thermal Energy:**

Solar radiations, flat plate collectors and their materials, applications and performance, focusing of collectors and their materials, applications and performance; solar thermal power plants, thermal energy storage for solar heating and cooling, limitations.

**Unit III**

**Geothermal Energy:**

Resources of geothermal energy, thermodynamics of geo-thermal energy conversion-electrical conversion, non-electrical conversion, environmental consideration, estimates of geothermal power, nature of geothermal fields, advantages & disadvantages of geothermal energy forms, applications of geothermal energy. Geothermal power plant.

**Fuel Cells:**

Principle, working of various types of fuel cells, performance and limitations.

**Unit IV**

**Wind Energy:**

Wind power and its sources: Principle of working of Wind Energy, performance and limitations of energy conversion systems. Site selection, criteria, momentum theory, wind characteristics.

**Text / References Books:**

1. John Twiddeu and Tony Weir, "Renewal Energy Resources" BSP Publications, 2006
2. M.V.R. Koteswara Rao, "Energy Resources: Conventional & Non-Conventional" BSP Publications, 2006.
3. D.S. Chauhan, "Non-Conventional Energy Resources" New Age International.
4. C.S. Solanki, "Renewal Energy Technologies: A Practical Guide for Beginners" PHI Learning.
5. Peter Auer, "Advances in energy system and Technology" Vol I & II Edited by Academic Press.
6. G.D. Rai, "Non-conventional Energy sources" Khanna Publishers
7. Raja A.K., "Introduction to Non-Conventional Energy Resources" Scitech Publications.
- Fahrenbruch and Bube, "Fundamentals of Solar cells. Photovoltaic Solar Energy"

## **Tax Planning for Individuals**

Open Elective Course

MC.OEC-1

Total Credit-3

Time-3 Hrs.

Total Marks-100

External Marks-80

Internal Marks-20

**Note:** The examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of two marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All questions shall carry 16 marks each.

**Unit-1:** Introduction of Income Tax :Important Definitions- Assessee, Assessee in Default, Previous Year, Assessment Year, Meaning of Income, Casual Income, Gross Total Income, Total Income, Five Heads of Income, Tax Free incomes and Agriculture Income, Residential Status and Determination of Residential Status of an Individual, Tax Liability based on residential status. Rates of Income tax for senior citizen, Super Senior citizen and other individuals.

### **Unit-2**

Income from Salary- Salary, Bonus, Commission, and Pension  
Taxability on Allowances- Dearness Allowance, Medical Allowance, House Rent Allowance, Children Education Allowance, Uniform Allowance, Hostel Allowance, Warden Allowance.  
Tax Liability on Perquisites- Rent Free House, Medical Facility, Education Facility, Use of Mobile, Laptop, Computer and Cars.  
Retirement Benefits: Encashment of Earned Leave, Provident Fund, Gratuity, Encashment of Pension.

**Unit-3:** Taxable Income from House Property-Self Occupied House and Let out House Property.  
Deductions from House Property Income.  
Income From Other Sources- Income from Interest, Dividend, Subletting, Royalty, Family Pension, Income of Insurance Agent.

**Unit-4:** Some Important Deductions from Gross Total Income- Deduction Under Section 80C, 80CCC, 80CCD, 80D, 80E, 80QQB, 80TTA, and 80U.  
Filing of online Income Tax Returns/ITR-1.

### **Suggested Readings:**

1. Direct Taxes law & Practice – Dr. H.C.Mehrotra & Dr. S.P. Goyal, Sahitya Bhawan Publications, Agra.
2. Direct Taxes & Practice – Dr. V.K. Singhania Taxmann Publication.
3. Direct Taxes law & Practice – Dr. Bhagwati Prasad – Wishwa Prakashan, N.Delhi.
4. Simplified Approach to income Tax: Dr. Girish ahuja & Dr. Ravi Gupta – Sahitya Bhawan Publishes & Distributors, Agra.
5. Income Tax : Law and Accounts, P.K.Gupta and N.K.Garg, Sanjay Sahitya Bhawan Agra.

## **Indian Financial System**



**M.Sc. Physics Semester III**  
**Open Elective – II**  
**Sources of Energy –II**

Theory Marks: 80  
Internal Assessment: 20  
Time: 3 hours

**Unit I**

**Bio-mass:**

Introduction of biogas, Availability of bio-mass and its conversion theory, classification of biogas plants, principle & working of floating drum plant & fixed dome type plant- advantages & disadvantages. Biogas from plant waste, community biogas plants, utilization of biogas.

**Unit II**

**Ocean Thermal Energy** Availability, theory and working principle, performance and limitations.

**Wave and Tidal Wave:**

Principle, working, performance and limitations.

**Unit III**

**Petroleum and Coal energy**

Petroleum, origin, composition, production, extraction, octane number, kerosene, LPG, lubricants natural gas, physical properties and uses of coal, generis of coal, molecular structure, determination of fixed carbon content, coal for generation of electricity, zero emission power plants, coal reserves and mining.

