



## KALIACHAK COLLEGE

Sultanganj, Malda

### Student Performance and Learning Outcomes

Sl	Programme Outcomes	
1.	<b>Bachelor of Arts</b>	<p>This college offers a Bachelor of Arts (B.A) with different combinations. Students have the option to choose between English, Bengali, Sanskrit, Arabic and Urdu as a language course. The other subject areas include Economics, Geography, Political Science, Sociology, History, Philosophy, Education and Physical Education. The students go through a well-defined study programme for their all-round development. Following the successful accomplishment of BA, students will be able to develop various social qualities and can look for higher education such as a postgraduate degree in any of the areas where BA has been completed or they can go for jobs. Following are the major outcomes of this programme:</p> <ul style="list-style-type: none"> <li>➤ <b>Understanding:</b> Graduates develop an understanding of concept, theoretical frameworks and scientific way of inquiry</li> <li>➤ <b>Reasoning:</b> Graduates are trained to think rationally and critically to solve complex problems in their personal and professional life</li> <li>➤ <b>Human Value:</b> Graduates imbibe Moral &amp; Ethical values to clearly articulate and apply their knowledge, particularly in terms of study of social sciences, to determine and defend actions which improve our society</li> <li>➤ <b>Knowledge and Human Culture:</b> With the acquired knowledge and skill, the graduates are able to analyse, compare, and assess the social, economic and political structures along with her art, and culture.</li> <li>➤ <b>Leadership, Service &amp; Entrepreneurship:</b> Graduates demonstrate true spirit of Service to the nation and society through leadership, employment and entrepreneurship</li> <li>➤ <b>Job Opportunity:</b> The Programme provides the opportunity for the graduates to be employed in Banking service, Indian Railway, LIC, Post &amp; Telegraph, WBCS &amp; IAS IFS services.</li> <li>➤ After completion of this course students can also go for B.Ed, M.A, M.Ed, or PhD and choose teaching as a career either in school or in university.</li> </ul>
2.	<b>Bachelor of Science</b>	<p>Bachelor of Science (BSc) offers theoretical as well as practical knowledge about different subject areas. These subject areas include Physics, Chemistry, Mathematics and Biology and other fields depending on the specialisation a student opts. This programme course is most beneficial for students who have a strong interest and background in Science and Mathematics. The course is also beneficial for students who wish to pursue multi and interdisciplinary science careers in future. Following are the various programme outcomes:</p> <ul style="list-style-type: none"> <li>➤ This course forms the basis of science and comprises subjects like</li> </ul>

		<p>Physics, Chemistry, Biology, Zoology and Mathematics.</p> <ul style="list-style-type: none"> <li>➤ It helps to develop a basis of rationality and scientific temperament and thus can prove to be more beneficial for the society. It can help a rapid and faster growth and development of the Nation.</li> <li>➤ There are many job opportunities for the students who graduated from this programme. There are Union Public Service Commission Indian Administrative Services, State Public Service Commission like WBCS, School Service Commission, Indian Foreign Services, Indian Forest Services, SSC CGL grades, Indian Air Force, Indian Navy, Banking Services and Indian Railways.</li> <li>➤ Students may opt for M.Sc. for their higher studies. After higher studies students can join as scientists and can do some research for the welfare of mankind.</li> <li>➤ Science graduates can go to serve in industries or may opt for establishing their own industrial unit.</li> <li>➤ After the completion of the B.Sc. degree there are various other options available for the science students. Often, in some reputed universities or colleges in India and abroad the students are recruited directly by big MNC's after their completion of the course.</li> </ul>
3.	<b>Economics Honours</b>	
4.	<p><b>Programme Outcomes</b></p> <p><b>Specific</b></p>	<p>Economics is the study of how societies use scarce resources to produce valuable commodities and distribute them among different people. The B.A in economics includes courses like Behavioural Economics, Micro &amp; Macro Theory, Indian Economy, Monetary Economics etc. These courses provide the foundational skills that are required in terms of the theoretical and empirical aspects of the discipline. Since 2019 Skill Enhancement Course is also added along with the existing programme.</p> <ul style="list-style-type: none"> <li>➤ The Graduates of Economics possess the knowledge, skills and attitudes of analysis of the role of different sectors of any economy.</li> <li>➤ They are acquainted with economic aspects of modern society, and familiarize with the techniques for the analysis of economic phenomena, and develop an ability to exercise judgment in evaluating public policies.</li> <li>➤ To demonstrate an understanding of basic functioning of Indian economy.</li> <li>➤ To recognize and appreciate the diversity of views about economic problems that have historically been expressed and to analyze social problems and public policies.</li> <li>➤ To describe the institutions in India that shape policies to achieve their goals in addressing issues of unemployment,</li> </ul>

		<p>inflation, exchange rates, balance of payments, economic growth etc in present global context.</p> <ul style="list-style-type: none"> <li>➤ To understand and learn the basic terminology of micro and macro Economics, how the market operates, the level of economic activity in an economy determined.</li> <li>➤ Graduates will be able to be successful bureaucrats, teachers for the middle schools level Economics, and other employees such as in Indian RailWay, Banking sector, LIC, State Public Service commission etc for both administrative and clerical jobs.</li> <li>➤ Economics Graduates have employability in MNCs and Marketing organizations. They can be employed as research associates in different research organizations.</li> <li>➤ Graduates may also pursue Post-graduation studies for more profound knowledge and endogenous research for development of the society.</li> </ul>
5.	<b>Course Outcomes</b>	
	Microeconomics	➤ Students will be acquainted with the scarcity and preferential choice, demand supply mechanism, production, market and distribution
	Mathematical Economics	➤ The students will learn the mathematical tool for economic analysis and techniques of solving the hypothetical economic problems using those tools.
	Macro economics	➤ It will introduce the students with the macro variables namely national income, consumption, Investment, Interest, Inflation, money market of an economy, along with its problems and policies
d)	Statistical Method	➤ Elementary statistical ideas are imparted into the classroom and students will be able calculate basic statistics of variables, distribution, and estimation
	Indian Economy	➤ Students learn the problems of Indian Economy its strategies of development and its evaluations
	Regional Economy of W.B.	➤ Student will be acquainted with the local economy its Growth and Transformation, Livelihood pattern, Social structure and infrastructure
	Econometrics	➤ Students will be able to estimate econometric relation through the use of Linear Least square method
	International Trade	➤ Students will learn the basic theories of international trade, Tariff and Non-tariff barrier, Trade as a development strategy
	Public Finance	➤ Students will learn the sources of government income and expenditure and the policy measures that affect the economy

	Environmental Economics	➤ After learning the course the students are expected to know the resource extraction, depletion and the issues of sustainable development, International Environmental issues like climate change and environmental policy
	Development Economics	➤ Students will get the ideas of developmental issues like growth, development, resource, distribution, demography, Labour, capital, credit market, globalization
	Economics of Health & Education	➤ Students will be introduced with the foundation of health and education economics
	Money & Financial Market	➤ Financial Institutions, Markets, Instruments and Financial Innovations , Interest Rates, Banking System
	Gender and Development	➤ Role of gender, employment, health, well being
<b>Programme Specific Outcomes : Department of English</b>		
		<ul style="list-style-type: none"> <li>● To inculcate in the student an understanding of literature, its socio-political and cultural underpinnings, and its moral, creative and revolutionary potential.</li> <li>● To inspire students to view literary history as a continuum of developing perspectives and new creative ideas.</li> <li>● To instill an understanding of the various genres of literature their nature and characteristics and to inspire an engagement with the practical examples of the forms.</li> <li>● To instill in students an awareness and understanding of various critical perspectives and to encourage them to apply the same to all forms of literature across its staggering diversity,</li> <li>● To encourage students to develop and adopt a comparative approach to literature and life as well.</li> <li>● To encourage creativity in students through close reading of significant literary texts from various genres included in the curriculum.</li> <li>● To view literature as an important agency of socio-cultural transformation.</li> <li>● To intake culture studies into more practical and pragmatic worldview so that they can contribute to the greater purposes of the nation and fraternity.</li> </ul>
	English (Hons) Semester I Paper I British Poetry & Drama: 14th to 17th Centuries	This course is designed to further strengthen the ability of the students through the exercises of British literature. This shelf of english literature serves the purpose of introducing the students to literary masterpieces in general. In this course an attempt is made to expose our students to various aspects of the stream which includes the celebrated works of Chaucer, Spenser and the metaphysical school of poetry with reference to some notable works of John Donne. It further encompasses a brief

		introduction to the 'University Wits' and a detailed reading of Marlowe's drama 'The Jew of Malta'. One in each of the Shakespearean tragedies and comedies, namely 'Macbeth' and 'Twelfth Night' incites the flavour of dramatic techniques into the beginners of English literati.
English (Hons) Semester I Paper II British Poetry & Drama: 17th & 18th Centuries		This paper deals with some of the diversities of English literature produced in these centuries mentioned. Milton's 'Paradise Lost: Book I' garners the gravity of English classics in the syllabus while Jonson's 'The Alchemist' and Behn's 'The Rover' serve the purpose of reading the evolution of literary devices in 17th and 18th centuries England. Pope's masterpiece 'The Rape of the Lock' is a mock epic in this paper that evokes both the satirical elements as well as court culture of the royal families in our students.
English (Hons) Semester II Paper III British Literature: 18th Century		The purpose of this paper is both to entertain and share human experiences, like love or loss, prosperity and inequalities to the students. Congreve's 'The Way of the World' or Swift's 'Gulliver's Travels' range a varied literary experience while Johnson's poetry supplies a rare and rich condiment to the syllabus. Fielding's 'Joseph Andrews' highlights the beginning stage of English novels in general.
English (Hons) Semester II Paper IV British Romantic Literature		This course has been introduced to acquaint the undergraduate students with the British 'Romantic' theories and its background at the French Revolution. The different schools of romanticism have been discussed in detail here. The journey from the pre-romantics like Blake to the romantic essays of 'Elia' (i.e, Chales Lamb) is an interesting vista to the learners. Wordsworth, Byron, Shelley and Keats - the major romantics are introduced to them specially dealing works from each.
English (Hons) Semester III Paper V British Literature: 19th Century		The socio-political and cultural shifts in the 19th century have been rigorously aired in this paper to the honours students. Popular novels of Dickens, Austen, Charlotte Bronte hold up the true spirits of 19th century English literature. The Industrial revolution and the scientific temperament found in Tennyson, Browning or Meynell are just and appropriate for the students to explore the literary reflections.
English (Hons) Semester III Paper VI British Literature: The Early 20th Century		The rapid evolution of English literature has been fore grounded in this particular course of the syllabus. Take it from Shavian underpinnings like in 'Pygmalion' or Forster's 'A Passage to India', the early 20th colonial discourses are to be introduced to the students here. Yeats' poetry and Eliot's notable works help the students develop a more critical and objective literary outlook towards the society and humanity broadly.
English (Hons) Semester III Paper VII European Classical Literature		This paper briefly introduces our students to the history and evolution of drama in general. The crux of the world drama in a miniature has been windowed in this section. Works of Homer, Sophocles, Plautus, Ovid and Horace suffice the classical flavour of literature to our students. This section enhances the inquisitive and critical interest of the learners in an exclusively entertaining way.
English (Hons) Semester IV Paper VIII		This course has been designed to open up the classical shelf of Indian literature translated into English. The paper does not only brief the age-old literary gems of our civilization like that of Kalidasa, Vyasa,

