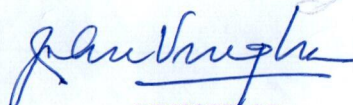




1.1.1 Lesson Plans


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Political Science Department

**PRINCIPAL
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DELHI-110**





Name of the Faculty Member: Alia Zaman
Department: Political Science
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Unit I- Groundings 1. Patriarchy, a. Sex-Gender Debates , b. Public and Private	GE for Hons-I	Women, Power and Politics
August	Theory	Unit I- (contd.) c. Power 2. Feminism, 3. a. Family, b. Community, c. State	GE for Hons-I	Women, Power and Politics
September	Theory	Unit II- Movements and Issues 1. History of the Women's Movement in India, 2. Violence against women	GE for Hons-I	Women, Power and Politics
October	Theory	Unit II- Work and Labour : a. Visible and Invisible work b. Reproductive and care work c. Sex work	GE for Hons-I	Women, Power and Politics

John Singh

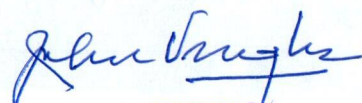
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**Name of the Faculty Member: Alia Zaman
Department: Political Science
Year: 2020-21**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	1. Concept of Globalisation: Globalisation debate; for and against. 2. Approaches to understanding globalisation: a. Liberal approach b. Radical approach	GE for Hons Sem-IV	Politics of Globalization
February	Theory	3. International Institutions/Regimes a. World Bank b. International Monetary Fund c. The World Trade Organisation	GE for Hons Sem-IV	Politics of Globalization
March	Theory	4. Issues in Globalisation: Alternative Perspectives on its nature and character, critical dimensions: economic, political and cultural 5. Globalisation and democracy: State, sovereignty and the civil society. 6. Globalisation and Politics in developing countries a. Globalisation and social movements b. Globalisation and the demise of Nation State	GE for Hons Sem-IV	Politics of Globalization
April	Theory	c. Globalisation and human migration 7. The inevitability of globalisation: Domestic and Global responses	GE for Hons Sem-IV	Politics of Globalization


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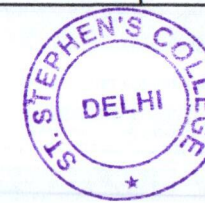




Name of the Faculty Member: PIA DAVID
Department: POLITICAL SCIENCE. YEAR 2020-21

July	Presentations made on zia mody's books, ten judgements that changed india, Through the semester	Outline of the Legal system in India System of courts/tribunals and their jurisdiction in India - criminal and civil courts, writ jurisdiction, specialized courts such as juvenile courts, Mahila courts and tribunals. Role of the police and executive in criminal law administration. Alternate disputes mechanisms such as lok adalats, non - formal mechanisms		
August		Brief understanding of the laws applicable in India Constitution - fundamental rights, fundamental duties, other constitutional rights and their manner of enforcement, with emphasis on public interest litigation and the expansion of certain rights under Article 21 of the Constitution. Laws relating to criminal jurisdiction - provision relating to filing an FIR, arrest, bail search and seizure and some understanding of the questions of evidence and procedure in Cr. P.C. and related laws, important offences under the Indian Penal Code, offences against women, juvenile justice, prevention of atrocities on Scheduled Castes and Scheduled Tribes. Concepts like Burden of Proof, Presumption of Innocence, Principles of Natural Justice, Fair comment under Contempt laws. Personal laws in India: Pluralism and Democracy	4TH SEMESTER BA PROGRAMME	DEMOCRATIC AWARENESS THROUGH LEGAL LITERACY
September -October		Laws relating to contract, property; tenancy laws, labour laws, and environmental laws. Laws relating to dowry, sexual harassment and violence against women Laws relating to consumer rights Labour laws in the context of globalisation		

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		<p>24</p> <p>Laws relating to cyber crimes</p> <p>Anti-terrorist laws: implications for security and human rights</p> <p>Practical application: Visit to either a (I) court or (ii) a legal aid centre set up by the</p> <p>Legal Services Authority in Delhi or an NGO or (iii) a Lok Adalat, and to interview</p> <p>a litigant or person being counselled. Preparation of a case history</p>		
November - December		<p>Critical Understanding of the Functioning of the Legal System, Legal Services Authorities Act and right to legal aid, ADR systems. What to do if you are arrested ; if you are a consumer with a grievance; if you are a victim of sexual harassment; domestic violence, child abuse, caste, ethnic and religious discrimination; filing a public interest litigation. How can you challenge administrative orders that violate rights, judicial and administrative remedies. Human Rights - emerging trends; Role of legal aid agencies, Human Rights Commissions, NGOs and civil liberties groups. Practical application - Using a hypothetical case of (for example) child abuse or sexual harassment or any other violation of a right, preparation of an FIR or writing a complaint addressed to the appropriate authority.</p>		