**Unit IV**

**Nuclear Energy**

Nucleus and its constituents, charge mass, isotopes, isobars, mass defect, binding energy and nuclear stability, radiation and nuclear reactions.

Nuclear fission, chain reaction,  $U^{235}$ ,  $U^{238}$ , controlled nuclear fission and nuclear reactors, fast breeder reactor, nuclear fusion, condition for nuclear fusion reaction, Hydrogen bomb, Nuclear bomb

**Text / References Books:**

1. John Twideu and Tony Weir, "Renewal Energy Resources" BSP Publications, 2006
2. M.V.R. Koteswara Rao, "Energy Resources: Conventional & Non-Conventional" BSP Publications, 2006.
3. D.S. Chauhan, "Non-Conventional Energy Resources" New Age International.
4. C.S. Solanki, "Renewal Energy Technologies: A Practical Guide for Beginners" PHI Learning.
5. Peter Auer, "Advances in energy system and Technology" Vol I & II Edited by Academic Press.
6. Raja A.K., "Introduction to Non-Conventional Energy Resources" Scitech Publications.
7. G.D. Rai, "Non-conventional Energy sources" Khanna Publishers

3<sup>rd</sup> Sem

11/11

## Open Elective

(Provided by the Deptt of Computer Science)

### Paper MCA-Introduction to Computer

Max. Marks: 60.

Time: 3 Hrs.

**Note:** The examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 6 small questions of two marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All questions shall carry 12 marks each.

#### Unit-I

Basic Concepts: What is computer, Characteristics of a Computer, Advantages of Computer, Limitations of Computer, Types of computer, Applications of computer, Data Representation, Hardware, firmware, Live-ware, Software: Relationship between hardware and software, System software: Operating system, Translators, Interpreter, Compiler, Assemblers, Linkers. Overview of operating system, Functions of operating system

#### Unit-II

Information Systems: Meaning, Need of an efficient Information system, Types of Information System. Information requirement for Planning, Coordination, and control for various levels in Business, Industry. Basic of data arrangement and access.

Introduction to database: Definition, Uses of databases, characteristics of database, DBMS, data independencies, difference between traditional file processing system and database approaches.

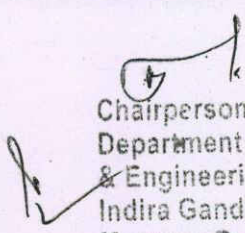
#### Unit-III

Net works: LAN, WAN. Wireless Network, Introduction networking, Importance of networking, Communication devices such as Modem, Features of Networking, Introduction to Internet: Meaning of Internet, Growth of Internet, Owner of Internet, Anatomy of Internet, Basic Internet Terminology, World Wide Web, Internet Protocols, Usage of Internet to society, Search Engines.

#### Unit-IV

Introduction to MS Word: Features of MS Word, component of word document window, creating and Printing a document, Formatting text and document, Mail Merge, Macro, Export and Import file, working with auto shapes, Adding pictures to a work document,

Introduction to MS Excel: Features of Excel, Creating a table, Formatting worksheet, Types of graph, Excel functions, Printing a worksheet, Managing and Organizing data. Power point presentation.

  
Chairperson  
Department of Computer Science  
& Engineering  
Indira Gandhi University  
Meerpur, Rewari



**Department of Botany**  
**(Open Elective Course for students of other Departments)**  
**Semester-III**  
**18BOT23OE: Plant Resource Utilization**

Time : 3 hours

Theory Marks : 80

Internal Marks : 20

Credits : 3:0:0

**Note:** The question paper will consist of five Units. Each of the units I to IV will contain two questions and the students shall be asked to attempt one question from each. Unit-V shall be compulsory and will contain eight short answer type questions without any internal choice covering the entire syllabus.

**Unit-I**

Origin of Agriculture, World Centres of Primary diversity of domesticated plants: The Indo-Burma Centre, Plant Introductions and Secondary Centres. Origin, Distribution, Types, Botany, Cultivation, Harvesting and uses of Wheat and Rice. History, Botany, Breeding, Cultivation and uses of following fruits and vegetables: Mango, Apple, Banana, Potato, Alliums, Cabbage, Spinach and Tomato

**Unit-II**

General Account of the Spices: Ginger, Turmeric, Cinnamon, Clove, Umbelliferous spices and Peppers.

Beverage Plants: Source and general account of Tea and Coffee.

Legumes: Origin, Botany, Cultivation and uses of Pigeon pea, Chick pea, Cluster bean, French bean etc.

Medicinal Plants: Plants as sources of drugs, parts used, composition and uses.

**Unit-III**

Gums: Important commercial gums and their uses.

Tannins and Dyes: Sources and their uses.

Vegetable Oils and Fats: Distinction between fatty and essential oils. Drying (Soyabean and linseed), nondrying (Groundnut and Mustard oil) and Semi drying (Cotton seed and Sunflower oil) oils and their uses.

Fibres: Classification, uses, type of fibres - Soft fibres, Hard fibres, Surface fibres, Brush fibres and Braiding fibres.