	Indian Classical Literature	Sudraka etc. but also the trends, techniques and limitations of translation studies to the students.
	English (Hons) Semester IV Paper IX American Literature	This paper introduces our students to the history and evolution of American literature in general. The students are to frame up ideas about the society, politics and culture of America through the works of Tennessee Willams, Hemingway, E.A.Poe and Whitman. This program would clarify the overall concepts of world literature in the students.
	English (Hons) Semester IV Paper X Modern European Drama	As distinct from the program title, this course has been developed to construct the appropriate literary ideas of the students regarding the European school of modern drama. The works of Ibsen, Brecht, Beckett, Pirandello reveal the theoretical devices of modern literature to the students that would help them develop a critical perspective and knowledge in the discipline.
	English (Hons) Semester V Paper XI Postcolonial Literature	This program briefly discusses the school of post colonialism and its critical imperatives. Moreover, the analysis of works of some of the pioneering practitioners like Wole Soyinka, Marquez, Neruda etc help the students grab a working knowledge and hold on the theory of post-colonialism and its social, political, cultural and historiographic discourses till the date.
	English (Hons) Semester V Paper XII Indian Writing in English	The course clearly distinguishes between Indian English literature and Indian writing in english at first sight. Reading the famous Indian writers like Narayan, Karnad, Derozio, Tagore, Kamala Das, Ezekiel, Rushdie, Mulk Raj Anand, Shashi Despande cover a widest range of varied practitioners as precise as possible. It helps our students have an inquisitive sketch of Indian literature and the allied unending perspectives.
	English (Hons) Semester VI Paper XIII Popular Literature	This section is richly interesting to the students as they are akin to the cinematic and animated adaptations of the texts concerned. Agatha Christie, Rowling, Ray and Carroll are more popular than any classical literary figures to anyone from eight to eighty. This paper nourishes the knowledge of the students in culture studies and film studies as well in brief.
	English (Hons) Semester VI Paper XIV Women's Writing	The curriculum is devoted to the feminist and gendered literary machinations available. Ranging from Wollstonecraft's first wave feminist writing to the very Bengali writing of Mahashweta Devi, this paper focuses onto the loopholes and applications of gender studies in a brief. This provokes the students to go to the depth of this discipline having some morals and values desirable.
<b>Department of History</b>		
	<b>Programme Specific Outcomes</b>	Graduates from this discipline will be able to learn to use the historical perspective to analyse the present and thus to prepare the policy for the future. Graduates have good career scope in Archaeological departments. They can have better opportunity and access in the indian administrative services as there are some papers they have read in the UG course and is compulsory in those competitive examinations.
<b>Course Outcomes of History</b>		

	<p><b>DC-1 History of India: Pre-history to 6<sup>th</sup> Century BC</b></p>	<p>Students of history will acquire knowledge regarding the primitive life and cultural status of the people of ancient India. They can also learn to differentiate between the primary and secondary sources, pre- history and proto history culture. They can also gather knowledge about the society, culture, religion and political history of ancient India as well. They will learn about the origin of the Indian empire, trade and urbanizations of ancient civilization, like Harappan civilization, Vedic civilizations, later Vedic civilizations etc. How to develop Palaeolithic, Neolithic and Chalcolithic cultures in pre-Harappan period.</p>
	<p><b>DC-2 History of India: 6<sup>th</sup> Century BC-Gupta Period</b></p>	<p>Students can acquire knowledge about the evolution of human Society &amp; how the society of agricultural and animal husbandry had begun through the Aryans. They also learn how the emergence of various protests movements, including Jainism and Buddhism, against the immorality of Brahmanism. They can acquire knowledge about the origin, features, nature spread of various important dynasties of ancient India like Mouryans, Kushanas and Satavahans, Chera, Chola, Pandya, Pallavas, and various small dynasties like Maukharis, Vakatakas, Sasanka and later Guptas. They will realize about the religion and messages from Ashoke, the great Mourya Emperor and about the golden period of ancient India i.e., Gupta period from this paper. In addition, they also learn about contemporary society, economics, politics, and religion.</p>
	<p><b>DC-3 History of India: Post-Gupta to 1200 AD</b></p>	<p>They can achieve knowledge on how to develop Indian feudalism and evolution of the political structures of early-medieval north and south India. They can learn how the conquering of Islam had initiated in India and had transformed of Indian culture, society, religion and agrarian structures under the Islam power of medieval India. They will achieve knowledge about the religious and cultural changing scenarios after the advent of the Islam in India. They will gather knowledge how the Sultanate of Delhi had established in 1206.</p>
	<p><b>Semester II</b> <b>DC-4 History of India: 1200 AD to 1526 AD (Political History)</b></p>	<p>Students of history will learn about the foundation, expansion and consolidation of the Sultanate of Delhi and also to the downfall of the Delhi Sultanate. In addition, they will learn about theories of Kingship, and autonomous chieftains.</p>
	<p><b>Semester III</b> <b>DC-5 1200 AD to 1526 AD (Socio-Cultural, economic history of India)</b></p>	<p>In this paper they learn also acquire the knowledge about the Changing scenarios of the urban and rural societies after consolidation of the rule of the Sultanate of Delhi. They can learn about the activities of Delhi Sultanate i.e., revenue systems monetization, market regulations, growth of urban centres, trade and commerce, Indian Ocean trade, Bhakti and Sufis etc. They will learn towards the emergence of provincial dynasties &amp; Consolidation of regional identities like, Bahamanis, Vijayanagar and Bengal.</p>
	<p><b>Semester III</b></p>	<p>In this paper students will learn about the Historiography and sources and their different approaches of Mughal India history. They acquire knowledge towards Turkey's invasion &amp; Struggle for Empire in North-</p>

	<p><b>DC-6 History of India: 1526 AD-1707 AD (Political history)</b></p>	<p>Western India and foundation of the Mughal Rule in India. They also learn about the about the Mughal Indian society, economy and culture after consolidation of the Mughal rule India. They will learn about how the Regional Powers had been raised in different parts of India after the downfall of the Mughal Empire of Delhi. They can gather knowledge to the downfall of the Mughal Empire only lack of unity among the Mughal courtiers and resulted to raise provincial kingdoms in Bengal, Hyderabad, Ayodhya, Mysore and Maratha in Western India.</p>
	<p><b>Semester III</b></p> <p><b>DC-7 History of India: 1526 AD to 1707 AD (Socio-Economic, Cultural history)</b></p>	<p>In this paper the student learnt about the environmental context, Agriculture production; management of water resources, agricultural technology and crop patterns, Agrarian structure; land ownership and rights; revenue system; the village community; and peasantry,trade Commerce and the Monetary System, Urban Centers, Cultural Developments <b>during the Mughal rule.</b></p>
	<p><b>Semester IV</b></p> <p><b>DC-8 History of India: 1707 AD to 1818 AD</b></p>	<p>In this paper the student understand the concept of Modern India. They learn how to establish the Company's Rule in India after the battle of Plassey and English East India Company relation with Mysore, Marathas, Punjab and Awadh. Legitimized the regulating Act, Pitt's India Act, Charter Acts of 1813, Administrative, Military, Police and Educational Reforms as well. They will learn towards the land revenue systems, Commercialization of agriculture, De-industrialization under the company's rule in India at the same time. They also learnt about the early resistance of tribal and others like the Chuars. The Pinderies, the Santals, and the early resistance.</p>
	<p><b>Semester IV</b></p> <p><b>DC-9 History of India: 1818 AD to 1885 AD</b></p>	<p>In this paper the student understanding the the renaissance and socio-religious reforms movement occurred by Rammohan Roy (Brahma Samaj), Young Bengal, Vidyasagar under the rule of the Company's rule in Bengal. They also learnt about the Prarthana Samaj, AryaSamaj, SatyaShodhak Samaj, Theosophical Society, Wahabi, Faraizi, and New Hindu movements, Ramakrishna Mission movement. They will also learn about the changing position and attitudes for women, Sanskritization; Cast movements; Brahmanical and depressed classes. They will also acquire knowledge about the first national war of rebellion i.e. 1857 revolt, its causes, nature, extent and cause of failure.</p>
	<p><b>Semester IV</b></p> <p><b>DC-10 History of India: 1885 AD to 1950 AD</b></p>	<p>They will learn from this chapter about the local rebellion and movements like the Indigo rebellion, the Deccan Riots, the growth of the new middle class; the age of associations, the Aligarh movement, the Arya and the PrarthanaSamaj aftermath of 1857. They will learn the real historiography of Indian Nationalism; Birth of Indian National Congress, The Moderates and the Extremists, Partition of Bengal, the Swadeshi movement in Bengal in 1905. They can acquire knowledge about the rise of Gandhi's power in Indian politics and his activities towards the freedom like, Rowlatt Satyagraha, Khilafat and Non-</p>



		cooperation movement, The Swarajya party, Poona Pact, Civil Disobedience Movement, and Quit India Movement. They also learn how to raise communal politics and opposition politics on the eve of the freedom movement in India and aftermath of partition in India
	<p style="text-align: center;"><b>Semester V</b></p> <p><b>DC-11 Rise of the Modern West (Mid-15<sup>th</sup> century to 17<sup>th</sup> century)</b></p>	Students of history will learn about the rise of the modern west world and transition the society and economy from feudalism to capitalism. They will learn how the rise of Renaissance in Italy and spread of humanism in Europe and results of the European Reformation in the 16th century and Shift of economic balance from the Mediterranean to the Atlantic, Commercial Revolution, Influx of American silver and the Price Revolution. They gathered knowledge towards the emergence of European state system like Spain, France, and England etc.
	<p style="text-align: center;"><b>Semester V</b></p> <p><b>DC-12 Rise of the Modern West (17<sup>th</sup> century to Mid-18<sup>th</sup> century)</b></p>	History students will learn about the European crisis of economic, social and political dimensions as well as the English Revolution, major issues like political and intellectual currents in the 17th century. They will learn about the rise of modern science in relation to European society by the Renaissance and the European politics in the 18th century like parliamentary monarchy, patterns of Absolutism in Europe and prelude to the Industrial Revolution in England and other European countries.
	<p style="text-align: center;"><b>Semester VI</b></p> <p><b>DC-13 History of Europe: 1789 AD to 1870 AD</b></p>	They will learn about the French Revolution and its impact of European countries. Unity and power makes people strong, which have shown in the French revolution in 1789. How Industrialization has occurred and its effect on socio economic transformation of Europe. They will know about the politics of super power among the European countries. How the sense regarding nationalism and unification had developed among the European countries on eve of the 2nd world war.
	<p style="text-align: center;"><b>Semester VI</b></p> <p><b>DC-14 History of Europe: 1871 AD to 1945 AD</b></p>	Students of history will learn about how the world became divided after the First World War among the superpowers of the world. They also learn how the aggressive foreign policy of Italy and Germany influenced to the European countries and compelled them to form allied powers of the world. Gradually, the 2nd world war had occurred and the League of Nations was established in the aftermath of the war which affected world politics. Ultimately, the world became divided into two superpowers .i.e. USSR and associate countries on the other hand USA and their associate powers.
	<p style="text-align: center;"><b>Discipline Specific Core (DSE)</b></p> <p style="text-align: center;"><b>Semester V</b></p> <p><b>DSE-1 A India after independence</b></p>	From this paper the students will learn about the making of Indian constitution and learn about the various wings of constitution and how democracy was working through election and multi dementia party system from 1950-1970. Through this paper they also prepared their lesson about Economy Society and Culture c 1950-1970s The Land Question, Planned Economy, Industry and Labour Science and Education The Women’s Question: Movements and Legislation –Cultural Trends: Institutions and Ideas, Literature, Media, Arts etc.