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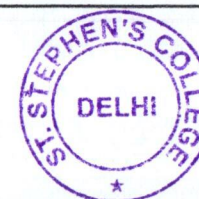




Name of the Faculty Member: PIA DAVID
Department: POLITICAL SCIENCE. YEAR 2020-21

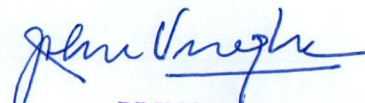
Month	practical	topics	course	paper code
January	Writing research papers on institutions like parliament, both houses, and panchayats	Powers and functions of people's representatives at different tiers of governance Members of Parliament, State Legislative Assemblies, functionaries of rural and urban local self-government from Zila Parishads/Municipal Corporation to Panchayat/Ward. (Weeks 1-3)	BA P 3RD SEMESTER	Legislative Support
February	Writing research papers on institutions like parliament, both houses, and panchayats	Supporting the legislative process: How a Bill becomes a Law, Role of the Standing Committee in reviewing a Bill, Legislative Consultations, amendments to a Bill, the framing of Rules and Regulations. (Week 4) Supporting the legislative committees Types of committees, Role of committees in reviewing government finances, policy, programmes, and legislation. (Weeks 5-7)		
March	Writing research papers on institutions like parliament, both houses, and panchayats	Reading the budget document: 18 Overview of Budget Process, Role of Parliament in reviewing the Union Budget, Railway Budget, Examination of Demands for Grants of Ministries, Working of Ministries. (Weeks 8-10)		
April	Writing research papers on institutions like parliament, both houses, and panchayats	Support in media monitoring and communication: Types of media and their significance for legislators. Basics of communication in print and electronic media..(Weeks 11-12)		

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History Department


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Name: Sangeeta Luthra Sharma
Department: History
Year: 2020-21

Month	Theory/ Tutorials	Topics	Course	Paper Name
Jul-August		Confucian Value system China and the Great Divergence Debate	HISTORY OF MODERN CHINA (1840- 1960)	DSE XI Revised CBCS
September		Opium Wars and the Unequal Treaty System Taiping and Boxer Movements – Causes, Ideology, Nature. Discussion on debates on GD and opium wars; Comparison between Taiping and Boxer Movements		
October		Self-Strengthening Movement; Hundred Days Reforms of 1898 The Revolution of 1911: Context, Nature and Role of Social Classes Sun Yat-sen (Sun Zhong Shan)- Ideology and Three Peoples Principles Warlordism. Discussions on failures of 19 th reform efforts. Transition of China from period of Imperialist control to phase of Nationalism		
November		Origins and Significance; May Fourth Movement of 1919 1921-1927: Formation of the CCP and early activities; Reorganization of the KMT (Nationalist Party); The First United Front 1928-1949: Kiangsi (Jiangxi) Period; Evolution of Maoist Strategy and Revolutionary Measures; the Yenan Phase; Peasant Nationalism and Communist Victory Establishment of the New Order and Mao's Strategy of Development Great Leap Forward: Debates.; Details of Relation between May Fourth movement and the emergence of political parties, details of 1920s political developments Emergence of Mao- different phases of peasant nationalism Topic of the Great Leap Forward was covered in tutorial classes		

Sangeeta Luthra Sharma
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Name: Sangeeta Luthra Sharma