**Unit-IV**

Wood and its Uses: Soft woods and hard woods, wood as fuel, construction material Unexploited plants of potential economic value; plants as a source of renewable energy. Genetic Resources and their conservation.

### Books recommended

1. Anonymous. National Gene Bank: Indian Heritage on Plant Genetic resources (Booklet). National Bureau of Plant Genetic Resource, New Delhi. 1997.
2. Cobby, L.S. and W.M. Steels. An Introduction to the Botany of Tropical Crop Plants. 3rd Ed. The English Language Book Society and Longman, London. 1979.
3. Bole, P.V. and Y. Vaghani. Field Guide to Common Indian Trees. Oxford University Press, Mumbai. 1991.
4. Chandel, K.P.S., G. Shukla and N. Sharma. Biodiversity in Medicinal and Aromatic Plants in India: Conservation and Utilization. National Bureau of Plant Genetic Resources, New Delhi. 1996.
5. Conway, G. and V.W. Rattan. The Doubly Green Revolution. Food for all in the 21st Century. Cornell Univ. Press. 1999.
6. Dastur, J.F., Medicinal Plants of India and Pakistan, 3rd Edition, Meyerbooks, 1985.
7. Hill, A.F. Economic Botany. McGraw Hill Book Co. Inc., New York. 1986.
8. Kirtikar, K.R. & D.D. Basu. Indian Medicinal Plants. Vols. I & II. 2nd Ed. Lalit Mohan Basu, Allahabad. 1953.
9. Kochhar, S.L. Economic Botany of the Tropics. 2nd Ed. MacMillan India Ltd., Delhi.
10. Leonard, W.H. & J.H. Martin. Cereal Crops. MacMillan Co., New York, USA. 824 pp. 1963.



**Department of Zoology**  
**(Open Elective Course for students of other Departments)**  
**Semester-III**  
**18ZOO23OE: Wildlife and Conservation**

Time : 3 hours

Theory Marks : 80

Internal Marks : 20

Credits : 3:0:0

**Note:** The question paper will consist of five Units. Each of the units I to IV will contain two questions and the students shall be asked to attempt one question from each. Unit-V shall be compulsory and will contain eight short answer type questions without any internal choice covering the entire syllabus.

**Unit-I**

Wildlife: Definition, significance and wildlife zones of the world and India, Protected Area Systems, Present status of National PA-Systems.

**Unit-II**

Theory and Practice of Biosphere Reserves of the world: Biosphere Reserves of India. Natural Heritage sites, Wildlife and livelihood; Wildlife and illegal trade & control.

**Unit-III**

Wildlife Damage, electric fences for wildlife damage control, Basic electric fence design, Trench design, line trapping, Mist netting, Rocket netting Chemical capture: Equipment, Drugs, Plan of operation.

Poaching: Its implications, conducting anti-poaching operations.

**Unit-IV**

Wildlife conservation techniques, role of WWF, IUCN, UNEP, Red Data Book; Categories of Endangered Wildlife Species. National Projects: Project Tiger, Project elephant, Project Rhinoceros, Project Crocodiles

**Books recommended**

1. Techniques for wildlife Census in India by W.A. Rogers (A field manual); Wildlife Institute of India, Dehradun.
2. Wildlife Wealth of India : (Resources & Management), T. C. Majumuria; Tecpress Services, L.P. Bangkok, Thailand (1990).
3. Ali, S. and Ripley S.D., Handbook of Birds of India and Pakistan, 10 Volumes, Oxford University Press, Bombay.
4. The Book of Indian Animals by S.H. Prater, BNHS-Publication, Bombay.
5. Wildlife in India by V.B. Saharia, Natraj Publishers, Dehradun.
6. E.P. Gee, The Wildlife of India.



**Department of Mathematics**  
**(Open Elective Course for students of other Departments)**  
**Semester-III**

**17MAT23OE: Basics of Vedic Mathematics**

Time : 3 hours

Theory Marks : 80

Internal Marks : 20

Credits : 3:0:0

**Note:** The question paper will consist of five Sections. Each of the sections I to IV will contain two questions from each unit and the students shall be asked to attempt one question from each. Section-V shall be compulsory and will contain eight short answer type questions without any internal choice covering the entire syllabus.

**Unit-I**

- Introduction to Vedic Mathematics
- Importance of Vedic Mathematics
- Number system and its applications in Vedic Mathematics
- Multiplication of any number by numbers containing digit 1 only
- Multiplication of any number by numbers containing digit 9 only
- Multiplication using Sutra-Urdhvatiryagbhyam

**Unit-II**

- Multiplication using base and sub-base method
- Multiplication using Ekadhikena Sutra
- Sum and Difference of Products
- Square using Nikhilam Sutra
- Square using Duplex Method
- Addition and subtraction of squared and products numbers

**Unit-III**

- Cube using Nikhilam and Anurupyena Sutra
- Division using Dhvajank Method
- Meru-prastar and their applications
- Square root and cube root
- Algebraic Multiplication