	<p><b>DSE-1 B Economic History of Modern India</b></p> <p><b>DSE-2-A History of China and Japan</b></p>	<p>From this paper the students will learn about the economic history of modern India under colonial rulers. They also study about the Colonial Economy (1757- 1813), Agriculture and Property Rights (1813-1947), Industrial development(1813-1947), <b>and also the</b>Trade and Commerce of India (1813-1947)</p> <p>Students will be aware about the emergence of the communist party of China and it's influence on the entire Asian countries. They will learn how the Chinese Republic came out from colonial pressure and bondage. As well as they will gather knowledge about the emergence of Japan as a military state of East Asia on the eve of World War-II that had influenced World War-II.</p>
	<p><b>DSE-2-B Regional History with special reference to North Bengal (1206-1947)</b></p> <p><b>History of North Bengal (1200-1947 AD)</b></p>	<p>In this paper the students will learn about the mother land and its people, its divergence, and its physical structure. From this paper they also aware about the primary and secondary sources from where they got information about their own land. They also learnt from this paper about the history of medieval and modern North Bengal. They also study about the various wings of said period like social, economic, cultural, religious development of this land during this said period i.e. 1200 to 1947 AD.</p>
	<p><b>Semester VI</b></p> <p><b>DSE-3-A</b></p> <p><b>Contemporary World (1945-1990)</b></p>	<p>Students will aware about theImpact of the Second World War on the International System, Origins of the Cold War and the division of Europe, the decline of European Imperialism, impact of the cold war on the Third World,Vietnam, Korea and Cuba crisis, The New World System, from Bi -Polarism to Uni-Polarism system</p>
	<p><b>DSE-3-B Gender and Education</b></p>	<p>From this paper the student will learnt about the various issues Gender and Education like Basic Concepts &amp;Theories, Emergence of Women Studies in India, Gender &amp; Social History: Family &amp;Marriage, Women's Question in the 19th century, Women' Movement in Colonial &amp; Post-Colonial India etc.</p>
	<p><b>DSE-4-A Contemporary World (1990-till date)</b></p>	<p>From this paper students will learn Globalization - Impact on the Third World - information revolution, question of Technology, - revival of economic liberalism. Implications for changes in the development strategies in the Third World with special reference to India and various subject like this.</p>
	<p><b>DSE-4-B History of south-East Asia (20<sup>th</sup> Century)</b></p>	<p>From this paper student will learn about modern South- East Asia in the 20<sup>th</sup> Century. They know about various related topic from this topic like Migration: Indian and Chinese Labour and Capital, Movements of Resistance and the making of new identities [a] Peasant resistance. [b] Radicalism and the Origins of the Vietnamese Revolution, 1920- 1946, Revolution of 1945-1949 and other subjects like emergence of Modern Nations and States in Myanmar, Indonesia and Cambodia.</p>
	<p><b>SEC-1 Understanding Indian Heritage</b></p>	<p>Students understand the different facets of heritage and their significance. They also understand about the legal and institutional frameworks for heritage protection in India as the challenges facing it. They can examine the implications of the rapidly changing interface between heritage and history. They will gather knowledge about the</p>

		heritage through projects and visit museums and Archives.
	<b>SEC-2 Project (Related to Honours- Educational Tour, Term-paper, and Seminar etc.)</b>  <b>NB: it is depended on the respective teacher/department of the colleges</b>	In the paper the student will conduct hand to hand experiences. They will be given various assignments (like Educational Tour, Term-paper, and Seminar etc.) from the college to know how well they have understood the subject. This paper includes historical educational tour so that they get a better chance to get acquainted with local or indigenous historical places as well as try to bring to life what is read in the book.
	<b>CC Paper-XIV Making of the Contemporary World (1946 – 2000)</b>	Students will learn about the post-war developments of Social, Political and Economic scenarios of the World and decolonization and the emergence of the Third world. As well as they will learn the origin of the Cold War and Changing World political Scenarios and emerging trends in culture, Media and Revolution among European countries.
	<b>DSE Paper-III History of Modern East Asia (1840-1919)</b>	Students will learn about the nature and structure of the traditional Chinese society and how to transform the Chinese society from traditional to modern cultures. They can also learn about how the strong countries of the World captured the Chinese society, culture and economy during the nineteenth century. They will be aware how the Chinese were united towards the foreign colonial powers and defeated them and ultimately gain to freedom
	<b>DSE Paper OR History of the USSR (1917 - 1945)</b>	Students will be aware about the Russian War of 1917 which affected the contemporary society and politics of the European countries. They will gather knowledge on how to raise Communist Power of Russian on the eve of World War-II. They will learn about the foreign policy of Russia which affected the entire World. As well as they were aware towards several treaty, alliance and conferences during the prior of World War-II.
	<b>DSE Paper-IV History of China &amp; Japan (1919-1949)</b>	Students will be aware about the emergence of the communist party of China and it's influence on the entire Asian countries. They will learn how the Chinese Republic came out from colonial pressure and bondage. As well as they will gather knowledge about the emergence of Japan as a military state of East Asia on the eve of World War-II that had influenced World War-II.
	<b>DSE Paper –IV (OR) History of the USSR-II (1945-1964)</b>	Students will learn how the USSR emerged as a powerful state opposition of the US after World WarII. They gather knowledge towards the society, polity and economics of the USSR which influenced the under-development countries of South-East Asia. On the other hand the USSR opposed the activities of the USA and protected the under-developed countries. As well as they acquire the knowledge about to rise of Non-alignment.
	<b>Department of Geography</b>	
<b>1.</b>	<b>Programme Specific Outcome</b>	The curriculum of geography is designed considering it as a subject of chorology. Simply geography is a bridge between the physical and social sciences. Thus this discipline deals with the analysis of physical

		phenomenon and social phenomena for human interests. From this programme learners will achieve real world knowledge regarding the physical phenomena, like tectonic activities, geomorphological processes, climatic phenomena, oceanography, hydrology, ecology and environment as a whole. The achieved knowledge about the mentioned aspects would be helpful for the betterment of the human societies. On the other hand, the human related aspects like population, demography, economy, resource management are widely studied by this programme. Therefore the planning strategies for human development would be better perceived. The acquired knowledge in this discipline would be applicable for national interests.
<b>2.</b>	<b>Course Outcome; Department of Geography</b>	
	<b>Course</b>	<b>Outcome</b>
a)	Geotectonic & Geomorphology	Specific knowledge concerned with tectonic and geomorphic activities of landform evolution will be achieved through course. The knowledge will also be applied in the real field to understand the problem induced by endogenetic and exogenetic forces. Morphological mapping, geological mapping are appreciated for terrain evolution and mineral exploration.
b)	Cartographic Techniques	It will enhance the skill concerned to representation of quantitative data in the visualised format both in physical and social geographical studies
c)	Population & Settlement Geography	Population and demography related aspects are studied by this course. These will be helpful for making population policies and also eradicating population related problems. Urban and rural settlements are studied incorporating morphology, site situation and problems in this course. Thus the scientific knowledge of management of rural and urban settlements will be achieved.
d)	Cartograms & Thematic Mapping	Scientific representation of spatio-temporal phenomena mapping techniques are highly appreciated in the field of geography. The achieved knowledge through this course could fulfil the mentioned targets.
e)	Climatology	Climatic events have strong influences on each human activity. In the present era modernisation human interferences in the climatic phenomena has induced severe problems for sustaining life on the planet. The study of climatology will be helpful for betterment of climate and eradicate the problems induced by human interference in the atmosphere. To search the strategies for facing the problems like global climatic change, global warming, greenhouse effect, acid rain, ambient air pollution and other anomalies in climatic events can be achieved through the study of the course.
f)	Statistical Method in Geography	With the help of this course quantitative research techniques would be adopted by the learners indeed. This course can enhance the knowledge of learners in both descriptive and inferential statistics.

g)	Geography of India	This course incorporates the detailed study of physical, economical, social, cultural aspects along with planning, policies and strategies of regional development of India. Therefore, this section is helpful not only for geographical study but also to face different competitive examinations.
h)	Regional Planning and Development	In this section the vital issues related to regional development are included. Therefore, this will be helpful for achieving the knowledge about policy making and its implementation strategies for regional development both at macro and micro level.
i)	Economic Geography	It deals with detailed informative and analytical study about economic activities and resources of the nation and the world. So, through the study of this part the learners can achieve the ideas of present status of economy and human as well as material resources of the country and the world.
j)	Environmental Geography	Contemporary issues related to environment and environmental hazards and disasters have been incorporated. Thus, by this study of this part of geography knowledge as well as perception of environmental aspects can be achieved in the scientific way.
k)	Soil & Bio-Geography	Ecology and pedology related aspects have been taken into consideration. Therefore, knowledge of ecosystem, biome, wetlands, bi-diversity, and soil quality, assessment of soil erosion and pollution etc. Can be achieved through the study. The knowledge would be applied for soil quality management and ecological management.
l)	Hydrology & Oceanography	Hydrology deals with the mode of occurrence of water and activities of valuable water on earth. Problems of ground water utilisation, scarcity of drinking water and management of hydrosphere have been included in this section. Thus it is helpful for management of water resources. Oceanography deals with physical and chemical characteristics of ocean water, along with potentiality of marine resources. Thus it is helpful for management of ocean resources.
m)	Disaster Management	Relevant issues related to environmental disasters are included in this section. So, through the study of this section ideas of proper management of environmental disasters can be achieved to mitigate the problem in the real world situation.
n)	Fluvial Geomorphology	In this optional special paper morphometric characteristics of the river basin have been scientifically discussed. Therefore, the learner can achieve proper knowledge regarding the management of river basins from the dimension of environment and resources.
o)	Social & Cultural Geography	In this optional special paper social and cultural issues relevant to present society have been incorporated. This will be helpful for making welfare supportive policies of the

		targeted society indeed.
p)	Applied Geomorphology	This optional special paper deals with application of geomorphological knowledge to solve real world situations related to geomorphic events like landslide, flood, bank erosion, constructional activity etc. So, it has immense applicability in the present global market.
q)	Human Geography	In this optional special paper concerned with the interface of human and nature. It deals with several human activities and its resultant effects on the environment and vis-a-vis. Therefore, the problems induced by owing to man –nature interface can be mitigated by the scientific study of this section.
r)	<b>Department of Political Science</b>	
s)	Programme specific Outcome	<ol style="list-style-type: none"> <li>1.To include in the students an understanding of society, organisations, cultural and political life of human beings.</li> <li>2.To inspire students to realise and create the new frontiers of political science.</li> <li>3.To develop the ability of describing different modern theories in a critical manner.</li> <li>4. To able to act morally or ethically in a comparative manner.</li> <li>5. To generalise the observations which are needed for building the theory.</li> <li>6. To develop the quality of active participation in government and politics of the citizen.</li> <li>7.The students of political science can know the perfect way of understanding class, caste ,political systems, political structures and their functions, international relations, public administration, comparative analysations etc.</li> </ol>
t)		<b>Course Outcomes</b>
u)	DC – 1	Students will be acquired with the studies of the constituent Assembly, Preamble, fundamental Rights duties, Directive Principles, organs of the Government, Federalism which are the main determinants of State Policy.
v)	DC-2	This paper deals with the political process in India i.e., political parties, voting behavior, regional aspirations, religion and politics, caste politics as well as the changing nature of the Indian Sate.
w)	DC-3	It will introduce the students with the theories and approaches to the study of politics such as liberal, Marxist, anarchist, Conservative, Normative, Empirical as well as the contemporary perspectives, in Pol theory i.e. Feminist, Postmodern etc. It also introduces the students with the studies of political sovereignty, Globalization, Political Obligation, Right to resistance, Democracy and its various forms.
x)	DC-4	This course is designed o strengthen the ability of the students to understand the theory of liberty, equality, justice, Rights so that they can enter into the major debates in Marxism, Leninism, socialism etc.

y)	DC-5	This paper deals with some of the diversities in politics like historical context of capitalism, socialism, colonization along with the comparative study of political economy of Britain, Brazil, Nigeria and China.
z)	DC-6	The students will learn the approaches to studying comparative politics, electoral systems, emergence of party system, nation and state debates as well as the historical context of federation and confederation.
aa)	DC-7	This paper briefly introduces our students to the history of classification of classical political philosophy of Plato, Aristotle, Machiavelli, Hobbes, Locke as well as the Modern Political Philosophies of Rousseau, J. S. Mill, Karl Marx etc.
bb)	DC-8	Students will get the ideas of Indian political issues of Vyasa, Manu, Kautilya, Barauni, AbulFazal, Kabir. At the same time the students will be modern political thinkers like Ram Mohan Ray, Tagore, Ambedkar, Nehru, Lohia etc.
cc)	DC-9	This paper briefly introduces our students to the history and evolution of understanding political sociology i.e., case, class, gender, power, authority etc.
dd)	DC-10	The socio-political and cultural shifts have been rigorously aired in this chapter to the topics of culture, socialization, political participation and very much socio-cultural-political impact on them.
ee)	DC-11	This section is really interesting to the students as it deals with the perspectives on International relations and world history. This course will teach the students the new frontier of International relations and an overview of Twentieth Century IR History.
ff)	Dc-12	This course deals with some of the diversities in Global politics i.e., Globalisation, Contemporary Global issues, Global shifts of power and Governance.
	DC-13	Through this course, the students will be acquainted with the study of public administration like public administration as a discipline, classical theories of public administration, Neo-classical theories, contemporary theories, public policy etc. which are very dynamic issues in modern world.
	DC-14	This course will introduce the students to strengthen the ability to realize the public policies and administration in India and their decentralization, Budgetary process which is most dynamic part of the Government, citizen and administration interface, social welfare administration. Administration corruption etc. This section is really interesting to the students of politics as these are the burning topics of the Governance.