Department: History

Year: 2020-21

Month	Theory/ Tutorials	Topics	Course	Paper code/Name
January		Crisis of Tokugawa <i>Bakuhau</i> system The Meiji Restoration; limits to modernization Economic change: Agrarian Settlement; fiscal policies; Capitalism and Industrialisation Popular/People's Rights Movement; gender Meiji Constitution; political parties Discussions revolving around early history of Japan Discussions on varied interpretations on 'democracy' and constitution- ambiguities	HISTORY OF MODERN JAPAN (1868- 1950S)	DSE XII
February		History of Korea- The Old Order and Institutional decay: Joseon Korea's relations with China, Japan and western powers Attempts at social, political and economic reform Japan- Militarism and fascism - Nature and significance. Discussion on early history of Korea-comparison with Japan, and how 19 th century developments in Japan impacted 20 th century politics		
March		Japanese Imperialism 1868-1945; ideology; expansion and conflict American occupation of Japan and post-War reconstruction; Changing nature of Japanese politics- impact on Japan's international positioning		
April		Japan's colonisation of Korea and growth of Korean Nationalism (1910-45) 1910-1919: Consolidation of Japanese power 1919-1931: March First Movement (1919); Saito Reforms of 1920s 1931-1945: War mobilisation; Japanese policy of assimilation; Korean response The Korean War; Impact of Japanese imperialism on Korea and Korea's response – analysis of Korean nationalism		

Sangeeta Luthra
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Name of the Faculty Member: Dr. Amrita Tulika

Department: History

Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Colonialism and forms of labour Laying the foundation of independent India- constitution, linguistic re- organization	History Hons. Semester V GE for Hons Courses	12317501/ DSE I- History of the USA: Independence to Civil War 12315355/ The Making of Contemporary India (1950- 1990s)
August	Theory	Forms of labour; American Revolution; Federalist constitution; Westward Expansion Foreign policy; Five Year Plans; Education, science and technology	Same as above Same as above	Same as above Same as above
September	Theory	Marginalization of indigenous tribes; Turner's thesis; Early capitalism; Slavery Uneven economic development- Punjab and Bihar; Political formations- Congress and Left parties; Caste politics; Dravidian movement; Women and Politics	Same as above Same as above	Same as above Same as above
October	Theory	US quest for dominance- war and diplomacy; The Civil War- politics, issues, historiography J.P. Movement and Emergency; Coalition politics; Mandal Commission; Neo- liberalism; Print and Visual Media	Same as above Same as above	Same as above Same as above

Amrita Tulika
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Name of the Faculty Member: Dr. Amrita Tulika

Department: History

Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	India in the mid- 18 th century- issues and debates; Colonial expansion- regional kingdoms; economy, culture and society Reconstruction: agrarian transformation; share-cropping; new social groups; The Gilded Age	B.A. Hons. Semester IV B.A. Hons. Semester VI	12311407/ History of India VI (c.1750- 1857)- Core Course 12317608/ DSE V- History of USA: Reconstruction to New Age Politics
February	Theory	Imperial ideologies; colonial army; Law and Education; Land revenue systems; commercialization; forests and pastoral economy Agrarian crisis; Populism; Progressivism; New Deal; Stereotypes of women	Same as above Same as above	Same as above Same as above
March	Theory	De- industrialization; Socio- religious reform movements Women and politics; Class and gender; Women's Liberation; African- American Movements	Same as above Same as above	Same as above Same as above
April	Theory	Debates around gender and caste; Popular resistance Imperialism	Same as above Same as above	Same as above Same as above

Amrita Tulika

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**Name of the Faculty Member: Dr. Sabina Kazmi
Department: History
2020-21**

Month	Theory/ Practical/ Tutorials	Course	Paper Name	Paper Code	Topics
July to November 2020	Theory	B.A. Prog. (IInd Year) (Semester III)	History of India (c1200 – 1700)	62314360	<ul style="list-style-type: none"> • Turkish incursions and establishment of Delhi Sultanate • Political evolution – Gujarat and Vijayanagar, • Mughal state establishment, expansion, nature, Akbar and Rajput • 17th century developments- rise of Sikhs and Maratha polities • Art and Architecture - case studies of Qutub complex, Hampi, Fatehpur Sikri • Bhakti & Sufi traditions literature interaction etc.
	Theory	B.A. Hons History (Semester III)	History of India (1200 – 1500)	12311348	<ul style="list-style-type: none"> • Sources - Sanskrit and Vernacular (Premakhyan) • Inscriptions and architecture (Hampi) • Consolidation of identities -Rajputs and warrior lineages • Political culture – Vijayanagar and Gujrat • Bhakti & Sant Traditions - Gender roles
	Theory	GE-III	Cultural diversity in India	62315517	<p>This paper will be shared between Dr. Sabina Kazmi and Dr. Digvijay Singh</p> <ul style="list-style-type: none"> • Folk Traditions and culture of orality – Jataka & Premakhayans • Religious Processes- Bhakti and Sufi traditions • Food and Attire- cultural implications