#### Unit-IV

- Addition and subtraction of algebraic products
- Square and square root of algebraic expressions
- Simultaneous simple equations
- Miscellaneous Simple equations
- Auxiliary fractions
- Triplets

#### Reference Books

1. Bharti Krishan Tirath: Vedic Mathematics, Motilal Banarsidas New Delhi, 2001.
2. Dr. Vyawahare-Chouthaiwale-Borgaonkar: Introduction to Vedic Mathematics, Swadhaya mandal, Kille pardi, Gujarat. 2003.
3. Chouthaiwale-Kolluru: Enjoy Vedic Mathematics, Sri Sri Publications Trust, Bangalore, 2010.
4. N. K. Jain, Choudhary: Vedic and Jain Mathematics, Vishwa Punar Nirman, Talangkhedi, Nagpur.
5. V. G. Unkalkar: Magic world of Mathematics, Vandana Publishers Bangalore, 2008.
6. V. G. Unkalkar: Excel with Vedic Mathematics, Vandana Publishers Bangalore, 2009.
7. V. G. Heroor, The History mathematics and Mathematicians of India, Vidya Bharti, Bangalore, 2006.
8. V. G. Heroor, Jyopati, Rajasthan Sanskrit University, Jaipur, 2007.



## COMMUNICATION SKILLS

PAPER CODE: MBA 304

External Marks: 80

Internal Marks: 20

Time: 3 Hr

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section 'A'** shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section 'B'** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

### Unit -I

Communication Skills - Concept, characteristics and process of communication; 7C's of communication; listening skills, verbal communication, non-verbal communication, body language, art of meeting and greeting, making effective conversation

### Unit -II

Presentation Skills - Difference between speech and presentation, handling of presentation audience questions, holding meetings, group discussion and interviews; structuring a presentation, delivering the presentation; situational presentation

### Unit -III

Behavioral Skills - Positive attitude, self-management, problem solving skills, time management skills, anger management, coping skills, assertiveness team building skills

### Unit -IV

Business Etiquette - Business dress and grooming, office courtesies, etiquette for special occasions, meeting etiquette, dining etiquette

### Suggested Readings:

1. Kaul, Asha, The Effective Presentation, Response Books, New Delhi
2. Fox, She, Business Etiquette for Dummies, Wiley Publishing inc.
3. Chaney, Lillian and Janette Martin, The Essential Guide to Business Etiquette, Praeger, London
4. Sanghi, Seema, Towards Personal Excellence, Response Books, New Delhi
5. Sherfield, Robert M, R J Montgomery and Patricia G Moody, Developing Soft Skills, Pearson Education, New Delhi
6. Chancy, Lillian and Janelte Martin, The Essential Guide to Business Etiquette, Praeger, London

## **Open Elective Paper**

### **Foundation of Yoga**

**Paper code-OEPY-17**

Max. Marks:60

Note:- 1. Question No. 1 will be compulsory and will carry 12 marks. It will comprise of 6 short answer type question of 2 marks each to be selected from the entire syllabus.

2. Four questions will be set from each unit, out of which the student will be required attempt one question from each unit. Questions will carry 12 marks each.

#### **Unit -1**

- Origin of Yoga, History, Definitions, Importance, Development of Yoga, aim and objectives of Yoga
- Introduction to streams of Yoga – Karam Yoga, Gyan Yoga, Bhakti Yoga
- Elements of Yoga and Yogic practices in Jainism and Buddhism

#### **Unit – 2**

- Definition of Hath Yoga, Concept of Mattha, Time, Mithara, Success and Failure elements of Hath Yoga
- Concept, Definition, Benefits, Techniques, Precautions of Sodhan kriya, Asana, Pranayam and Meditation according to Gherand Samhita

#### **Unit -3**

- General introduction to Bhagvat gita, Patanjali Yoga Sutra
- Definition of Yoga in Bhagvat Gita and their relevance and scope, essentials of Bhagvat Gita
- Patanjali yog sutra -Yoga its meaning, purpose and nature of Yoga, chittavritis, kriya Yoga, concept of Ishvara and qualities of Ishvara theory of klesh, Ashtanga Yoga, Karma

#### **Unit-4**

- Biography of Various Yogies - Maharishi Patanjali, Gorkashnath, Maharishi Dayanand, Swami Vivekanand, Maharishi Arvind and Aadi Shankaracharya





## Practical Yoga

Max. Marks: 40

- Surya Namaskar
- Asana –
  - A. Standing Posture:- Tadasana, Trikonasana, Vrikshasna
  - B. Sitting Posture – Patamasana, Paschimotanasana, Vajarasana, Ustrasana, Shashankasana
  - C. Prone posture – Bhujangasana, Dhanurasana, Shalbhasana
  - D. Supine Posture – Halasana, Sarvangasana, Setubandh, Chakrasana, Savasana
- Pranayama – Nadi Shodan, Bhastrika, Bharamri, Suryabhedhi, Sheetkari
- Mudra – Jnana Mudra, Vayn Mudra, Vipritkarani Mudra, Shambhavi
- Bandh – Moolbandh, Uddiyan Bandh, Jalandhar Bandh.
- Meditation – Om Meditation

III (a) Each candidate will prepare a practical note book in which Total 10 Asanas, Two Bandh, Suryanamaskar, Four Pranayama along with photographs as per Class Teacher Advice from the above said complete syllabus.



