

**THE BRIEF NOTE FOR GENERIC ELECTIVE PAPERS OF VARIOUS
DEPARTMENTS FOR SEMESTER-III, 2018
KIRORI MAL COLLEGE, DELHI**

DEPARTMENT OF BENGALI

Semester-III: Language in Media: Journalistic Writing

DEPARTMENT OF BOTANY

Generic Elective III-Environmental biotechnology, Unique paper code-32165302

This course is particularly designed to fortify the students with the knowledge of current environmental scenario and updated bio technique. They can go to various environmental policy and planning career, sustainability career and green jobs. This course has 9 Units of lectures, covering the many facets of environment and biotechnology which contains various aspects of global environmental problems and how by using living organism and technique we can reduce the prevalent pollution. It aware the students about Public Participation for Environmental Protection, various Environmental movement and people's participation with special reference to environmental ethics to help to make our environment clean and healthy. It also alerts the students about making and execution of various Laws and Policies for Environmental Protection at national and International level. Practical assigned for this course have very right approach towards the environment involving various measurements. There is Water/Soil (polluted and non-polluted sites) analysis in which Dissolved Oxygen, salinity, pH, total hardness, alkalinity, total dissolved solids (TDS), Rapid field test etc. has to be done. Microbial assessment of air & water has to be done to determine the quality.

DEPARTMENT OF CHEMISTRY

The generic electives papers offered to B.Sc. (Hons.) students from the Department of Chemistry, Kirori Mal College, University of Delhi in the odd semesters 2018 are as follows:

Semester 3: GE3- Solutions, phase equilibrium, conductance, electrochemistry and functional group organic chemistry-II (4 Theory & 4 Practical)

This paper comprises study of Physical and Organic chemistry (2 Theory classes each/week). The students across the science streams *viz.* physics, zoology and botany elect these papers along with their core course papers. These papers are beneficial and compulsory for them to get admission in post graduate courses. Further, for fundamental as well as interdisciplinary research, Chemistry plays an integral part. It is then imperative to gain insights on the subject at Undergraduate level.

DEPARTMENT OF COMMERCE

| | | |
|--------------------------|---------|---------------------|
| 3 rd Semester | BCH 3.4 | Business Statistics |
|--------------------------|---------|---------------------|

In 3rd semester, the department is offering Business Statistics to give competent grip about the subject by covering important techniques like central tendency, time series analysis, hypothesis testing, etc. Business statistics is a very important paper particularly for the students who aspire to undertake research programmes in their forthcoming academic pursuit. This course is likely to give students an understanding on the basic tools and techniques required for undertaking basic research which is likely to develop a curiosity among students to solve problems using research techniques.

DEPARTMENT OF COMPUTER SCIENCE

Semester- 3: Paper Name: Computer Networks and Internet Technologies (Paper Code : 32345301)

This course includes introduction to computer network, data communication, Transmission Media, Network Devices etc. It also includes a brief exposure to internet browsers, and Internet Applications like www, telnet, ftp, e-mail, etc. The practicals would include introduction to hypertext markup language (html), creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames, hosting options and domain name registration.

DEPARTMENT OF ECONOMICS

ECONOMICS GEC for Semester 3 – MONEY AND BANKING

This course exposes students to the theory and functioning of the monetary, banking and financial sectors of the economy. It explains the basic process of money supply and credit creation in the economy. It also highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. It further covers the role of central banking as well as the changes in banking structures and monetary policy including financial and banking sector reforms with special reference to India.

The following is the course outline:

1. Money

Concept, functions, measurement; theories of money supply determination.

2. Financial Institutions, Markets, Instruments and Financial Innovations

- a. Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.
- b. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.

3. Interest Rates

Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.

4. Banking System

- a. Balance sheet and portfolio management.
- b. Indian banking system: Changing role and structure; banking sector reforms.