Sabina Kazmi

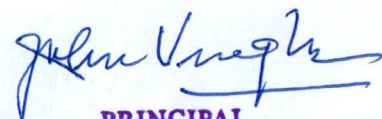
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**Name of the Faculty Member: Dr. Sabina Kazmi
Department: History
2020-21**

Month	Theory/ Practical/ Tutorials	Course	Paper Name	Paper Code	Topics
January – April -2021	Theory	B.A. Prog. – IIIrd Year (Semester V)	Cultural Transformations in Early Medieval Europe		<ul style="list-style-type: none"> • Scientific Revolution and Enlightenment • Literacy and Artistic developments • Women and Public sphere • Popular culture – magic, mentalities and family
	Theory	GE	Delhi Through the Ages – From Colonial to Contemporary Period		<ul style="list-style-type: none"> • 19th c. Delhi – Developments • 1857 in Delhi and aftermath • Imperial Delhi- Planning & Significance • Partition in Delhi • Contemporary Delhi – Expansion, Migration, dislocation, public culture.


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Name of the Faculty Member: Mr. Dias Mario Antony

Department: History

Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name	Unique Paper Code
July - November	Theory	I. The Archive: [a]. Early Manuscript Collections (Jain, Persian, Sitamau Library) [b]. Colonialism and collections [c]. National project and the archive [d]. Taxonomies and cataloguing [e]. Project work: learn the cataloguing system of your college library and compare with the catalogue of a major collection (see online catalogues of Ethe and Rieu). II. The Museum [a]. The colonial gaze [b]. Artefacts [c]. The post-colonial state and the museum – project work:	BA Hons. History (II Year)	Archives and Museums (LOCF)	12313353
	Field Work	Visit to the National Museum and National Gallery of Modern Art.	BA Hons. History (II Year)	Archives and Museums (LOCF)	12313353
	Theory	I. Constitution of heritage in colonial India [a]. Institutionalization and commodification of Indian art and architecture: collections, exhibitions, museums and monumentalizing – case study of the Great Exhibition, London; Kew Gardens, London; Indian	BA Programme (II Year)	Heritage and Tourism (LOCF)	62313364



		<p>Museum, Kolkata; Tranquebar; guide books and travel literature.</p> <p>II. Tourism: marketing heritage</p> <p>[a]. Religious Tourism: Case studies of Kashi, Sarnath, Ajmer Sharif, Amritsar, Bom Jesus Cathedral of old Goa.</p> <p>[b]. Memory and tourism: Raj nostalgia, Indian diaspora's search for roots.</p> <p>[c]. Ecotourism: commercializing nature.</p> <p>[d]. Exhibiting culture: handicrafts, heritage walks and tours, palaces, heritage festivals.</p> <p>III. Sustainable Tourism</p> <p>[a]. Interface with local sensibilities: case study of Agra, Simla, Goa.</p> <p>[b]. Conservation of Heritage: Humayun's Tomb, Ajanta Caves.</p>			
	Field Work	<p>Field trips/Project work: Some plans are as follows:</p> <p>[a]. Field Trips to Mathura Museum, National Museum, National Gallery of Modern Art, Rail Museum, Sulabh International Museum of Toilets, National Craft Museum, galleries, exhibitions.</p> <p>[b]. Heritage walks/trails to monuments and sites.</p> <p>[c]. Visit to light and sound shows and live performances at monuments, sites.</p>	BA Programme (II Year)	Heritage and Tourism (LOCF)	62313364



		<p>[d]. Documenting the impact of tourism on heritage sites and local communities.</p> <p>[e]. Making a report on the ongoing conservation projects of various sites by the ASI, Aga Khan Trust for Culture, INTACH and other community and private organizations.</p> <p>[f]. Food tourism etc.</p>			
	Theory	<p>I. The literary imagination</p> <p>II. Folk traditions and cultures of orality</p> <p>III. Religious processes</p> <p>IV. Food and attire</p> <p>V. Visual culture</p> <p>VI. Music and performance</p> <p>VII. Sport</p>	BA Programme (III Year)	Cultural Diversity in India (CBCS)	62315517
	Tutorial	Discussion of supplementary readings.	BA Programme (III Year)	Cultural Diversity in India (CBCS)	62315517