**M.Sc. Environmental Science: Semester -3**

**Environmental Issues in India**

**(Open Elective)**

**Course Code-17ENV211OEC**

External Exam : 80 marks

Internal Assessment : 20 marks

Total : 100 marks

Time : 3 hrs.

**UNIT-I**

Environment: concept and components of environment; abiotic & biotic types of environment; Biodiversity and Biosphere Reserve.

**Unit-II**

Environmental Hazards: Earthquakes, Volcanoes, Tsunamis, Floods, Droughts and famines- Causes, consequences and measures;

**Unit-III**

Environmental Pollution- meaning, types, sources, causes and effects of environmental pollution with special reference to air pollution, water pollution & noise pollution. Environmental Legislation on air and water pollution in India.

**Unit-IV**

Climate Change: Global warming, Green house effect; Ozone depletion; Acid Rain; Urban smog.

**Note:** Question No. 1 shall be compulsory and will contain six objective type questions covering entire syllabus. In addition, the question paper will have four units consisting of two questions each. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

**Recommended Readings:**

1. Anderson J.M. (1981), *Ecology for Environmental Science : Biosphere, Ecosystems and Man*, Arnold, London.
2. Botkin, D.B., Keller, E.A. (2007), *Environmental Science: Earth as a Living Planet*, John Wiley and Sons, New York.
3. Goudie, Andrew (1984), *The Nature of the Environment*, Oxford Katerpring Co. Ltd.
4. McKinney, M.L., Schoch, R.M. (2003), *Environmental Science: Systems and Solutions*, Jones & Bartlett Learning.
5. Miller, G.T, Spoolman, Scott (2011), *Environmental Science*. Brooks Cloe, London.
6. Odum, E.P. (1971), *Fundamental of Ecology*, W.B. Sanders, Philadelphia.
7. UNEP (2007), *Global Environment Outlook: GEO4: Environment For Development*, United Nations Environment Programme.



# SYLLABUS FOR OPEN ELECTIVE LAW

## FUNDAMENTAL RIGHTS AND DUTIES

### UNIT-I

1. Fundamental Rights- Meaning and concept of fundamental rights, definition nature and scope of fundamental rights.
2. Fundamental Rights and Indian Constitution.

### Unit-II

1. Right to Equality.
2. Right to freedom.
3. Right against Exploitation.
4. Right to Freedom of Religion

### Unit-III

1. Cultural and Educational Rights.
2. Right to Constitutional Remedies.
3. Public Interest Litigation.
4. Social Activism.

### Unit-IV

1. Fundamental Duties- Meaning, Concept, Scope and Nature of Fundamental Duties.
2. Indian Constitution and Fundamental Duties.
3. Relationship between Fundamental rights and duties.
4. Enforcement of Fundamental Duties in Fundamental Rights.



Chairperson

**M.A. English (Final)**  
**Session 2017-18**  
**Semester III**

**Communication Skills**

**Paper XX**

Course Code:

Time: 3 Hours

Total: 100

Total Credits: 4+1 = 5

Theory: 80

Internal Assessments: 20

**Objectives:**

1. To improve the basic skills of reading, writing, listening and speaking among students of any subject.
2. To prepare students to face interviews and group discussions.
3. To acquaint students with the contemporary, colloquial and idiomatic expressions in language.
4. To train them in practical letter writing and forms of business communication

**Unit I: Understanding Communication Skills**

- i. What is communication, types of communication?
- ii. Media of communication, channels of communication
- iii. Barriers to effective communication.
- iv. Role of communication skills in society

**Unit II: Understanding figurative language**

- i. Idioms and phrases, making sentences with at least 50 contemporary idioms and phrases should be taught
- ii. Agreement of subject and verb, correct usage of prepositions.
- iii. Conditional sentences.
- iv. New terms from Management, Information Technology and social media should be taught..

**Unit III: Letter writing**

- i. Resume writing and job application
- ii. Business letters (Orders, Inquiries, Sales letters, Complaints)
- iii. Memos and replies to memos.
- iv. Emails

**Unit IV: Presentation Skills**

- i. How to effectively organize thoughts, research and data collection for speech/presentation, the use of logic and sequence, central idea.
- ii. Oral presentation, diction, tone, clarity and body language.
- iii. Power point presentation
- iv. Time management and preparation, adaptation skills if changes occur.



**M.Sc. Geography: Semester -3**

**FUNDAMENTALS OF GEOGRAPHY**

**Course Code-16GEOG301OEC**

**Exam Course Code -3069**

External Exam : 80 marks

Internal Assessment : 20 marks

Total : 100 marks

Time : 3 hrs.

**Unit-I**

Solar System, Solar and Lunar Eclipses; Earth-shape, movements, formation of day/nights and seasons; location-latitude-longitude, longitude and time zones, International Date Line.