5. Central Banking and Monetary Policy

Functions, balance sheet; goals, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India

DEPARTMENT OF ENGLISH

ENGLISH GE FOR HONS SEM 3 : LANGUAGE, LITERATURE AND CULTURE

Language and literature are as much a part of our environment as the physical, economic and political environment. This course aims at increasing the students' awareness of why language matters, multilinguality, features of Indian literature and trends in contemporary Indian culture, especially as they are reflected in the media. The course is designed to acquaint the students with the relationship between language and literature through a study of significant themes and forms of Indian literature through the ages. Students will study representative literary works included in *Indian Literature: An Introduction* (edited by Anjana Dev, Sanam Khanna and Bajrang Bihari Tiwari). The course also introduces students to basic concepts of language, its characteristics, its structure, and how it functions in society. The course further aims to familiarise the students with how language is influenced by the socio-political-economic-cultural realities of society. .

DEPARTMENT OF GEOGRAPHY

GE Paper No. 6. Rural Development (Geography)

The Generic Elective (GE) course has been designed to impart knowledge of disciplines other than the one chosen by the student as his/her Honours field of study. Keeping this perspective in mind, the **Department of Geography** offers the paper "**Rural Development**" in its GE course for II year students of Honours courses in the III Semester.

Relevance of the GE Paper-Rural Development

With the advent of civilization, there emerged trade centres and port towns. Later, the Industrial Revolution resulted in the establishment of new towns. These developments in the history of human life ushered in two distinct types of cultural landscapes namely, urban and rural. Expansion of urban areas is rapidly shrinking rural landscapes. This in turn, has resulted in skewed development of rural areas. The

significance of studying this paper in the present context is more due to the accelerated rate of out-migration of rural people to urban areas in search of better livelihood opportunities and greater access to education and health services. The relevance of introducing this paper at the undergraduate level also assumes greater importance because of a new trend of urban to rural migration of people who have retired from jobs in urban areas. The concept of rural development encompasses the overall development of rural areas with emphasis on improving the quality of life and providing sustainable livelihoods for the rural population particularly, the rural poor. Therefore, this paper provides a base for understanding and accelerating sustained development in rural areas and is useful in policy making.

Course Content

This paper has five units which are as follows:

Unit 1. Defining Development:

Inter-Dependence of Urban and Rural Sectors of the Economy.

Need for Rural Development.

Gandhian Approach of Rural Development.

Unit 2. Rural Economic Base:

Panchayati Raj System.

Agriculture and Allied Sectors.

Seasonality and Need for Expanding Non-Farm Activities and Co-operatives.

PURA.

Unit 3. Area Based Approach to Rural Development:

Drought Prone Area Programmes.

PMGSY.

Unit 4. Target Group Approach to Rural Development:

SJSY.

MNREGA.

Jan Dhan Yojana.

Rural Connectivity.

Unit 5. Provision of Services:

Physical and Socio-Economic Access to Elementary Education.

Physical and Socio-Economic Access to Primary Healthcare.

Physical and Socio-Economic Access to Micro credit.

DEPARTMENT OF HINDI

सेमिस्टर-03, ऐच्छिक पेपर (GE) भाषा और समाज

पृथ्वी पर ज्ञात समाजों में से हम किसी भी ऐसे समाज को नहीं जानते जहाँ भाषा के किसी भी रूप का अस्तित्व न हो। भाषा द्वारा ही मानव को वह क्षमता प्राप्त होती है जिससे वह अजैविक क्रियाओं (सामाजिक) को विकसित कर सकता है। यही कारण है कि भाषा और समाज का अस्तित्व परस्पर निर्भर है। भाषा समाज के निर्माण और गति से संबद्ध महत्वपूर्ण अवयवों में से एक है जो समाज में संबंध, ज्ञान और सांस्कृतिक-व्यवहार को अस्तित्व प्रदान करती है। इस ऐच्छिक पेपर का उद्देश्य निम्न पक्षों की व्यावहारिक और सैद्धांतिक समझ पैदा करना है-

इकाई-01 में भाषा और समाज के अंतर्संबंध पर चर्चा करते हुए समाजभाषाविज्ञान के व्यावहारिक और सैद्धांतिक पक्ष को विश्लेषित किया जाएगा।