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Name of the Faculty Member: Mr. Dias Mario Antony
Department: History
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name	Unique Paper Code
January – April	Theory	<p>I. Major Religious Traditions through the Ages I [a]. Textual Vedic and Puranic traditions. [b]. Buddhism, Jainism and Ajivikas.</p> <p>II. Major Religious Traditions through the Ages II [a]. Juridical and Mystical Islam. [b]. Emergence of Sikhism.</p> <p>III. Socialization and Dissemination in the Medieval and Early Modern Era [a]. Scholarly Approaches to Brahmanization in the Early Medieval Era. [b]. Scholarly Approaches to Islamisation in the Medieval Period. [c]. Religious Identities in the Medieval Period; Representation of the Self and the Other.</p> <p>IV. Plurality and Political Mobilization of Religion [a]. Religious Boundaries and Liminal Spaces. [b]. Construction of Modern Religious Identities.</p> <p>V. Religion, Secularism and Nation-State</p>	Generic Elective (II Year)	Religion and Religiosity (LOCF)	12315405

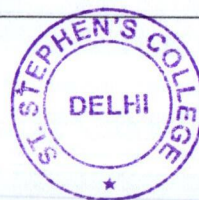
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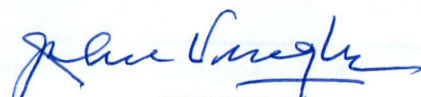
		[a]. Debates on Secularism and the Indian Constitution. [b]. Beyond Communal and Secular Discourse.			
	Tutorial	Discussion of supplementary readings.	Generic Elective (II Year)	Religion and Religiosity (LOCF)	12315405
	Theory	<p>I. Laying the foundation of independent India [a] The Constitution: nationality and citizenship [b] Linguistic re-organization [c] Foreign policy and the making of non-alignment</p> <p>II. Envisioning a new economic order [a] Agriculture and industry; Five Year Plans [b] Education, science and technology [c] Uneven development –Punjab, Bihar (case studies)</p> <p>III. Democracy at work [a] Congress and other political formations [b] (i)Left parties (ii) Naxalbari (iii) caste politics (iv) Dravidian movement [c] Women and politics (i)Hindu Code Bill (ii)Status of Women Report</p> <p>IV. Crisis and after [a] Railway Strike, J.P. Movement and Emergency [b] Developments in the 1980's: (i) Coalition politics; (ii) Mandal Commission and aftermath [c] Responding to new global alignments: Neo-liberalism</p>	BA Hons. History (III Year)	The Making of Contemporary India (1950-1990s) – CBCS	12317614

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		V. The Public Sphere [a] Print media [b] Institutions of art and culture [c] Visual Media: cinema and television			
	Tutorial	Discussion of supplementary readings.	BA Hons. History (III Year)	The Making of Contemporary India (1950-1990s) – CBCS	12317614
	Theory	I. Definition of Archives and Museum: types - digital, virtual, crafts, media; difference between archives, museum and library. II. History of development of archives and museums in India with one case study each. III. Collection, documentation, preservation. IV. Museum presentation and exhibition.	BA Programme (II Year)	Archives and Museums (LOCF)	62313466
	Field Work	Visit to the National Museum and/or National Archives of India.	BA Programme (II Year)	Archives and Museums (LOCF)	62313466
	Theory	This is a shared paper. Mr. Dias Mario Antony will be teaching the following section/s: I. The Cholas: State and Administration, economy and culture.	BA Programme (I Year)	History of India 300- 1200 CE (LOCF)	62311204


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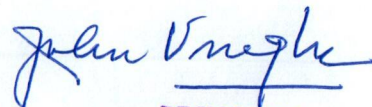