gg)		<b>Department of Philosophy</b>
hh)	Programme Specific Outcomes	<p><b>B.A. Philosophy (Hons. and General)</b></p> <ul style="list-style-type: none"> <li>● After completing graduation in Philosophy, a student can develop reasoning power to understand something systematically or methodically.</li> <li>● A Student can improve his/her critical thinking skill.</li> <li>● A Student can develop his/her communication skill, charity relevances in written and oral presentations.</li> <li>● S/he develops the ability to act morally or ethically.</li> <li>● Awareness of one's own thinking and use of language develops among the students.</li> </ul> <ul style="list-style-type: none"> <li>● A student can know that philosophy is a good way to know certain things about logic, epistemology, metaphysics, ethics; more other various issues such as social, political, environmental &amp; professional ethics; and also about laws of nature, causal relations and things that exist in the world.</li> </ul>
ii)		<b>Course Outcomes</b>
jj)	Outlines of Indian Philosophy	In addition to what the term 'Philosophy' (' <i>darshana</i> ' in Indian context) stands for and its basic characteristics and nature, the course gives the students a thorough understanding of major systems of Indian philosophy--both heterodox and orthodox, viz. Charvaka, Jainas, Bauddhas, Nyaya, Vaisheshika, Samkhya, Yoga, Mimamsa, Vedanta--thereby helping them know the basic teaching of each Indian philosophical school.
	History of Western Philosophy	This course acquaints students with the major periods or shifts in Western philosophy while highlighting the contribution of Greek and Continental philosophers, viz. Plato, Aristotle, Bacon, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant.
	Indian Ethics	As 'Ethics' is treated to be an independent discipline in Western world, it plays an important role in philosophical discussion-- both in oriental and occidental contexts. The programme brings to light the ethics embedded in major philosophical texts in Indian philosophy, such as the <i>Bhagavadgita</i> etc. and the schools like Charvaka, Jaina, Bauddha, Yoga as well as the philosophy of Mahatma Gandhi.
	Western Ethics	This course deals with the basic nature and scope of Western ethics and major theories in it.
	Philosophy of Religion	As philosophical analysis of religion is of paramount importance in any philosophical discourses, the course sheds light on the concepts pertaining to Indian and Western religions.
	Western Logic	The course acquaints students in depth with a very important part of Western philosophy, i.e. Logic--both in its inductive, deductive, and



		mathematical or symbolic usages.
	Psychology	The programme gives the students an overall introduction to Psychology (which is treated to be an independent branch of academic discipline) in a precise manner.
	Epistemology and Metaphysics (Western)	The course acquaints students with major epistemological and metaphysical concepts in Western philosophy. The prescribed text, <i>An Introduction to Philosophical Analysis</i> by John Hospers is an introduction to modern language or analytic philosophy as well.
	Socio-Political Philosophy	The programme helps students have an introductory idea about major concepts in Western socio-political philosophy.
	Indian Logic and Epistemology	This course is based on a textual study of a primary manual in Indian logic, i.e. Nyaya system, named the <i>Tarkasamgraha and Dipika</i> by Annam Bhatta, thus helping the students grasp the nuances of major epistemic discussions in Indian logic, i.e. in Nyaya school of Indian philosophy.
	Philosophy of Mind Or, Russell: <i>Problems of Philosophy</i>	While either of the courses is to be taken into consideration, this discipline-specific-elective course helps students have a preliminary understanding of a recent development in Western philosophical discussion, viz. Philosophy of Mind and also of a fundamental philosophical text by Bertrand Russell, named the <i>Problems of Philosophy</i> .
	An Introduction to Feminist Philosophy Or, Phenomenology & Existentialism	In consonance with modern trends in philosophical study, either of the courses brings to the notice of students a very vibrant philosophical movement surging globally.
	Contemporary Indian Philosophy Or, <i>Bhagavadgītā</i>	While the first module of this discipline-selective-elective programme helps students know about the contributions of contemporary thinkers in Indian philosophy; the second module, i.e. the <i>Bhagavadgita</i> , a source book of Indian philosophy and tradition, presents before them a lofty philosophical teaching embedded in it.
	Applied Ethics .Or Hume: <i>An Enquiry Concerning Human Understanding</i>	This programme highlights the application or pragmatic outlook of ethical discourses and also presents deep philosophical nuances of an important philosophical text in Western philosophical tradition, named the <i>An Enquiry Concerning Human Understanding</i> by David Hume.
	Philosophy of Human Rights	This skill-enhancement-course gives an overview of philosophy of Human Rights from its historical and political perspective.
	Environmental Philosophy	This programme introduces to the students a burning issue that the world is facing today, i.e. nature and its conservation, from both traditional Indian and modern Western perspectives.
	Philosophy and Practice	This programme helps the students view Philosophy not only as a speculative academic study, but also as a source that deals with various pragmatic issues of day-to-day life, viz. society, family and values; man

		and technology; religious pluralism; the new face of women.
<b>Program Outcomes: Department of Sociology</b>		
	<p>One reason to study sociology is simply because sociology is fascinating and a multifaceted discipline. Sociologists and students of sociology can study anything, including other disciplines, because sociological issues are prominent in all aspects of life. Its subject matter is diverse and can cover anything from race, social class, crime, gender, poverty, education, politics and other more theoretical wider issues such as the impact of radical change to whole societies. It helps us look more objectively at our society and other societies. It directs attention to how the parts of society fit together and change, as well as makes us aware of the consequences of that social change. It encourages critical thinking ability with an answer to probably solve radical issues. Students pursuing Sociology will be benefitted with-</p> <ul style="list-style-type: none"> <li>→ a critical thinking ability</li> <li>→ sharpen his quantitative research skill</li> <li>→ social skills ( eg sharpen his communicative skill, in order to interact with people from different social, cultural background) .</li> </ul>	
SEME STER -I	DC1 Introduction to Sociology	This is an introductory course intended to introduce the students to the discipline of Sociology. Its origin, growth, perspectives and relationship with other social sciences. To acquaint the students with the basic concepts and institutions of sociology. It also makes the students understand the relationship between individual and society, culture and social change.
	DC2 Foundations of Social Thought (Western and Indian)	This course awares the students with the history of Sociological theories and make them understand the contribution of pioneers of sociology.
SEME STER -II	DC3 Sociological Theory	This course introduces the students to the Classical Sociological thinkers whose theories, thought, work has shaped the discipline of sociology.
	DC4 Social Research Methods	This paper will throw light on the meaning, scope and significance of carrying a social research. It aims to scientifically study social phenomenon by planning a research design with the use of different types of methods to carry out a successful social research. It will provide the students with some elementary knowledge of the complexities philosophical underpinnings of research.
SEME STER -III	DC5 Society in India	This paper throws light on family, its evolution, the role of caste, varna and tribe in Indian society. It also sheds light on the nation building process of statehood and the emergence of market practices which took over the earlier dominant Indian jajmani relationship.
	DC6 Protests, Resistance and Movements	This course looks at social movements from a sociological perspective. It introduces the contexts and concepts of social movements and attempts to theoretically locate them through concrete case studies.
	DC7 Rural Society in India	This paper throws light on the rural Indian society, it focuses on the peculiar agrarian nature of rural India. It also talks about the programmes and implementations by the Government for the upliftment of the rural society and the challenges it faces. The prime objective of this course is to acquaint the students with the characteristics of Tribe and their relationship with other different

		institutions. This course also aware the students about various tribal problems and issues and the welfare schemes and programmes that are meant for tribal people.
SEME STER -IV	DC8 Urban Society In India	This course focuses on the nature and scope of urban sociology, its features and functions and the urban problems and policies for its growth.
	DC9 Crime and Society	This course shares its sociological views on crime and differentiates the types of crime.It aims to give a Classical positivist explanation of crime.It also draws a changing profile of criminals and aims to provide a sociological theory of punishment (Foucault's Crime and Punishment).
	DC10 Industrial Sociology	This course sheds light on the nature and scope of Industrial sociology.It focuses on the changes and approaches in Productive system -the role of trade union.This paper also manages to track the impact of industrialism on the Indian structure, the programmes and implementations by the Govt for its advancement etc.
SEME STER -V	DC11 Population and Society	This course provides a critical understanding of the interface between population and society.It analyses the role of fertility,mortality and migration on the composition,size,and structure of their economic,political and social implications.
	DC12 Sociology of Tribal Society	This course focuses on the concept of tribe and caste while giving a demographic profile ,habitat and distribution of tribal people. It also aims to give a classification of tribal people on the basis of culture, kinship and family structure.It also gives a socio-cultural profile of tribes on the basis of - marriage, family, language, religion. It also gives a close outlook on how tribals have been affected by the forces of Hinduization and Sanskritization and modernity. The paper also throws light on tribal movements for their identity and statehood.
SEME STER -VI	DC13 Statistics for Sociology	This course aims to enhance the skills of students to understand and use the techniques employed by social scientist to investigate social phenomena. With emphasis on formulating research design, methods of date collection and data analysis, it will provide students with some elementary knowledge on how to conduct both qualitative and quantitative research.
	DC14 Sociology of Environment	The goal of the paper is to understand the interconnection between human societies and the natural environment- eg Chipko, Narmada Andolan-its impacts and reasons. It also aims to provide a theoretical dimension to environmental sociology and gives an account of Environmental Agreements and policies it ensures for the protection of the nature.
kk		<b>Course Outcomes: Department of Computer Science (General)</b>

ll)	<b>SEM-I (DC-1) Computer Fundamental</b>	<ul style="list-style-type: none"> <li>★ This is basically fundamental of computers as well as computer science. By this a basic knowledge creates in mind and gets a brief idea about a computer. Anyone can gain knowledge by this, and it helps to operate computers too.</li> </ul>
mr	<b>SEM-II (DC-2) 'C' Programming and Lab (Practical)</b>	<ul style="list-style-type: none"> <li>★ When it comes about programming we first learn 'C' programming. It makes students think logically.</li> <li>★ creates a good programmer who writes code and develops websites, mobile and pc apps etc.</li> <li>★ along with this they also get knowledge of MS office.</li> <li>★ After learning C programming students can easily learn higher level programming languages like JAVA, PYTHON etc.</li> </ul>
nn	<b>SEM-III (DC-3) Data structure using 'C'</b>	<ul style="list-style-type: none"> <li>★ Data structure provides the knowledge of data flow and the algorithms</li> <li>★ Data structure builds knowledge of implementation of various techniques.</li> <li>★ students go through complex thinking by Data structure</li> <li>★ In the programming field and relating to jobs data structure plays a vital and main role.</li> </ul>
oo	<b>SEM-IV (DC-4) DBMS with MySql</b>	<ul style="list-style-type: none"> <li>★ DBMS stands for Data-Base Management System. by the name we can understand that it gives the brief idea about how a database are managed</li> <li>★ In private sector jobs it is very important about DBMS knowledge. Without DBMS knowledge you will have no idea how a website or a system like banks etc. manages their background work.</li> <li>★ Database Administrator job requires a lot of Database and It's management knowledge which student may know easily studying this</li> </ul>
b b b )	<b>SEM-V (DSE-1,E1) Data Communication and Networking</b>	<ul style="list-style-type: none"> <li>★ When it comes to any connection oriented things whether wired or wireless Networking comes.</li> <li>★ A network expert has many ideas of how to connect all devices in a institute, private company etc. on a huge basis.</li> <li>★ This topic gives all types of Networking knowledge to the students so that they can understand properly how networks work.</li> <li>★ It also gives the idea of how the internet works.</li> <li>★ In the networking field there are various opportunities for the students to pursue many courses after graduation to work in a private or government sector.</li> </ul>
c c c )	<b>SEM-VI (DSE2,E1) Operating System and Lab (Practical)</b>	<ul style="list-style-type: none"> <li>★ When it comes to computer OS i.e. Operating systems come into existence, without OS a computer is useless.</li> <li>★ Students first see the Interface i.e. user interface(UI) when they first turn on any computer.</li> <li>★ OS's brief knowledge helps users to work properly onto the computer.</li> <li>★ They got the idea about different types of OS like Windows, Linux, Unix etc.</li> </ul>