**Unit-II**

Interior of earth; volcanism and earthquakes; plate tectonics; weathering and erosion; Relief, Introduction to major landforms.

**Unit-III**

Weather and climate: factors affecting and distribution; composition and structure of atmosphere;

Atmospheric pressure and global winds; introduction to Monsoon.

**Unit-IV**

Relief of oceans; oceanic salinity; circulation of oceanic water; currents of Atlantic, Pacific and Indian Oceans.

**Note:** Question No. 1 shall be compulsory and will contain eight objective type questions covering entire syllabus. In addition, the question paper will have four units consisting of two questions each. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

**Recommended Readings**

Leong, Goh Cheng., 2015, *Certificate Physical and Human Geography*, Oxford University Press, New Delhi.

Getis, Arthur and Blij and Mark and Getis Victoria., 2014, *Introduction to Geography*, McGraw Hill Education.

Singh, Savinder., 2006, *Physical Geography*, Pravalika Publications, Allahabad.

Strahler, Alan and Strahler, Aurthur., 2005, *Introducing Physical Geography*, John Wiley & Sons, Inc.

INDIRA GANDHI UNIVERSITY, MEERPUR, REWARI

DEPARTMENT OF ECONOMICS  
OPEN ELECTIVE COURSE

(To be offered to students of other Departments of the University)  
Third Semester

PRINCIPLES OF ECONOMICS

Maximum Marks: 100

Time: 3 Hrs.

External Examination: 80

Internal Assessment: 20

Note: The question paper shall have five units. Each of the first four units will contain two questions and the students shall be asked to attempt one question from each unit. Unit five shall contain eight short answer type questions without any internal choice, covering entire syllabus.

Unit- I

Exploring the subject matter of economics: why study economics? Scope and Method of Economics; the Economic Problem: Scarcity and Choice; Positive and Normative economics; Microeconomics and Macroeconomics.

Unit-II

Demand and supply schedules; Law of demand and determinants; shifts of demand versus movements along a demand curve; Elasticity of demand: price, Income and cross elasticity; determinants of price elasticity; elasticity of demand and applications; consumer's surplus.

Unit-III

Basic issues studied in macroeconomics; the role of government in the macro economy; National Income Accounting: Concepts of GDP and National Income; measurement of national income; nominal and real income and the circular flow; limitations of the GDP concept.

Unit- IV

The Simple macroeconomic (closed economy) models: Classical and Keynesian Model: Aggregate expenditure and equilibrium output--aggregate output and aggregate income: simple Keynesian model of income determination.

SUGGESTED READINGS

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- Joseph E. Stiglitz and Carl E. Walsh, Economics, W. W. Norton & Company, Inc. New York, International Student Edition, 4th edition, 2007
- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press
- Lipsey, R.G. & Chrystal, K.E.: Principles of Economics, 11th Edition, Oxford University Press.
- N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, Cengage Learning India Private Limited, 6th edition, 2012
- N. Gregory Mankiw, Macroeconomics, Worth Publishers, 7<sup>th</sup> edition, 2010



INDIRA GANDHI UNIVERSITY, MEERPUR, REWARI  
DEPARTMENT OF POLITICAL SCIENCE OPEN ELECTIVE COURSE  
(To be offered to students of other Departments of the University)  
Third Semester  
HUMAN RIGHTS IN INDIA

Maximum Marks: 100

Time: 3 Hrs.

External Examination: 80

Internal Assessment: 20

**Note:** The question paper shall have five units. The candidate shall attempt five questions in all. Question No.1 will be compulsory question will consist of eight short answer type questions of equal marks (i.e. 2 marks each) spread over the whole syllabus. The candidate shall attempt four more questions selecting at least one from each unit. Each question will carry 16 marks.

**Unit: I**

- The Concept of Human Rights: Western and Third World Context

**Unit-II**

- Human Rights and Constitutional - Legal Framework in India , Fundamental Rights. Directive Principles of State Policy and Protection of Human Rights Act, 1993

**Unit-III**

- Human Rights: Issues and Challenges: Refugees, Minorities, Women and Children

**Unit-IV**

- Civil Society and Human Rights: Media, Public Opinion and Human Rights

**SUGGESTED READINGS:**

- Alston Philip, The United Nations and Human Rights-A Critical Appraisal, Oxford, Clarendon, 1995.
- Baxi, Upendra (ed.), The Right to be Human, Delhi, Lancer. 1987
- Beetham, David edited, Politics and Human Rights, Oxford, Blackwell, 1995
- Desai, A R. (ed), Violations of Democratic Rights in India, Bombay, Popular Prakashan, 1986.
- Evans, Tony, The Politics of Human Rights: A Global Perspective, London, Pluto Press. 2001.
- Haragopal, G, Good Governance: Human Rights, Perspective, Indian Journal of Public Administration, Vol. 44 (3), July-September, 1998.
- Hargopal. G. Political Economy of Human Rights, Hyderabad, Himalaya, 1999.
- Human Rights in India- The Updated Amnesty International Reports, Delhi, Vistaar

Tony Judt, Post War. Vladislav Zubok, A Failed Empire: The Soviet Union and the Cold War From Stalin to Gorbachev, Chapel Hill: University of North Carolina Press, 2007.