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Accreditation 2021**



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Economics Department

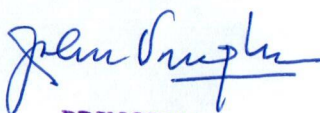

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**Name of the Faculty Member: Poonam Kalra
Department: Economics. Year: 2020-21**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
August	Theory(2 per week)	Introduction to the course: How can the representation and analysis of data help us study real-world problems. Publicly available data sets	B.A.(Hons.) Economics	HS31(Data Analysis)
	Practical(4 per week)	Download R, Import a .csv file check for the type of data		
September	Theory(2 per week)	Data preparation, Data cleaning using EXCEL, pivot tables	B.A.(Hons.) Economics	HS31(Data Analysis)
	Practical(4 per week)	Dirty data cleaned using "Find and Replace" and "VLOOKUP" functions. Built pivot tables using data		
October	Theory(2 per week)	Data Visualisation, Probability distributions	B.A.(Hons.) Economics	HS31(Data Analysis)
	Practical(4 per week)	Plot Histogram, trend lines, bar charts, pie charts etc. Finding cumulative probabilities using EXCEL functions		
November	Theory(2 per week)	Sampling Distribution and Hypothesis testing	B.A.(Hons.) Economics	HS31(Data Analysis)
	Practical(4 per week)	Using EXCEL commands for t, F, Normal distribution and Hypothesis testing		


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Name of the Faculty Member: Poonam Kalra

Department: Economics. Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory(5 per week)	Macroeconomic policies and their impact: fiscal policy; financial and monetary policies	B.A.(Programme.)	PDE61(EDPI-II)
	Tutorial(1 per week)	Discussed articles by Joshi and Dua		
February	Theory(5 per week)	AGRICULTURE Policies and performance; Production and productivity; credit; labour; markets and pricing; land reforms; regional variations	B.A.(Programme.)	PDE61(EDPI-II)
	Tutorial(1 per week)	Discussed articles by Vaidyanathan, Ghatak etc.		
March	Theory(5 per week)	INDUSTRY Policies and performance; production trends; small scale industries; public sector; foreign investment, labour regulation	B.A.(Programme.)	PDE61(EDPI-II)
	Tutorial(1 per week)	Discussed articles by Nagaraj and a chapter in the Economic Survey etc.		
April	Theory(5 per week)	SERVICES AND TRADE Trends and performance; trade and investment policy	B.A.(Programme.)	PDE61(EDPI-II)
	Tutorial(1 per week)	Discussed article by Rupa Chanda		

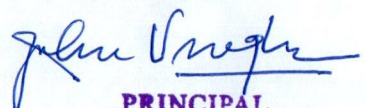
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Name: Leema Mohan Paliwal
Department: Economics. Year: 2020-21

Month	Theory/Tutorials	Topics	Course	Paper Name/ Code
August	Theory	Probability Theory	BA Hons. Economics	Statistical Methods for Economists
September	Theory	Discrete and Continuous univariate, multivariate random variables,	BA Hons. Economics	Statistical Methods for Economists
October	Theory	Sampling distributions and point estimation	BA Hons. Economics	Statistical Methods for Economists
November	Theory	Interval estimation and setting up a hypothesis	BA Hons. Economics	Statistical Methods for Economists
	Theory	Ten Principles of Economics	B A Programme	Principles of Microeconomics I
December	Theory, Tutorials	Demand and Supply Analysis	B A Programme	Principles of Microeconomics I


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Name: Leema Mohan Paliwal

Department: Economics. Year: 2020-21

Month	Theory/Tutorials	Topics	Course	Paper Name/ Code
January	Theory, Tutorials	Taxation and welfare in Demand and Supply Models	B A Programme	Principles of Microeconomics I
	Theory	Money: Concept, Functions, Measurement, Theories of Money Supply Determination,	B A Hons Economics	Money and Financial Markets
February	Theory, Tutorials	Consumer Theory	B A Programme	Principles of Microeconomics I
	Theory	Financial Institutions, Markets, instruments and innovations	B A Hons Economics	Money and Financial Markets
March	Theory, Tutorials	Production, Costs , perfect Competition	B A Programme	Principles of Microeconomics I
	Theory	Interest rate determination, term structure of interest rates, interest rates in India	B A Hons Economics	Money and Financial Markets
April	Theory	Banking System, Central banking and Monetary Policy	B A Hons Economics	Money and Financial Markets
	Theory, Tutorials	National Income Accounting, Money supply	BA Hons. Economics	Introductory Macroeconomics
May	Theory, Tutorials	Money Demand, Classical Model	BA Hons. Economics	Introductory Macroeconomics
June	Theory, Tutorials	Simple Keynesian Model	BA Hons. Economics	Introductory Macroeconomics

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Name of the Faculty Member: Manjula Singh
Department: Economics Year: 2020-2021