इकाई-02 में समुदाय, जातीयता और बहुभाषिकता आदि अवधारणाओं के माध्यम से भाषाई विविधता को विश्लेषित किया जाएगा।

इकाई-03 में व्यक्ति, वर्ग, जेंडर और संस्कृति के क्रम में सामाजिक व्यवहार को समझने का प्रयास किया जाएगा।

इकाई-04 में समाज में भाषा सर्वेक्षण के स्वरूप और प्रविधि का विश्लेषण किया जायेगा।

DEPARTMENT OF HISTORY

Semester 3: GE VI paper-6: The Making of Contemporary India (1950-1990s)

Contents of the syllabus:

Laying the foundation of independent India [a] The Constitution: nationality and citizenship

[b] Linguistic re-organisation [c] Foreign policy and the making of non-alignment

II. Envisioning a new economic order

[a] Agriculture and industry; Five Year Plans [b] Education, science and technology

[c] Uneven development –Punjab, Bihar (case studies)

III. Democracy at work

[a] Congress and other political formations

[b] (i)Left parties (ii) Naxalbari (iii) caste politics (iv) Dravidian movement [c]

Women and politics (i)Hindu Code Bill (ii)Status of Women Report

IV. Crisis and after

[a] Railway Strike, J.P. Movement and Emergency

[b] Developments in the1980's: (i) Coalition politics; (ii) Mandal Commission and aftermath [c] Responding to new global alignments: Neo-liberalism

V. The Public Sphere [a] Print media [b] Institutions of art and culture [c] Visual Media: cinema and television

DEPARTMENT OF MATHEMATICS

Semester III – Differential Equations

Course Objectives: The main objectives of this course are to introduce the students to the exciting world of Differential Equations, Mathematical Modeling and their applications.

Course Learning Outcomes: The course will enable the students to:

i) Formulate Differential Equations for various Mathematical models.

ii) Solve first order non-linear differential equation and linear differential equations of higher order using various techniques.

iii) Apply these techniques to solve and analyze various mathematical models.

iv) Formulate, classify and transform partial differential equations into canonical form.

v) Solve linear and non-linear partial differential equations using various methods; and

apply these methods in solving some physical problems.

Course Content:

UNIT-I First order ordinary differential equations: Basic concepts and ideas, Exact differential equations, Integrating factors, Bernoulli equations, Orthogonal trajectories of curves, Existence and uniqueness of solutions, Second order differential equations: Homogenous linear equations of second order, Second order homogenous equations with constant coefficients, Differential operator, Euler-Cauchy equation.

UNIT-II Existence and uniqueness theory, Wronskian, Nonhomogenous ordinary differential equations, Solution by undetermined coefficients, Solution by variation of parameters, Higher order homogenous equations with constant coefficients, System of differential equations, System of differential equations, Conversion of nth order ODEs to a system, Basic concepts and ideas, Homogenous system with constant coefficients.

UNIT-III Power series method: Theory of power series methods, Legendre's equation, Legendre polynomial, Partial differential equations: Basic Concepts and definitions, Mathematical problems, First order equations: Classification, Construction, Geometrical interpretation, Method of characteristics, General solutions of first order partial differential equations, Canonical forms and method of separation of variables for first order partial differential equations, Classification of second order partial differential equations, Reduction to canonical forms, Second order partial differential equations with constant coefficients, General solutions.