		<ul style="list-style-type: none"> <li>★ It's shell script programming taught students how a script can be written and run on a computer system.</li> <li>★ In job's interview of IT field OS questions also asks to the student.</li> </ul>
<b>Department of Chemistry</b>		
<b>Programme Specific Outcome:</b>		
		<ul style="list-style-type: none"> <li>• Students will demonstrate an understanding of major concepts in all disciplines of chemistry.</li> <li>• Students will employ critical thinking and the scientific method to design, carry out, record and analyze the results of chemical experiments</li> <li>• Students will get an awareness of the impact of chemistry on the environment, society, and other cultures outside the scientific community.</li> <li>• The ability to explain chemical nomenclature, structure, reactivity, and function in their specific field of chemistry.</li> <li>• The design and execution of the experiment should demonstrate an understanding of good laboratory</li> <li>• The proper handling of chemical waste streams and also explains how the applications of Chemistry relate to the real world.</li> </ul>
<b>Course Outcomes Course Outcomes:</b>		
a)	<b>Chemistry Paper-I (CEMGT-1):</b>	To enable the students to learn the Atomic Structure, Chemical Periodicity, Acid and Bases and Redox Reactions ,Fundamentals of Organic Chemistry, Stereochemistry, Nucleophilic Substitution and Elimination Reactions, Aliphatic Hydrocarbons Chemistry
b)	<b>Core Practical-I (CEMGP-1)</b>	Students will gain an understanding of methods of analysis related to chemical analysis goals such as detection of special elements, Solubility classification, Detection of Functional Groups. Estimation of Sodium carbonate, sodium hydrogen carbonate, Estimation of Oxalic acid, Determination of water of crystallization, Estimation of Iron and Copper.
c)	<b>Chemistry Paper-II (CEMGT-2):</b>	To enable the students to learn about the Kinetic theory of gases, liquids, Solids, Chemical Kinetics and Chemical Bonding including all concepts.
d)	<b>Chemistry Practical-II (CEMGP-2):</b>	Enable the student to understand Surface Tension, Viscosity, Kinetics of rate reaction, Qualitative semi micro analysis.
e)	<b>Chemistry Paper-III (CEMGT-3):</b>	After completing this course, students must have a basic knowledge of Chemical Energetics, Chemical Equilibrium, Ionic Equilibrium, Aromatic Hydrocarbons, Organometallic compounds, Aryl Halides, Alcohol, Phenols and Ethers, Carbonyl compounds.
f)	<b>Chemistry Practical -III (CEMGP-3):</b>	To predict the outcome and mechanism of Thermo-chemistry, Ionic Equilibrium and Identification of pure compounds
g)	<b>CEMHSE 1A</b>	To enable the students to learn about Complexometry, Analysis of water, Analysis of food products, Chromatography, Ion Exchange, and Analysis of cosmetics.
h)	<b>Chemistry Paper-IV (CEMGP-4)</b>	Enable the student to understand the theory of Solution, Phase Equilibrium, Conductance, Electrochemistry, Analytical and

		Environmental Chemistry.
i)	<b>Chemistry Practical -IV (CEMGP-4):</b>	To predict the outcome and mechanism of Distribution Law, Conductance.
j)	<b>CEMHSE 2A</b>	To know it skills, Computer programming and Hands on programme
k)	<b>CEMGTDSE-1</b>	To know theory of Transition Metal, Coordination theory, Crystal field theory, Error analysis and Computer Application
l)	<b>CEMGPDSE-1</b>	To predict the outcome of Complexometric titration, Preparation of Complexes.
m)	<b>CEMHSE-2A</b>	After completion of this chapter students should get concepts about Pharmaceutical, Fermentation.
n)	<b>CEMGTDSE-2</b>	Students should aware of the Advanced organic and Industrial chemistry, Carboxylic acid ,amines ,diazonium salts, polymers, Paints, Vernishes, Pesticides, Food additives
o)	<b>CEMGPDSE-2:</b>	To perform advanced organic preparations like Nitration, Condensation, Acetylation, Hydrolysis, Benzoylation
p)	<b>CEMHSE-2B:</b>	To review the concepts of analytical clinical biochemistry, Identification and estimation of different biomolecules

**DEPARTMENT OF BOTANY**

**B.Sc. BOTANY(HONOURS) – PROGRAMME SPECIFIC OUTCOMES**

		<p><b>PSO 1:</b> Inculcate strong fundamentals on modern and classical aspects of Botany and create awareness about cultivation, conservation and sustainable utilization of the plant diversity.</p> <p><b>PSO 2:</b> Critical evaluation of ideas and arguments by collecting relevant information about the plants, so as to recognize the position of plants in the broad classification and phylogenetic level.</p> <p><b>PSO 3:</b> Identify problems and independently propose solutions using creative approaches, acquired through interdisciplinary experiences, and a depth and breadth of knowledge/expertise in the field of Plant Identification.</p> <p><b>PSO 4:</b> Accurately interpret collected information and use taxonomical details to evaluate and formulate a position of plant in taxonomy.</p> <p><b>PSO 5:</b> Students will be able to present scientific hypotheses and data both orally and in writing in the formats that are used by practicing scientists.</p> <p><b>PSO 6:</b> Students will be able to access the primary literature, identify relevant works for a particular topic, and evaluate the scientific content of these works.</p> <p><b>PSO 7:</b> Students will be able to identify the major groups of organisms with an emphasis on plants and be able to classify them within a phylogenetic framework.</p> <p><b>PSO 8:</b> Students will be able to use the evidence of comparative biology</p>
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		<p>to explain how the theory of evolution offers the only scientific explanation for the unity and diversity of life on earth. They will be able to use specific examples to explicate how descent with modification has shaped plant morphology, physiology, and life history.</p> <p><b>PSO 9:</b> Students will be able to explain how plants function at the level of the gene, genome, cell, tissue, flower development. Drawing upon this knowledge, they will be able to give specific examples of the physiological adaptations, development, reproduction and mode of life cycle followed by different forms of plants.</p> <p><b>PSO 10:</b> Students will be able to explain the ecological interconnectedness of life on earth by tracing energy and nutrient flow through the environment. They will be able to relate the physical features of the environment to the structure of populations, communities, and ecosystems.</p> <p><b>PSO 11:</b> Students will be able to demonstrate proficiency in the experimental techniques and methods of analysis appropriate for their area of specialization within biology.</p> <p><b>PSO 12:</b> Students will be able to understand the contribution of Botany in increasing and improving the supply of naturally producing drugs, food, fibres and the active constituents from plant sources that have led to rapid developments in Pharmacognosy and Phytochemistry.</p>
<b>SEMESTER-WISE COURSE TITLE</b>		<b>DISCIPLINE CORE – COURSE OUTCOMES</b> By the completion of the course, the students will be able to-
	<b>SEMESTER-I DC 1 PAPER 1</b>  <b>ALGAE &amp; MICROBIOLOGY</b>	<ol style="list-style-type: none"> <li>1) Understand the general characteristics, ecological distribution, morphological and cellular organization along with modes of reproduction in algal components.</li> <li>2) Understand the various contributions of algae in terms of environment, agriculture, biotechnology and industry.</li> <li>3) Understand the microbial diversity along with its mode of nutrition, reproduction and its economic importance.</li> <li>4). Know the role of microbes in the maintenance of the ecological balance and its importance in modern research.</li> <li>5) Get the knowledge on the systematics of viruses and bacteria along their various metabolic processes.</li> <li>6) Understand the industrial application of microbes based on the metabolite it develops which are useful for the application in various fields of medicine and nutrients.</li> <li>7) Know the role of microbes and algae in projecting new avenues in agriculture as bio-fertilizers and bio-pesticides.</li> </ol>
	<b>SEMESTER-I DC 2 PAPER 3</b>	<ol style="list-style-type: none"> <li>1) Understand the Biodiversity among fungi, morphological and cellular organization along with their mode of reproduction.</li> <li>2) Understand the ecological significance of fungi.</li> <li>3) Understand the economic importance of Fungi in several industries.</li> <li>4) Role of fungi in biotechnological aspects.</li> </ol>

	<p style="text-align: center;"><b>FUNGI, LICHEN &amp; PLANT PATHOLOGY</b></p>	<p>5) Understand the nature of associations, ecological and agricultural importance of lichen. 6) Understand plant pathology in India and Global perspective. 7) Students on the completion of this paper will gain a clear view of the plant disease causing pathogens and their mechanism of infection. 8) Students will get to know the symptoms of various plant diseases and thereby undertake different control measures to protect plants or crops from disaster.</p>
	<p style="text-align: center;"><b>SEMESTER-II DC 3 PAPER 5</b></p> <p style="text-align: center;"><b>ARCHEGONIATE &amp; PALAEOBOTANY</b></p>	<p>1) Understand the morphological diversity of Bryophytes, Pteridophytes and Gymnosperms. 2) Know the taxonomic position, occurrence, thallus structure, reproduction of Bryophytes. 3) Know about the evolution of sporophytes in Bryophytes. 4) Understand the stellar evolution and seed formation habit in pteridophytes. 5) Understand the diversity among different groups of archegoniate in terms of their general characteristics and modes of reproduction. 6) Understand the ecological and economic importance of the Bryophytes, Pteridophytes and Gymnosperms. 7) Understand the major events of plant life through geological ages and the process and conditions of fossilization. 8) Know the importance of fossil study.</p>
	<p style="text-align: center;"><b>SEMESTER-II DC 4 PAPER 7</b></p> <p style="text-align: center;"><b>MORPHOLOGY &amp; ANATOMY OF ANGIOSPERMS</b></p>	<p>1) Students will gain a clear understanding of the most advanced plant division i.e. Angiosperms. 2) Understand the floral morphology of angiosperms and different theories related to the evolution of advanced leaf like or floral parts of the plants. 3) Compare the types of inflorescence and fruits. 4) Explain about the plant cell, tissues and tissue systems. 5) Understand the secondary growth in general and anomalous secondary growth in plants and their significance. 6) Understand the importance of dendrochronology. 7) Know the anatomical organization of plants having different adaptive and protective adaptation.</p>
	<p style="text-align: center;"><b>SEMESTER-III DC 5 PAPER 9</b></p> <p style="text-align: center;"><b>PLANT SYSTEMATICS</b></p>	<p>1) Recognize the major groups of vascular plants and their phylogenetic relationships. 2) Gain proficiency in the use of keys and identification manuals for identifying any unknown plants to species level. 3) Understand the herbarium techniques, preservation and its importance. 4) Know the popular Herbaria and Botanical gardens of the world with their importance in plant systematics. 5) Learn about the characters of biologically important families of Angiosperms. 6) Knowledge on the Objectives, Principles and Evolutionary Trends in Taxonomy. 7) Understand the different system of taxonomic classification of plants</p>



		<p>proposed by different renowned taxonomists and the system of classification followed in the present.</p> <p>8) Knowledge on the affinities, phylogeny, economic importance and comparative studies of different plant families both monocotyledons and dicotyledons.</p>
	<p><b>PLANT ECOLOGY, PHYTOGEOGRAPHY &amp; BIODIVERSITY</b></p>	<p>1) Understand the structure of an ecosystem, functions and its various components.</p> <p>2) Understand the level of organization, dynamism, homeostasis along with the inter-relationship between the living world and environment.</p> <p>3) Develop understanding on Population and Community ecology along with its characteristics and structure.</p> <p>4) Understand the role of climate in soil development and states of water in the environment with its importance.</p> <p>5) Understand the trophic organization and functional aspects of ecosystem.</p> <p>6) Knowledge on the different phytogeographic regions of India, factors serving for the geographic divisions and its vegetation.</p> <p>7) Explain about the endemism, types and causes along with the study of the principles of phytogeography.</p> <p>8) Understand the different conservation strategies for rare and endangered plants.</p>
	<p><b>SEMESTER-III DC 7 PAPER 13</b></p> <p><b>ECONOMIC BOTANY</b></p>	<p>1) Know the origin and evolution of crop plants with special reference to the process of cultivation and utilization of products.</p> <p>2) Understand the importance of germplasm diversity.</p> <p>3) Knowledge on medicinal plants and pharmacognosy, preparation of crude drugs and possibility of modification of drugs.</p> <p>4) Understand the morphology and utilizations of dye yielding plants, method of cultivation and extraction of dye.</p> <p>5) General account with special reference to beverages, timber yielding plants and fibre yielding plants along with their process of extraction and uses.</p> <p>6) Understand the utilization and health implications of several oil and fat extracting plants and their economic importance.</p>
	<p><b>SEMESTER-IV DC 8 PAPER 15</b></p> <p><b>CELL BIOLOGY &amp; PLANT BREEDING</b></p>	<p>1) Explain the structure of cell components and their functions. To describe cell division in plants.</p> <p>2) Understand the chemistry, structure and functions of plant cell wall, plasma membrane and functions of other cell organelles.</p> <p>3) Have a clear account of the endomembrane system of cells and their importance.</p> <p>4) Understand the phases of cell cycle and its regulation.</p> <p>5) Knowledge on the basic processes of plant breeding and crop development using different breeding techniques.</p> <p>6) Introduce the student with a branch of plant breeding for the survival of human beings from starvation.</p> <p>7) Study the techniques of production of new superior crop varieties.</p> <p>8) Understand the role of mutations, somaclonal variations in crop improvement and also the use of DNA markers in plant breeding.</p>