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory & Tutorials	The labour market Wage determination; wages, prices and employment; natural rate of unemployment; from employment to output	BA (H) Economics	12271302 Intermediate Macroeconomics- I
August	Theory & Tutorials	Aggregate demand and aggregate supply curves Derivation of aggregate demand and aggregate and supply curves; interaction of aggregate demand and supply to determine equilibrium output, price level and employment	BA (H) Economics	12271302 Intermediate Macroeconomics- I
September	Theory & Tutorials	Inflation, unemployment and expectations Phillips curve; adaptive and rational expectations; policy ineffectiveness debate	BA (H) Economics	12271302 Intermediate Macroeconomics- I
October	Theory & Tutorials	Microeconomic foundations <u>Consumption</u> Keynesian consumption function; Fisher's theory of optimal intertemporal choice; lifecycle and permanent income hypotheses; rational expectations and random-walk of consumption expenditure. <u>Investment</u> Determinants of business fixed investment; residential investment and inventory investment. <u>Demand for Money</u> Interest sensitivity of money demand function; Baumol's, Tobin's and Friedman's approach to money demand	BA (H) Economics	12271302 Intermediate Macroeconomics- I

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Name of the Faculty Member: Manjula Singh

Department: Economics Year: 2020-2021

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory & Tutorials	<u>Economic growth</u> Harrod-Domar model; Solow model; Golden rule, technological progress, economics of ideas, engines of growth, modern theories of endogenous growth	BA (H) Economics	12271402 Intermediate Macroeconomics- II
February	Theory & Tutorials	<u>Business cycles</u> Real business cycle theory; new Keynesian models of sticky prices	BA (H) Economics	12271402 Intermediate Macroeconomics- II
March	Theory & Tutorials	<u>Open economy models</u> Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets	BA (H) Economics	12271402 Intermediate Macroeconomics- II
April	Theory & Tutorials	<u>Fiscal and monetary policy</u> Active or passive; monetary policy objectives and targets; rules versus discretion: time consistency; the government budget constraint; government debt and Ricardian equivalence	BA (H) Economics	12271402 Intermediate Macroeconomics- II

Manjula Singh
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**Name: Divya Singh
Department: Economics
Year: 2020-2021**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
August	Theory	1. Introduction to Development Economics 2. Basic concepts in Development Economics (relationship between growth and development, factors affecting growth and development)	B.A. (Honours) Economics III Year (Core)	Development Economics I
August	Tutorials	1. Solving analytical and numerical problems from the topics and texts covered in lectures. 2. Discussion of some supplementary material (Some texts discussed include: Why Nations Fail by Acemoglu and Robinson, The Colonial Origins of Comparative Development by Acemoglu)	B.A. (Honours) Economics III Year (Core)	Development Economics I
September	Theory	1. Basic concepts in Development Economics (continued) 2. Indices of development and their trends 3. The Human Development Index 4. Growth Models (Harris-Todaro, Solow)	B.A. (Honours) Economics III Year (Core)	Development Economics I
September	Tutorials	1. Solving analytical and numerical problems from the topics and texts covered in lectures 2. Literature on PPP and NER, Development Indices other than the HDI	B.A. (Honours) Economics III Year (Core)	Development Economics I
October	Theory	1. New Growth Theories 2. Concepts and Measurement of Poverty and Inequality 3. Trends in Poverty and Inequality	B.A. (Honours) Economics III Year (Core)	Development Economics I

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October	Tutorials	<ol style="list-style-type: none"> 1. Solving analytical and numerical problems from the topics and texts covered in lectures 2. Discussion of some supplementary material on poverty and inequality (Deaton and Dreze on nutrition trends, some relevant topics from Banerjee and Duflo's Poor Economics) 	B.A. (Honours) Economics III Year (Core)	Development Economics I
November	Theory	<ol style="list-style-type: none"> 1. Political Institutions and the Functioning of the State (Governance of common Property Resources, Corruption, Literature on Comparative Development and theories of growth and development) 	B.A. (Honours) Economics III Year (Core)	Development Economics I
November	Tutorials	<ol style="list-style-type: none"> 1. Solving analytical and numerical problems from the topics and texts covered in lectures 	B.A. (Honours) Economics III Year (Core)	Development Economics I