REFERENCES:

[1] Erwin Kreyszig, Advanced Engineering Mathematics, John Wiley & Sons, Inc., 9/e, (2006)

[2] TynMyint-U and LokenathDebnath; Linear Partial Differential Equations for Scientists and Engineers, Springer, Indian Reprint (2009)

DEPARTMENT OF PHILOSOPHY

Semester-III: Feminism 12105303)

DEPARTMENT OF PHYSICAL EDUCATION

Semester-III: Health Education, Anatomy and Physiology

DEPARTMENT OF PHYSICS

3rd Semester: Waves and Optics (4) + Lab (4)

DEPARTMENT OF POLITICAL SCIENCE

Semester-III: Nationalism in India

Nationalism in India

Course objective: The purpose of this course is to help students understand the struggle of Indian people against colonialism. It seeks to achieve this understanding by looking at this struggle from different theoretical perspectives that highlight its different dimensions. The course begins with the nineteenth century Indian responses

to colonial dominance in the form of reformism and its criticism and continues through various phases up to the events leading to the Partition and Independence. In the process, the course tries to highlight its various conflicts and contradictions by focusing on its different dimensions: communalism, class struggle, caste and gender questions.

I. Approaches to the Study of Nationalism in India (8 lectures)

Nationalist, Imperialist, Marxist, and Subaltern Interpretations

II. Reformism and Anti-Reformism in the Nineteenth Century (8 lectures)

Major Social and Religious Movements in 19th century

III. Nationalist Politics and Expansion of its Social Base (18 lectures)

a. Phases of Nationalist Movement: Liberal Constitutionalists, Swadeshi and the Radicals; Beginning of Constitutionalism in India

b. Gandhi and Mass Mobilisation: Non-Cooperation Movement, Civil Disobedience Movement, and Quit India Movement

c. Socialist Alternatives: Congress Socialists, Communists

IV. Social Movements (8 lectures)

a. The Women's Question: Participation in the National Movement and its Impact

b. The Caste Question: Anti-Brahminical Politics

c. Peasant, Tribals and Workers Movements

V. Partition and Independence (6 lectures)

a. Communalism in Indian Politics

b. The Two-Nation Theory, Negotiations over Partition

Reading List

I. Approaches to the Study of Nationalism in India

Essential Readings:

S. Bandopadhyay, (2004) *From Plassey to Partition: A History of Modern India*, New Delhi: Orient Longman, pp. 184-191.

R. Thapar, (2000) 'Interpretations of Colonial History: Colonial, Nationalist, Post-colonial', in

P. DeSouza, (ed.) *Contemporary India: Transitions*, New Delhi: Sage Publications, pp. 25-36.

II. Reformism and Anti-Reformism in the Nineteenth Century

Essential Readings:

S. Bandopadhyay, (2004) *From Plassey to Partition: A History of Modern India*, New Delhi: Orient Longman, pp.139-158, 234-276.

A. Sen, (2007) 'The idea of Social Reform and its Critique among Hindus of Nineteenth

Century India', in S. Bhattacharya, (ed.) *Development of Modern Indian Thought and the Social Sciences*, Vol. X. New Delhi: Oxford University Press.

III. Nationalist Politics and Expansion of its Social Base

Essential Readings:

S. Bandopadhyay, (2004) *From Plassey to Partition: A History of Modern India*. New Delhi: Orient Longman, pp. 279-311.

S. Sarkar, (1983) *Modern India (1885-1947)*, New Delhi: Macmillan,

P. Chatterjee, (1993) 'The Nation and its Pasts', in P. Chatterjee, *The Nation and its Fragments: Colonial and Postcolonial Histories*. New Delhi: Oxford University Press, pp.

76-115.

IV. Social Movements

Essential Readings:

S. Bandopadhyay, (2004) *From Plassey to Partition: A history of Modern India*. New Delhi: Orient Longman, pp. 342-357, 369-381.

G. Shah, (2002) *Social Movements and the State*, New Delhi: Sage, pp. 13-31

V. Partition and Independence

A. Jalal, and S. Bose, (1997) *Modern South Asia: History, Culture, and Political Economy*.

New Delhi: Oxford University Press, pp. 135-156.

A. Nandy, (2005) *Rashtravad banam Deshbhakti* Translated by A. Dubey, New Delhi: Vani Prakashan. pp. 23-33. (The original essay in English is from A. Nandy, (1994) New

Delhi: Oxford University Press, pp. 1-8.)