**Course LH 01:** This will be a local history project in which every student will undertake a project work of 2 credits of his own choice in consultation with concerned faculty member and submit it for evaluation.

**Open Elective 01: A Brief History of India's Freedom Struggle** 3  
**Credits**

Unit I:

Colonization of India,

Anti-Colonial Civilian, Tribal Uprisings( Sanyasi, Santhal, Munda, Kol etc)

Revolt of 1857 and Different Social Classes.

Peasant Movements. (Indigo, Pabna, Deccan )

Unit II:

Rise of Incipient Indian nationalism in Reform Movements

Ideologies and Programmes of the Indian National Congress, Moderates and Extremists: 1885-1920. Social and Economic Bases of Nationalism, Home Rule League

Trends in Swadeshi movement.

Ideologies and Programmes of Indian revolutionaries in India and abroad

Unit III:

Gandhian Mass Movement: Phases of Mobilization: Non-Cooperation, Civil Disobedience and Quit India. Left Wing Politics(CSP, Kisan Sabha and Trade Unions).

Unit IV:

Two Nation Theory and Rise of Communalism

Movement of the Depressed classes

INA and RIN , Independence and Partition and Integration of Princely States

**Suggested Readings:**



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**Paper MCA- Computer and Network Security**

**Max. Marks: 60.**

**Time: 3 Hrs.**

**Note:** The examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 6 small questions of two marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All questions shall carry 12 marks each.

**Unit-I**

The Security Problem in Computing: The meaning of Computer Security, Computer Criminals, Methods of Defense and Elementary Cryptography: Substitution Ciphers, Transpositions, Making "Good" Encryption Algorithms

**Unit-II**

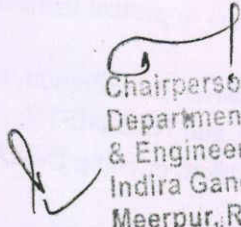
Private Key Encryption, The Data Encryption Standard, The AES Encryption Algorithm, Public Key Encryptions, and Uses of Encryption RSA algorithms.

**Unit-III**

Security in Network: Threats in Network, Network Security Controls, Firewalls, Intrusion Detection Systems, Secure E-mail. Buffer Overflows, Software Security, Operating System Security, Trusted Computing and Multilevel Security,

**Unit-IV**

Privacy and ethical issues in networks, health issues in networked, Physical and Infrastructure Security, Security Auditing, Legal and Ethical Aspects, future of networked economy.

  
Chairperson

Department of Computer Science  
& Engineering  
Indira Gandhi University  
Meerpur, Rewari

Open Elective Course  
MC.OEC-2  
Total Credit-3

Time-3 Hrs.  
Total Marks-100  
External Marks-80  
Internal Marks-20

**Note:** The examiner shall set nine questions in all covering the whole syllabus. Question No.1 will be compulsory covering all the units and shall carry 8 small questions of two marks each. The rest of the eight questions will be set from all the four units. The examiner will set two questions from each unit out of which the candidate shall attempt four questions selecting one question from each unit. All questions shall carry 16 marks each.

**Unit-1:** Indian Financial System: A Brief Introduction, Reserve Bank of India and its functions, Credit Control by RBI, A Brief introduction of Bank Rate, Repo Rate, Reverse Repo, Marginal Standing Facility, CRR, SLR.  
Indian Commercial Banks and their main functions-Types of credits allowed by bank, Types of Bank-Accounts, Role of commercial banks in Economic Development.

**Unit-2:** Brief Introduction of Insurance, Types of Insurance-Life Insurance and General Insurance, Insurance Regulatory and Development Authority-IRDA.  
Financial Literacy and Financial Inclusiveness, Introduction of some important Schemes regarding Financial Inclusiveness, Micro Financing, Mutual Funds, Ponzy Schemes, Guidelines for Investors to protect them from Frauds.

**Unit-3:** Brief introduction of Indian Capital Market-Primary and Secondary Market, BSE-SENSEX and NSE-NIFTY, Understanding the Change in SENSEX and NIFTY, Investment in Share Market, opening D-MAT account, Brief Introduction of SEBI.

**Unit-4:** Introduction of Indian Debt Market-Corporate Debt Market, PSU bonds market and Government security market.  
A brief introduction of Financial Derivatives-Meaning and Types, Forward and Futures, Options, and Commodity Derivatives.



**M.Sc. Geography: Semester-4**  
**GEOGRAPHY OF INDIA**  
**Course Code-16GEOG401OEC**  
**Exam Course Code-4069**

End Semester Exam : 80 marks  
Internal Assessment : 20 marks  
Total : 100 marks  
Time : 3 hrs.