	<p style="text-align: center;"><b>SEMESTER-IV DC 9 PAPER 17</b></p> <p style="text-align: center;"><b>GENETICS &amp; BIOSTATISTICS</b></p>	<ol style="list-style-type: none"> <li>1) Understand structural organization and variation in chromosome as well as karyotype analysis.</li> <li>2) Explain the structure and replication of DNA along with the study of RNA- their types, structure and function.</li> <li>3) Understand Mendelian genetics and its extensions.</li> <li>4) Have knowledge of the nature and function of genes, process of inheritance and chromosome theory of inheritance.</li> <li>5) Describe the linkage, crossing over and mutations.</li> <li>6) Understand the fine structure of genes: Classical vs Molecular concepts.</li> <li>7) Get a clear idea about population and evolutionary genetics.</li> <li>8) Understand the characteristics, usefulness and limitations of Biostatistics.</li> <li>9) Know the methods of sampling of population along with the measures of central tendency and dispersal.</li> <li>10) Understand the Rules of probability, Null-hypothesis, Tests of significance and concept of correlation and Regression.</li> </ol>
	<p style="text-align: center;"><b>SEMESTER-IV DC 10 PAPER 19</b></p> <p style="text-align: center;"><b>REPRODUCTIVE BIOLOGY OF ANGIOSPERMS</b></p>	<ol style="list-style-type: none"> <li>1) Understand the history and future prospects of reproductive biology of angiosperms.</li> <li>2) Understand the genetic and molecular aspects of flower development.</li> <li>3) Get a vivid understanding about anther and pollen biology including its scope in future.</li> <li>4) Understand types of pollination, significance and adaptations along with the mechanism of fertilization.</li> <li>5) Learn basic concepts and methods to overcome self-incompatibility.</li> <li>6) Understand the embryo-endosperm relationship.</li> <li>7) Know the structure of seed and various mechanisms of its dispersal.</li> <li>8) Knowledge on the historical perspective of palynology and its aspects and prospects.</li> <li>9) Understand the process of development of micro and megaspores and its involvement in the process of plant development.</li> </ol>
	<p style="text-align: center;"><b>SEMESTER-V DC 11 PAPER 21</b></p> <p style="text-align: center;"><b>PLANT PHYSIOLOGY</b></p>	<ol style="list-style-type: none"> <li>1) Understanding of physiological processes involved in the plant sciences.</li> <li>2) Knowledge on plant-water relationship, mineral nutrition and their uptake strategies.</li> <li>4) Explain the mechanism of translocation of sugar in phloem.</li> <li>5) Understand the mechanism of stomatal movement and the role of different agents on the alteration of its movement.</li> <li>6) Review the role of plant growth regulators and their application in agriculture and horticulture.</li> <li>7) Growth and other related physiological aspects such as circadian rhythm, photoperiodism and vernalization.</li> <li>8) Understand the types, causes and methods of breaking seed dormancy.</li> <li>9) Explain the physiology of flowering and the importance of phytochromes, cryptochromes and phototropins in photomorphogenesis.</li> </ol>

	<p style="text-align: center;"><b>SEMESTER-V DC 12 PAPER 23</b></p> <p style="text-align: center;"><b>PLANT METABOLISM</b></p>	<ol style="list-style-type: none"> <li>1) Understand the concept of plant metabolism with reference to various anabolic and catabolic pathways.</li> <li>2) Understand the concept of photosynthetic electron transport along with the importance of the pigment system in plants.</li> <li>3) Differentiate among various carbon assimilation pathways in C<sub>3</sub>, C<sub>4</sub> and CAM plants.</li> <li>4) Understand the carbon oxidation pathways and their significance in plant metabolism.</li> <li>5) Understand the mechanism of ATP synthesis.</li> <li>6) Explain the events related to lipid metabolism.</li> <li>7) Provide knowledge on nitrogen metabolism with special reference assimilation of nitrogen in amino acids and protein.</li> <li>8) Understand the mechanisms of signal transduction with reference to receptor-ligand interactions, second messenger concept, calcium calmodulin and MAP kinase cascade.</li> </ol>
	<p style="text-align: center;"><b>BIOMOLECULES (BIOCHEMISTRY)</b></p>	<ol style="list-style-type: none"> <li>1) Understand the type and significance of different chemical bonds including the idea of different biomolecules.</li> <li>2) Explain structure, composition, classification, function and properties of carbohydrates, proteins, lipids, nucleic acids.</li> <li>3) Understand the concept of bioenergetics with reference to laws of thermodynamics, concepts of free energy, redox reaction and importance of ATP in the biological system.</li> <li>4) Understand enzyme characteristics.</li> </ol>
	<p style="text-align: center;"><b>SEMESTER-VI DC14 PAPER 27</b></p> <p style="text-align: center;"><b>PLANT BIOTECHNOLOGY</b></p>	<ol style="list-style-type: none"> <li>1) Understand the history and application of plant tissue culture in agriculture and forestry.</li> <li>2) Know the methods, stages, advantages, disadvantages and application of micropropagation.</li> <li>3) Understand the application of recombinant DNA technologies with special reference to restriction endonucleases, restriction mapping, cloning vectors.</li> <li>4) Explain the strategies and application of gene cloning.</li> <li>5) Understand a brief idea of different methods of gene transfer.</li> <li>6) Understand the applications of biotechnology in several aspects of human welfare.</li> </ol>
		<p><b>DISCIPLINE SPECIFIC ELECTIVE: COURSE OUTCOMES</b></p> <p>By the completion of the course, the students will be able to-</p>
	<p style="text-align: center;"><b>DSE Analytical Techniques in Plant sciences</b></p>	<ol style="list-style-type: none"> <li>1) Know cell fractionation techniques and the applications of radioisotopes.</li> <li>2) Review the principle and application of spectrometry, chromatography</li> <li>3) Understand the characterization of proteins and nucleic acids</li> <li>4) Get proper ideas about the biostatistics and its applications.</li> </ol>
	<p style="text-align: center;"><b>DSE Bioinformatics</b></p>	<ol style="list-style-type: none"> <li>1) Understand the particular branches, aim, scope and research areas of bioinformatics.</li> <li>2) Get the knowledge of several biological sequence databases.</li> </ol>

		<p>3)Get a brief introduction and concepts of sequence alignments.</p> <p>4)Understand the concept of molecular phylogeny.</p> <p>5)Understand the applications of bioinformatics in various fields</p>
	<p><b>DSE</b> <b>Stress Biology</b></p>	<p>1)Understand concepts of acclimation and adaptation.</p> <p>2) Explain the role of several biotic and abiotic factors responsible for plant stress.</p> <p>3) Understand the stress sensing mechanism in plants.</p> <p>4) Get proper knowledge of developmental and physiological mechanisms that protect plants against environmental stress.</p> <p>5) Understand the production and scavenging mechanisms of ROS by plants.</p>
	<p><b>DSE</b> <b>Plant Breeding</b></p>	<p>1)Review the concept of plant breeding; Significance and role in crop improvement.</p> <p>2) Understand the types of variety selection.</p> <p>3)Know the important achievements and undesirable consequences of plant breeding.</p> <p>4) Explain the concept of Heterosis and Hybrid vigour; Male sterility in plants and their applications.</p>
	<p><b>DSE</b> <b>Natural Resource Management</b></p>	<p>1) Get knowledge regarding contemporary practices including National and international efforts in resource management and conservation.</p> <p>2) Understand the significance, threats, management strategies of biological resources.</p> <p>3) Construct a greater approach towards the sustainable utilization of natural resources.</p>
	<p><b>DSE</b> <b>Industrial and Environmental Microbiology</b></p>	<p>1) Know the scope of microbes in industry and environment.</p> <p>2) Understand the relation of microbes and quality of environment.</p> <p>3) Understand the role of microorganisms as indicators of water quality, check coliform and fecal coliform in water samples including their importance in sewage and domestic wastewater treatment systems.</p> <p>4) Understand the role of microbes in agriculture and remediation of contaminated soils.</p> <p>5) Understand the intervention of microbial fermentations for the production and estimation of industrial products.</p>
		<p><b>SKILL ENHANCEMENT COURSE: OUTCOMES</b> By the completion of the course, the students will be able to-</p>
	<p><b>SEC</b> <b>Floriculture</b></p>	<p>1)Understand the history, importance and scope of floriculture and landscape gardening.</p> <p>2) Know the strategies of landscaping in highways and educational institutions.</p> <p>3) Get proper ideas about commercial floriculture.</p>
	<p><b>SEC</b> <b>Mushroom Culture Technology</b></p>	<p>1) Understand the history, nutritional and medicinal values of edible mushrooms.</p> <p>2) Understand the technologies used for mushroom cultivation .</p>

	<b>SEC Biofertilizers</b>	<p>1) Understand the general account of the microbes used as biofertilizers with special reference to PGPR, PGPF, VAM, Cyanobacteria.</p> <p>2) Understand the strategies of organic farming with the utilization of green manuring, vermicomposts.</p> <p>3) Understand the methods of preparing bio-compost from municipal, agricultural and industrial wastes.</p>
	<b>SEC Ethnobotany</b>	<p>1) Understand the concept, scope, objectives of Ethnobotany with reference to major and minor tribal groups of India and their lifestyles.</p> <p>2) Understand the methodology of ethnobotanical studies.</p> <p>3) Understand the legal aspects of Ethnobotany and its application in modern medicine.</p>
	<b>SEC Plant Diversity and Human Welfare</b>	<p>1) Understand the ethical and aesthetic values and uses of Biodiversity.</p> <p>2) Understand the projected scenarios of biodiversity loss and management strategies of plant biodiversity.</p> <p>3) Review the role of plants in relation to human welfare.</p>
	<b>SEC Medicinal Botany</b>	<p>1) Understand the history and importance of medicinal plants with special mention to indigenous medicinal sciences: Ayurveda, Siddha and Unani</p> <p>2) Review on ethnobotany and folk medicines</p> <p>3) Know the strategies of conservation of endangered and endemic medicinal plants.</p>
	<b>SEC Herbal Technology</b>	<p>1) Understand the role of medicinal plants in Siddha system of medicine.</p> <p>2) Get a detailed understanding of phytochemistry and analytical pharmacognosy.</p>
		<b>Department of Mathematics</b>
	<b>Programme Specific outcomes</b>	<p><b>B.Sc. Mathematics (Hons.)</b></p> <p>On completion of the programme student will be able to :</p> <ul style="list-style-type: none"> <li>● Create a hypothesis and appreciate how it relates to broader theories.</li> <li>● Evaluate hypothesis, theories, methods and evidence within their proper contexts.</li> <li>● Solve complex problems by critical understanding, analysis and synthesis.</li> <li>● Demonstrate engagement with current research and developments in the subject.</li> <li>● Critically interpret data, write reports and apply the basics of rules of evidence.</li> <li>● Select, interpret and critically evaluate information from a range of sources that include books, scientific reports, journals, case studies and the internet.</li> <li>● Develop proficiency in the analysis of Complex Mathematical Problems and the use of Mathematical or other appropriate techniques to solve them.</li> </ul>

		<ul style="list-style-type: none"> <li>• Demonstrate skills in the use of Computers for control, data acquisition, and data analysis in experimental investigations</li> <li>• Provide a systematic understanding of core Mathematical concepts, principles and theories along with their applications</li> <li>• Function on multidisciplinary teams by working cooperatively, creatively, and responsibly as a member of a team.</li> <li>• Communicate effectively by oral, written, computing and graphical means.</li> <li>• Recognize the need to encourage lifelong learning through continuing education and research.</li> </ul> <p>Career Avenues:</p> <ul style="list-style-type: none"> <li>• Career Opportunities exist in teaching in schools &amp; Colleges(after M.sc., B.Ed/Net/Ph.D) where any of the science subjects is an important discipline.</li> <li>• Indian Administrative services and other state and central Govt. Services where knowledge of science subjects is an advantage.</li> <li>• Careers in Organization/Industries where a high level of competence in and dependence of Mathematics is demanded.</li> </ul>
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**Department of Physics**