Additional Readings:

B. Chakrabarty and R. Pandey, (2010) *Modern Indian Political Thought*, New Delhi: Sage Publications.

P. Chatterjee, (1993) *The Nation and its Fragments: Colonial and Postcolonial Histories*,

New Delhi: Oxford University Press.

R. Pradhan, (2008) *Raj to Swaraj*, New Delhi: Macmillan (Available in Hindi).

S. Islam, (2006) *Bharat Mein Algaovaad aur Dharm*, New Delhi: Vani Prakashan.

DEPARTMENT OF SANSKRIT

Semester III: (Basic Sanskrit) संस्कृत-भाषा

विश्व में विद्यमान समस्त भाषाओं की जननी होने का विरुद्ध संस्कृत भाषा को प्राप्त है। जो मधुर, समस्त दोषों से रहित, अतिललित, पवित्र तथा वैज्ञानिक भाषा है। वेद, शास्त्र, उपनिषद्, गीता, रामायण, दर्शन, महाभारत, आयुर्वेद, विज्ञान आदि सभी भारतीय संस्कृति के ग्रन्थ संस्कृत भाषा में लिखे गये हैं जो कि मानव जीवन के चरम लक्ष्य मोक्ष प्राप्ति के साधक हैं। अतः जिस मनुष्य ने संस्कृत भाषा का अध्ययन नहीं किया या दूसरे शब्दों में कहें तो जिसे भारतीय संस्कृति के मूलभूत वेदादि शास्त्रों का अध्ययन करने का सौभाग्य प्राप्त नहीं हुआ वह वस्तुतः अपने अस्तित्व को पहचानने में सर्वथा असफल ही होता है एवं अपने मूल लक्ष्य से भटककर केवल सांसारिकता में ही फंस जाता है। अतः प्रत्येक मनुष्यमात्र को संस्कृत भाषा का अध्ययन अवश्य करना चाहिए।

वैश्विक पटल पर संस्कृत के बढ़ते प्रभाव को देखकर अमेरिका ने नर्सरी कक्षा से ही बच्चों को संस्कृत की शिक्षा देना आरम्भ कर दिया है तथा लंदन में ब्रिटिश विश्वविद्यालय में संस्कृत को अनिवार्य विषय के रूप में पढाया जा रहा है। नासा के मिशन संस्कृत की पुष्टि उसकी बेवसाइट भी करती है। उसमें स्पष्ट लिखा है कि 20 वर्षों से नासा संस्कृत पर अनेक शोध कर चुका है। साथ ही संस्कृत को कम्प्यूटर प्रयोग के लिए सर्वश्रेष्ठ भाषा माना गया है। स्पीच थैरेपी के वैज्ञानिकों का मानना है कि संस्कृत पढने से गणित और विज्ञान की शिक्षा में आसानी होती है, क्योंकि इसके पढने से मन में एकाग्रता आती है, संस्कृत की वर्णमाला भी वैज्ञानिक है, इसके उच्चारण से गले का स्वर स्पष्ट होता है। संस्कृत में बात करने से मानव शरीर का तंत्रिका-तंत्र सक्रिय रहता है। जिससे कि व्यक्ति का शरीर सकारात्मक आवेश के साथ सक्रिय हो जाता है। संस्कृत उत्तराखण्ड की राज्यभाषा है। कर्नाटक के मडुर गाँव में आज भी लोग संस्कृत में ही बोलते हैं।

संस्कृत भाषा में रचित साहित्य तथा दर्शन मानव के रिश्तों को भलीभाँति समझाने का कार्य करते हैं सम्पूर्ण संस्कृत साहित्य से मानव-मात्र का सर्वाङ्गीण विकास सरलता से हो जाता है तथा संस्कृत भाषा के ज्ञान के लिये संस्कृत विभाग द्वारा इस प्रथम एवं तृतीय सेमेस्टर में **GE** के प्रश्नपत्र में **Basic Sanskrit** तथा **Basic Principles of Indian Medicine System**