**UNIT-I**

1. India: Locational Setting and Geographical Expansion
2. Relief and Drainage Systems.
3. Climate, Soil and Natural Vegetation.
4. Regions of India

**UNIT-II**

5. The Peopling of India
6. Population: Distribution, Density and Growth
7. Population Composition: Ethnic and Socio-cultural Attributes (caste and tribes)
8. Unity in Diversity in India

**Note :**

The question paper will have five questions in all. Question No. 1 shall be compulsory and will contain eight short answer type questions (not exceeding 50 words each) covering entire syllabus. In addition, the question paper will have two units consisting of four questions from each unit of the syllabus. Candidate(s) are required to attempt two questions from each unit. All questions carry equal marks.

**Recommended Readings:**

1. Ahmed, A, *India: A General Geography*, NCERT, New Delhi.
2. Hussain, Majid (2012), *Geography of India*, 3<sup>rd</sup> Ed., Tata McGraw Hill WE Series.
3. Khullar, D.R. (2014), *India: A Comprehensive Geography*, 3<sup>rd</sup> Ed., Kalyani Publishers, New Delhi.
4. Qaureshi, M. H. *India: People and Economy*, NCERT, New Delhi.
5. Qaureshi, M.H. *India: Physical Environment*, NCERT, New Delhi.
6. Tiwari, R.C, (2010), *Geography of India*, 6<sup>th</sup> Ed., Prayag Pustak Bhawan, Allahabad.



**M. Sc. Environmental Science: Semester - 4**  
**POPULATION EXPLOSION & SUSTAINABLE DEVELOPMENT**  
**Open Elective Course**  
**Course Code-17EVS405OEC**  
**Exam Course Code-405**

End Semester Exam : 80 marks  
Internal Assessment : 20 marks  
Total : 100 marks  
Time : 3 hrs.

**UNIT - I**

Growth and distribution of population in India; Concepts of over population, under population and optimum population; Population as social capital; Population problems and policies. Migration and associated problems; Causes and consequences of migration; Social well-being and quality of life- Human Development Index.

**UNIT - II**

Population explosion and related issues: Energy crisis; food security; Resource degradation; Social insecurity; Regional imbalances. Environmental issues and crisis: Environmental pollution; Environmental degradation; Deforestation, Desertification and Soil erosion.

**UNIT - III**

Sustainable Development: History and emergence of the concept of Sustainable Development; Definitions and Parameters of Sustainable development; Global and regional dimensions of Sustainable Development. Concept of sustainable urban development; Sustainable Cities; Urban Sprawl; Urbanization: problems and remedies; Slums and associated problems.

**UNIT - IV**

United Nations International Agreements for Sustainable Development: United Nations Conference on the Human Environment (1972), The Rio Declaration on Environment and Development (1992), Kyoto Protocol (1997). Sustainable Development Goals (SDGs): SDG 11 - Sustainable Cities and Communities, and SDG 13 - Climate Action.

**Note:**

The question paper will have nine questions in all. Question No. 1 shall be compulsory and will contain eight short answer type questions (not exceeding 50 words each) covering entire syllabus. In addition, the question paper will have four units consisting of two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. All questions carry equal marks.

**Recommended Readings:**

1. Chris Barrow (2006), *Environmental Management and Development*, 2nd Ed.
2. Jennifer A. Elliott (2006), *An Introduction to Sustainable Development*, 3rd Ed.





## PERSONALITY DEVELOPMENT

PAPER CODE: MBA 404

External Marks: 80

Internal Marks: 20

Time: 3 Hr

**Instructions for External Examiner:** The question paper shall be divided in two sections. **Section 'A'** shall comprise of eight short answer type questions from whole of the syllabus carrying two marks each, which shall be compulsory. Answer to each question should not exceed 50 words normally. **Section 'B'** shall comprise 8 questions (2 questions from each unit). The students will be required to attempt four questions selecting one question from each unit. All questions will carry equal marks.

### Unit I

**Discovering the Self** -Knowing Oneself – preferences, tastes, likes dislikes and values – identification and meaning; Life script analysis, strokes and ego state analysis. **Assessing the Self**- Personality Types; Emotional Intelligence – Behavioural analysis and EQ mapping; right/left brain dependence; audio/visual/kinesthetic preferences; assessing stress levels and combating it, time management

### Unit II

**Relating to Others**- Communication and active listening skills; Johari window analysis; Conflict management styles and networking Physical appearance, body language, voice communication style, content quality of communication, Enriched communication through sensory specific language. Business style and professional image-Dress code, guidelines for professional attire, ethics and moral judgment

### Unit III

#### **Personal Transformation:**

Assertiveness training: Concept of assertiveness, components of behavior, assertive behavior skills-handling anger, depression, management by common sense, assertiveness in everyday commercial situation.

### Unit IV

**Presentation skills**- Difference between speech and presentation, handling of presentation audience questions, holding meetings, group discussion and interviews; structuring a presentation, delivering the presentation; situational presentation

#### **Suggested Reading:**

1. Goleman, Daniel, 'Emotional Intelligence', Bantam BOOK 1995
2. Helen Palmer, 'Enneagram', Harper San Francisco, 1988
3. I'm OK, You're OK, Thomas Harris