	<p><b>Programme Specific outcomes</b></p>	<p><b>B.Sc. Physics (General)</b></p> <p>Upon completion of the B.Sc. (General) Physics programme, the students will be able to:</p> <ul style="list-style-type: none"> <li>• Create a hypothesis about the laws and various mechanisms in Physics and appreciate how it relates to the broader theories.</li> <li>• Evaluate hypothesis, theories, methods and evidence within their proper contexts.</li> <li>• Solve complex problems by using their scientific knowledge, critical understanding, analysis and synthesis.</li> <li>• Demonstrate engagement with the current research studies and developments in the subject.</li> <li>• Critically interpret data, write reports and apply the basics of rules of evidence.</li> <li>• Select, interpret and critically evaluate information from a range of resources, such as books, scientific reports, journals, case studies and the internet.</li> <li>• Develop proficiency in the analysis of complex physical problems and the use of mathematical or other appropriate techniques to solve them.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Demonstrate skills in the use of computers for control, data acquisition and data analysis in experimental investigations.</li> <li>• Provide a systematic understanding of the core physical concepts, principles and theories along with their applications.</li> <li>• Function in multidisciplinary teams by working cooperatively, creatively and responsibly as a member of the team.</li> <li>• Communicate effectively via oral, written, computer skills and graphical means.</li> <li>• Recognize the need to engage in lifelong learning through continuing in education and research.</li> </ul> <p>Career Avenues:</p> <ul style="list-style-type: none"> <li>• Career opportunities exist in teaching in schools and in other educational institutions for higher studies, where any of the science subjects is an important discipline.</li> <li>• Career in Indian Administrative Services and in other State and Central Govt. Services, where the knowledge of science subjects is an advantage.</li> <li>• Career in different private or government organizations and industries, where a high level of competence and dependence on Physics is demanded.</li> </ul>
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**Course Specific Outcomes [B.Sc. Physics (General)]**

	<b>Course Name</b> (DC - Discipline Core courses; DSE - Discipline Specific Elective courses)	<b>Possible Outcomes</b>
	DC1(A1): Mechanics	Upon completion of this course, the students will be able to gain knowledge and critical understanding about various macroscopic dynamical phenomena happening in nature around us. This includes the motion of different large scale objects, laws of gravitation and planetary motion, flow mechanism of different kinds of liquids, basic idea about elasticity of different materials, energy and work done etc. They will be able to understand the functionality and working mechanism of different kinds of macroscopic machines.
	DC4(A2): Electricity and Magnetism	Upon finishing this course, the students will be able to acquire useful knowledge about the different physical properties of an electric charge, electric field and magnetic field. They will be able understand how the electric current is generated from the electric charges and how it flows through an electrical circuit. The students will also understand the theory behind the generation of a magnetic field and the propagation of an electromagnetic wave or radiation.

	DC7(A3): Thermal Physics and Statistical Mechanics	After completing this course, the students will have the understanding about laws of thermodynamics, interrelation between heat and work, kinetic theory of gases, blackbody radiation, phases of matter and their statistics etc. From the real-life application point of view, they will be able to understand the working principle of various thermodynamic machines and heat engines, and their properties.
	DC10(A4): Waves and Optics	Upon completion of this course, the students will be able to gain insight about the different properties of sound and light waves, and how such waves propagate through various mediums. They will also gain knowledge about different useful applications of optics and how various optical instruments work.
	DSE1(A1): Advanced Mathematical Methods - I	Upon completion of this course, the students will be able to build an aptitude about some of the advanced mathematical techniques required to study various advanced topics in Physics.
	DSE1(A1): Nuclear and Particle Physics	Upon finishing this course, the students will be able to gain knowledge about the nuclear reactions and nuclear radiations, radioactivity, classification of various particles and their properties, and particle detectors.
	DSE1(A1): Applied Dynamics	Upon completion of this course, the students will be able to gain knowledge about the oscillation and chaotic motion of coupled pendulum or spring-mass system, theory of different chaotic phenomena and fractal geometries.
	DSE1(A1): Communication Electronics	Upon completing this course, the students will be able to gain insight about various digital communication systems used in the modern era, such as mobile communication, satellite communication and radio communication.
	DSE4(A2): Advanced Mathematical Methods - II	Upon completing this course, the students will be able to gain knowledge about tensor algebra and group theory which may be useful to study special theory of relativity and crystallography.
	DSE4(A2): Classical Dynamics	Upon completion of this course, the students will learn about special theory of relativity, advanced classical mechanics, and fluid dynamics.
	DSE4(A2): Astronomy and Astrophysics	Upon finishing this course, the students will be able to gain knowledge about astronomical scales and astronomical objects, such as stars, solar system, galaxies etc. They will also gain some insight about the astronomical techniques, e.g., the usage of a telescope.
	DSE4(A2): Nano Materials and Applications	Upon completion of this course, the students will be able to gain knowledge about one of the most recent, emerging fields of material science and technology called 'nanoscience', where they will learn how very small scale nanostructured materials can be used for some of the



		most advanced technological applications.
q)	<b>Department of Zoology</b>	
r)	<b>Programme Specific Outcomes</b>	<p><b>B.Sc. Zoology (Hons.)</b></p> <p>After completion of Zoology (Hons) students will able to:</p> <ol style="list-style-type: none"> <li>1. <b>Zoology is one of the most popular branches in science that involves the study of animals and their biological processes. There are a lot of specializations available in Zoology that Candidates can opt for while pursuing their Undergraduate and Postgraduate courses. Some of the popular specializations are given below</b> <ol style="list-style-type: none"> <li>a. <b>Ecology and Evolutionary biology</b></li> <li>b. <b>Fisheries and Aquaculture</b></li> <li>c. <b>Cell and Developmental Biology</b></li> <li>d. <b>Genetics</b></li> <li>e. <b>Marine Biology</b></li> <li>f. <b>Animal Behaviour and Neurobiology</b></li> <li>g. <b>Biomedical Science</b></li> <li>h. <b>Parasitology</b></li> <li>i. <b>Classification and distribution of all animals, both living and nonliving.</b></li> <li>j. <b>Entomology</b></li> <li>k. <b>Ethology</b></li> </ol> </li> </ol> <p><b>There are numerous career opportunities for candidates completing their B.Sc and MSc. in Zoology. Candidates find jobs as Animal Behaviourist, WildLife Biologist, Zoo-Curator, WildLife Educator, Zoology Faculty, Forensic Experts, Fishery Extension Officer, toxicologist and marine biologist etc.</b></p> <p><b>After completing graduation in Zoology a Masters programme will help to learn a lot more than the Zoology- specific topics of research. The course will open doors for many other fields such as Biochemistry, Bio-Technology, Microbiology and Fishery science.</b></p> <p><b>Efforts of a Zoologist are also critical in protecting endangered species and other wildlife from habitat loss, disease, invasive species and climate change.</b></p> <p><b>Person who worked as Zoologist in depth knowledge of Animal sciences, Lab and field work equip him for a career in the Environmental, Agricultural and Pharmaceutical Industries</b></p>
		<b>Department of Sanskrit (General)</b>
	<b>Programme Specific Outcomes</b>	<ul style="list-style-type: none"> <li>• After completing this course, students are trained to think rationally and critically to solve complex problems in their personal and professional life.</li> <li>• To inculcate in the student an understanding of literature, its</li> </ul>

		<p>socio-political and cultural underpinnings, and its moral, creative and revolutionary potential.</p> <ul style="list-style-type: none"> <li>• To inspire students to view literary history as a continuum of developing perspectives and new creative ideas.</li> <li>• To instill an understanding of the various genres of literature their nature and characteristics and to inspire an engagement with the practical examples of the forms.</li> <li>• To view literature as an important agency of socio-cultural transformation in India.</li> <li>• To intake culture studies into more practical and pragmatic worldview so that they can contribute to the greater purposes of the nation and fraternity.</li> </ul>
	<b>Course Specific Outcome</b>	
Se	<b>101-SANG-C-1 Prosody &amp; General Grammar</b>	This specific course is designed to enhance the basic grammatical and phonetic knowledge of the students. It will improve the application of Sanskrit grammatical tools and techniques with reference to the accuracy and innovation of the language in practice.
Se	<b>201-SANG-C-2 Drama &amp; Rhetorics</b>	This course is aimed at the societal and cultural scenario of the ancient times for the students. They can read between the discourses as reflected in the literature with reference to Abhigyanshakuntala etc that would also move them towards a discursive comparison as well as critical examination of the time being with the present.
Se	<b>301-SANG-C-3 Court Epic &amp; Fable</b>	This shelf of the syllabus deals with two texts: Raghuvamsha and Hitopadesa, that would broaden up the political and social knowledge of the learners regarding the court culture and the didactic discourses of the literature as reflected. The Hitopadesa will enrich the moral incites of the student and help them to be honest and working contributors to the larger society.
Se	<b>302-SANG-SEC-1 Computer Typing &amp; Translation</b>	This course develops the practical ideas of the students regarding the devanagari, bengali and roman scripts to be textured on computer screens and prints.
Se	<b>401-SANG-C-4 History of Sanskrit Literature</b>	This course has two larger branches: vedic literature & classical literature. It is designed to inform the students about the historical facts and facades of the centuries and the evaluation with the time. It would also help them understand and compare the timeframes with the history and politics of representation as well as reflection.
Se	<b>501-SANG-DSE-IA/IB Epic &amp; Court Epic</b>	This course is designed to delineate the political grounds and the socio-cultural counterparts of the discourses critically reflected through the close reading of two different shelves of the Mahabharata and the Ramayana. It enriches the students' perspectives and

		realization of critical platforms.
Se	<b>504-SANG-SEC-2 Proof Reading &amp; Project Work</b>	This course is for the educational nourishment of the students regarding the technicalities of Sanskrit in print. The project work will enhance the playschool experience of the students with renewed interest and also the teamwork ethics.
Se	<b>601-SANG-DSE-IIA/IIB Upanishad &amp; Smriti/Indian Philosophy</b>	This course will help the students gather philosophical incites of the Upanishad and Manusamhita. It also reflects the ethical and didactic imperatives of a human being to perform rational duties to the family, state and society as well.

**ROGRAMME SPECIFIC OUTCOME : EPARTMENT OF EDUCATION**

Education as a discipline plays a significant role for an individual, society and nation. The main outcomes through the Education are:

- (1) The learner will be modest in his behavior. Education helps to modify the past behavior through learning.
- (2) The learner will be of sound character as the Education aims at the all round development of child-physical, mental, social, emotional, and spiritual. (3) The learner will be of developed personality as the whole personality of the learner is developed physically, intellectually, morally, socially, aesthetically and spiritually through the Education.
- (3) The learner will gain the power of endurance and adjustability through the Education.
- (4) The learner learns to keep the society progressive and dynamic by assimilating the old traditions and customs with the new technological advancement through Education.
- (5) The learner learns to respect the moral value and social value like co-operation, tolerance, sympathy, fellow feelings, love affection, respect towards elder, helping the poor and needy persons.
- (6) The learner becomes aware of civic and social responsibility as the Education helps the generation to understand its rights and duties as citizens of a democratic country.
- (7) The learner learns through Education to sustain the national integration living in the country having diversities in respect of color, caste, language, diet, dress, habits and physical environment.
- (8) Therefore, really education is an essential ingredient for all ages and stages of the life of an individual, society as well as the nation. Education can be a real panacea for all social evils.
- (9) Job Opportunity through this Programme: This Programme has enormous scope of getting a job. Such as,
  - a. School administration (DI/S, SI/S, SEO)
  - b. School teacher (Primary & High school)
  - c. College or University Professor
  - d. B.Ed college professor
  - e. WBCS (Educational Psychology is one of the Optional Paper which helps to acquire a high score.

**Course Outcome**

1. To be empowered in subject content and pedagogy.
2. To develop an understanding of the contemporary Indian Society and Heritage with special reference to education.
3. To be able to interact with children from diverse socioeconomic and diverse backgrounds.
4. To be able to use learner centered teaching methods as such and with modification in future.
5. To develop an understanding of paradigm shift in conceptualizing disciplinary knowledge in curriculum development.
6. To identify the challenging and overcoming gender inequalities in school, classroom, curricula, textbook, social institutions, etc.