(Ayurveda) को रखा गया है। ये दोनों ही प्रश्नपत्र छात्रों के लिये जीवनकाल तथा अंकों के लिये बहुत ही उपयोगी हैं। प्रथम प्रश्न पत्र में संस्कृत भाषा के मूलभूत सिद्धान्तों के साथ संस्कृत भाषा को सीखने का अवसर भी प्राप्त हो जाता है।

द्वितीय प्रश्न-पत्र में कुल चार सेक्शन हैं

प्रथम सेक्शन- इस सेक्शन में आयुर्वेद के इतिहास को जाना जायेगा तथा आयुर्वेद से सम्बन्धित प्राथमिक तत्वों पर प्रकाश डाला जायेगा।

द्वितीय सेक्शन- इस सेक्शन में स्वास्थ्य से सम्बन्धित मूलभूत सिद्धान्तों के विषय को समझा जायेगा जैसे-सत्व, रजस, तमस् प्रकृतियाँ।

तृतीय सेक्शन- इस सेक्शन में खान-पान, शरीर के लिये पोषक तत्व तथा शरीरोपचार के विषय पर प्रकाश डाला गया है।

चतुर्थ सेक्शन- इस सेक्शन में मुख्य औषधिय पौधों के विषय पर प्रकाश डाला गया है जो पौधे हमारे दैनन्दिन जीवन में आस-पास होते हैं परन्तु हम उनका सही से उपयोग नहीं कर पाते हैं।

अतः इस प्रश्न-पत्र को पढकर छात्र जीवन में निरोगी रहते हुए अपनी विद्याध्ययन की इस यात्रा को सुचारू रूप से पूर्ण करने में सफल होंगे तथा अंकों की दृष्टि से बहुत ही उपयोगी है।

निष्कर्षरूपेण कहा जा सकता है कि संस्कृत केवल एकमात्र भाषा ही नहीं है अपितु संस्कृत एक विचार, संस्कृति, विज्ञान, संस्कार, विश्व-कल्याण, शांति, सहयोग तथा “वसुधैव कुटुम्बकम्” की भावना है।

DEPARTMENT OF STATISTICS

SEMESTER III: STAT-GE 3 Basics of Statistical Inference

The learning objectives include:

- To learn how mathematical ideas of Statistics carry over into the world of applications.
- To analyze and interpret data using calculators and computer software.

Course Learning Outcomes:

After completing this course, students should have developed a clear understanding of:

- Basic concepts of Statistical Inference.
- Basic designs of experiments - CRD and RCBD.
- Use this information for making informed choices in data analysis.
- Data handling using Calculators, Excel and SPSS.

DEPARTMENT OF ZOOLOGY

Semester-III: Food, Nutrition and Health

This paper offers a holistic overview of nutritional benefit of food and health. As, health is one of the most fundamental aspect of human life which is completely depend upon the type of food we eat. Now a days there are reports of various types of admixture/impurities found in our routine food. Can we detect such adulteration in food simply at our home? This paper offers the fundamental concepts of various food components and nutrients, concept of a balanced diet, nutrient needs and dietary pattern for various groups such as adults, pregnant and nursing mothers, infants, school children, adolescents and elderly. Apart from that it provides the knowledge of “Nutritional Biochemistry” which includes various bio-organic macro-molecules such as Carbohydrates, Lipids, Proteins and their dietary source and role, role of vitamins and their dietary source and importance, other micro-nutrients and their biological functions. This paper put emphasis over food hygiene and brief account of food spoilage, its causes and their preventive measures. The most important part of this paper is pertaining to basic idea of health and related issues such as major nutritional deficiency diseases, Protein Malnutrition etc, Life style related diseases such as hypertension, diabetes mellitus, and obesity their causes and prevention through dietary and lifestyle modifications, Social health problems such as smoking, alcoholism, drug dependence and Acquired Immuno Deficiency Syndrome (AIDS) - their causes, treatment and prevention and Common ailments such as cold, cough, and fevers, their causes and treatment. The practical part under this paper requires fundamental knowledge of chemistry.

DEPARTMENT OF URDU

Semester-III: Study of Urdu Prose-I