<p>7. To be enabled to integrate and apply ICT in facilitating teaching-learning processes and in management.</p> <p>8. To develop the ability to think critically to analyze, synthesize and evaluate demonstrations of human expressions and to make judgments, draw inferences.</p> <p>9. To be able to understand the major Educational reforms and to apply the knowledge, skills, dispositions and characteristics inherent to a career as a highly qualified educator.</p> <p>10. To be able to develop a deep and secure foundation of the critical concepts and principles of their discipline that will, in turn, foster and nourish their continued progress toward a career in education</p> <p>11. Students seeking admission for B.A. programmes are expected to imbue with following quality which help them in their future life to achieve the expected goals:</p> <ol style="list-style-type: none"> <li>a. Realization of human values.</li> <li>b. Sense of social service.</li> <li>c. Responsible and dutiful citizen.</li> <li>d. Critical temper</li> <li>e. Creative ability.</li> </ol>		
EDCH DC-1	Philosophical Foundation of Education	<ol style="list-style-type: none"> <li>1. To develop understanding of the meaning, aims, objectives, and functions of education.</li> <li>2. To develop an understanding of the roles of Philosophy in Education.</li> <li>3. To develop understanding of major components in education and their interrelationship.</li> <li>4. To develop an understanding of the roles of Education in National Integration, International Understanding and Democracy.</li> <li>5. To develop an understanding of the need of discipline.</li> </ol>
EDCH DC-2	Sociological Foundation of Education	<ol style="list-style-type: none"> <li>1. To develop an understanding of the meaning of Sociology and Education.</li> <li>2. To develop an understanding of the processes of social change and its impact on education.</li> <li>3. To become aware of social Groups and socialization that influence education.</li> <li>4. To develop an understanding of the culture and its impact on education.</li> <li>5. To examine the social problems in present society</li> </ol>
EDCH DC-3	Psychological Foundation of Education	<ol style="list-style-type: none"> <li>1) To enable the student to understand the meaning and scope of educational psychology.</li> <li>2) To enable them to understand the dimensions of growth (e.g. social, emotional, creative and intellectual) and the causes of individual differences.</li> <li>3) To develop understanding of the process of learning and reaching and problems of learning.</li> <li>4) To acquaint them with the knowledge of Intelligence and Creativity.</li> <li>5) To enable them to understand different aspects of personality and means of developing an integrated personality.</li> </ol>
EDCH DC-4	Education in Ancient, Medieval and Pre- Independence India	<ol style="list-style-type: none"> <li>1. To be acquainted with the salient features of education in India in Ancient &amp; Medieval times.</li> <li>2. To be acquainted with the development of education in British India.</li> <li>3. To be acquainted with the development of education in Independent India, including significant points of selected Education.</li> <li>4. To have an adequate knowledge of the recommendations of various commissions and committees on Indian Education.</li> </ol>
EDCH DC-5	Education of India after Independence	<ol style="list-style-type: none"> <li>1. To have an adequate knowledge of the commendations of various commissions and committees on Indian Education.</li> </ol>

EDCH DC-6	Issues in Indian Education	<ol style="list-style-type: none"> <li>1. To develop an understanding of significant trends in contemporary education.</li> <li>2. To develop awareness of various organizations and their role in the implementation of policies and programmes.</li> <li>3. To focus attention on certain major national and social issues and role of education in relation to them</li> </ol>
EDCH DC-7	Contemporary Trends in Indian Education	<ol style="list-style-type: none"> <li>1. To understand the meaning and perspectives of women Education,</li> <li>2. To understand the meaning and perspectives of Social Education,</li> <li>3. To understand the meaning and perspectives of Environmental Education,</li> <li>4. To understand the meaning and perspectives of Population Education,</li> <li>5. To understand the meaning and perspectives of Peace and Value Education</li> </ol>
EDCH DC-8	Educational Evaluation	<ol style="list-style-type: none"> <li>1. To develop understanding of the concepts of measurement and evaluation in the field of education.</li> <li>2. To acquaint with different types of measuring instruments and their uses.</li> <li>3. To acquaint with the principles of test construction– both educational and psychological.</li> <li>4. To develop understanding of the concepts of validity and reliability and their importance in education measurement.</li> <li>5. To develop the ability to organize and to use various statistical measuring analysis and interpretation of relevant educational data</li> </ol>
EDCH DC-9	Statistics in Education	<ol style="list-style-type: none"> <li>1. To develop the ability to represent educational data through graphs and to develop skill in analyzing different descriptive measures.</li> </ol>
EDCH DC-10	Educational Management	<ol style="list-style-type: none"> <li>1. To develop knowledge and understanding of the meaning, scope process and types of management.</li> <li>2. To develop the ability to identify the roles of participating members (individual or collective) and to plan various institutionalized managerial activities.</li> <li>3. To develop the ability of making objective decisions in educational management.</li> </ol>
EDCH DC-11	Educational Technology	<ol style="list-style-type: none"> <li>1. To enable the students to understand about the concept, nature and scope of educational technology.</li> <li>2. To expose the students to the basic developments in Educational Technology.</li> </ol>
EDCH DC-12	Educational Guidance and Counselling	<ol style="list-style-type: none"> <li>1. To help in understanding the meaning and importance of guidance and counseling.</li> <li>2. To develop the ability to interpret various records for assessing the student's strengths and weaknesses.</li> <li>3. To understand the qualities of an ideal counselor.</li> <li>4. To develop interest in one's own personal and professional growth.</li> <li>5. To understand the concept of mental health and processes of healthy adjustment and good interpersonal relationships.</li> </ol>
EDCH DC-13	Curriculum Construction	<ol style="list-style-type: none"> <li>1. To understand the meaning, concept and scope of curriculum.</li> <li>2. To understand the basis of curriculum construction, transaction evaluation and innovation</li> </ol>
EDCH DC-14	Educational Thoughts	<ol style="list-style-type: none"> <li>1. To develop an understanding of the thoughts of great educationists and their contributions in education.</li> <li>2. To be acquainted with the process of collecting data.</li> <li>3. To be acquainted with the process of reporting of the collected data.</li> </ol>

EDCH DSE - 1	Inclusive Education	<ol style="list-style-type: none"> <li>1. To comprehend the basic characteristics of inclusive education.</li> <li>2. To comprehend the needs of inclusive education in modern society.</li> <li>3. To understand the basics related to designing the platform of inclusive education.</li> </ol>
EDCH DSE - 2	Mental Health	<ol style="list-style-type: none"> <li>1. To comprehend the meaning of mental health and mental hygiene</li> <li>2. To comprehend the meaning of mental illness and maladjustment</li> </ol>
EDCH DSE - 3	Teacher Education	<ol style="list-style-type: none"> <li>1. To enable the students to understand the meaning; scope, objectives of teacher education and its development in India.</li> <li>2. To acquaint the students with different agencies of teacher education India and their roles and functions.</li> <li>3. To acquaint the students with the various aspects of the student-teaching programme, prevailing in the country.</li> <li>4. To develop in the students an understanding about the important research findings in teacher-education.</li> </ol>
EDCH DSE - 4	Project Work	1.To achieve practical knowledge
EDCH GE -1	Life Skill Education	<ol style="list-style-type: none"> <li>1. Understand different aspects of life skills</li> <li>2. Comprehend different types of life skills needs for better society</li> <li>3. Conceptualize social skills, thinking skills, coping skills</li> <li>4. Understand different approaches of positive psychology and its developmental aspects.</li> </ol>
EDCH GE -2	Yoga Education	<ol style="list-style-type: none"> <li>1. Correlate Yoga and Education;</li> <li>2. Transact different determinants of Yoga Education and Yoga Practices;</li> <li>3. Determine the scientific bases of yoga practices;</li> </ol>
EDCH GE -3	Environmental Education	<ol style="list-style-type: none"> <li>1. To acquaint the students with the various aspects of Environment and Environmental Science.</li> <li>2. To develop in the students an understanding about Environmental Education and its importance.</li> <li>3. To make the students to comprehend various approaches of Environmental Education</li> </ol>
EDCH GE -4	Mental Retardation and Education	<ol style="list-style-type: none"> <li>1. To understand the meaning of mental retardation.</li> <li>2. To comprehend the approaches of education of mental retardation</li> </ol>
EDCH SEC - 1	Teaching & Pedagogy	<ol style="list-style-type: none"> <li>1. To initiate students to the field of pedagogy.</li> <li>2. To familiarize the students with principles of teaching.</li> <li>3. To develop an understanding of various methods of teaching</li> <li>4. To develop an understanding of the modern teacher.</li> </ol>
EDCH SEC - 2	Testing	<ol style="list-style-type: none"> <li>1. To know the meaning and basic characteristics of different tests.</li> <li>2. To understand the different psychological tests.</li> <li>3. To know the meaning and different characteristics of an achievement test.</li> <li>4. To comprehend different functional aspects of standardization</li> </ol>
		<b>DEPARTMENT OF URDU</b>
		<b>PROGRAMME SPECIFIC OUTCOME</b>
	B.A. GENERAL in URDU	The B.A. graduates can pursue B.Ed. course and opt teaching career in the schools. Also they can do Post Graduate Studies in their respective subjects studied in 'Under Graduate' level. After their Post Graduation education they

		<p>may do M.Phil or Ph.D. and take teaching as their career in higher education institutions like Degree colleges and Universities.</p> <p>Other Career options:- Journalism, Tourism, Judiciary (Law), Linguistics, etc. They are eligible to appear for any competitive exams conducted by Union Public Service Commission (UPSC) and other States Public Service Commissions, Indian Railway Board, etc for entering into the government services. They also pursue their studies in doing MBA, Post Graduate Diploma in Computer (PGDC), Certificate Courses of any discipline. Students interested in URDU Language subject can do the job in the following areas:</p> <ul style="list-style-type: none"> <li>● Professional Writing</li> <li>● Research</li> <li>● Editing</li> <li>● Journalism</li> <li>● Media</li> <li>● School Teachers, etc.</li> </ul>
		<b>COURSE OUTCOME</b>
1	<b>Urdu Zaban-O-Adab ki mukhtasar tarikh</b>	<p>By the end of this course, the student will be able to-</p> <ol style="list-style-type: none"> <li>1. Know about Urdu Literature and its beginning from Dakkan</li> <li>2. Different views about Urdu Language.</li> <li>3. Gain knowledge about major dialects of Urdu Language.</li> <li>4. Learn about the contributions of Sufi Sant in the Expansion of Urdu Language.</li> </ol>
2	<b>Urdu Ghazal</b>	<p>By the end of this course, the student will be able to-</p> <ol style="list-style-type: none"> <li>1. Read Urdu prose, to know famous Urdu writers and their famous works.</li> <li>2. Know famous Urdu Ghazals, Poets, their Poetry and its special features.</li> </ol>
3	<b>Urdu Nasr-O-Nazm</b>	<p>By the end of this course. the student will be able to-</p> <ol style="list-style-type: none"> <li>1. Write the essay in Urdu.</li> <li>2. Know about Urdu NASR-O-AZAM and their contribution in Urdu Literature.</li> <li>3. Get an opportunity to read and comprehend the speciality of Urdu Nazms.</li> <li>4. Learn to read and write Urdu poems (NAZM).</li> </ol>
4	<b>Novel</b>	<p>Students will be able to-</p> <ol style="list-style-type: none"> <li>1. Know about famous Urdu Novelist and Novels, acquaint with Urdu novelist, their life and their important works.</li> </ol>
5	<b>Qasidah</b>	<p>Students will be able to-</p> <ol style="list-style-type: none"> <li>1. Get knowledge about Urdu Qasida Nigari (ode) and their writers.</li> </ol>
6	<b>Jadeed Urdu Ghazal</b>	<p>By the end of this course, the students will be able to-</p> <ol style="list-style-type: none"> <li>1. Read and Learn about the Taraqqee pasand tehreek.</li> </ol>

		2. Learn about the life and contribution of Allama Iqbal, Dagh, Hasrat, Ohshat, Firaque, Yaganah and Faiz.
7	<b>Urdu Drama</b>	Students will be able to know about Urdu drama, Dramatist and their contribution in Urdu literature.
8	<b>Afsana</b>	Students will be able to know about Afsana and Afsana Nigaar.