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**Name: Divya Singh
Department: Economics
Year: 2020-2021**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	1. Macroeconomic Trends and Policies (Trends pertaining to the Indian Economy, Concepts and Trends in Financial Globalization External Sector and Trade Policy, Labour Laws)	B.A. (Honours) Economics III Year (Core)	Indian Economy II
January	Tutorials	1. Discussion of Supplementary Reading Material (particularly on India's Financial sector and labour laws)	Same as Above	Same as Above
February	Theory	1. Macroeconomic Trends and Policies (continued) 2. Agriculture Sector (Trends and Policies)		
February	Tutorials	1. Discussion of Supplementary Reading Material (particularly on labour laws and agriculture policy reform)		
March	Theory	1. Agriculture Sector (Trends and Policies) (continued) 2. Concepts, trends and policies in the Industrial and Manufacturing Sectors of the Indian Economy		
March	Tutorials	1. Discussion of supplementary reading material		
April	Theory	1. Concepts, trends and policies in the Industrial and Manufacturing Sectors of the Indian Economy 2. Discussion of India's Service Sector		
April	Tutorials	1. Discussion of supplementary reading material		

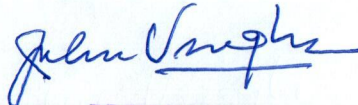
Divya Singh
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**Name: Saumaly Ghosh
Department: Economics
Academic year: 2020-2021**

Month	Theory/Tutorials	Topics	Course	Paper code/ Name
July	Theory+Tutorials	Absolute and Comparative Advantage theories	BA (H) economics semester V	International Economics
	Theory+Tutorials	Growth and development	BA Prog. Semester V	Economic Development and Policy in India-I
August	Theory+Tutorials	Heckscher Ohlin Model; Ricardian model	BA (H) economics semester V	International Economics
	Theory+Tutorials	Readings on growth and development	BA Prog. Semester V	Economic Development and Policy in India-I
September	Theory+Tutorials	Tariffs and trade policy	BA (H) economics semester V	International Economics
	Theory+Tutorials	Readings on education	BA Prog. Semester V	Economic Development and Policy in India-I
October	Theory+Tutorials	Regulation and trade policy	BA (H) economics semester V	International Economics
	Theory+Tutorials	Readings on health	BA Prog. Semester V	Economic Development and Policy in India-I


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Name: Saumaly Ghosh
Department: Economics
Academic year: 2020-2021

Month	Theory/Tutorials	Topics	Course	Paper code/ Name
January	Theory+Tutorials	Introduction to environmental economics; Sustainable development; Welfare theorems	BA(H) economics VIth semester	Environmental Economics
	Theory+Tutorials	Introduction to the budget	BA(H) economics IVth semester	Contemporary economic issues
February	Theory+Tutorials	Coase theorem and property rights	BA(H) economics VIth semester	Environmental Economics
	Theory+Tutorials	Readings on the Finance commission; project topic selection and discussion	BA(H) economics IVth semester	Contemporary economic issues
March	Theory+Tutorials	Regulation ; prescriptive regulations and economic incentives	BA(H) economics VIth semester	Environmental Economics
	Theory+Tutorials	Chapters from Economic Survey	BA(H) economics IVth semester	Contemporary economic issues
April	Theory+Tutorials	Environmental pricing	BA(H) economics VIth semester	Environmental Economics
	Theory+Tutorials	Chapters from Economic Survey	BA(H) economics IVth semester	Contemporary economic issues

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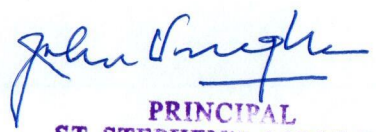
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E-mail: pstopprincipal@ststephens.edu

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English Department


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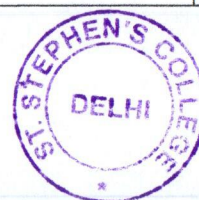




Name of the Faculty Member: Dr. Karen Gabriel
Department: English. Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory+ Tutorials	Introduction to American Literature; literature written by writers of European and African descent; Transcendentalism, pre- and post-civil war America, Slavery and the Civil Rights Movement.	BA (Hons) English, II Year (Core)	American Literature (12031301)
August	Theory+ Tutorials	Introduction to Toni Morrison; Introduction to African American Literature and its varied concerns. Introduction to Black Women's Writings. Start with Morrison's novel 'Beloved'.	BA (Hons) English, II Year (Core)	American Literature (12031301)
September	Theory+ Tutorials	Social Realism and the American Novel. Finish Morrison's 'Beloved'. Reflections on the idea of the 'American Dream'. Start with short stories: Edgar Allen Poe's 'The Purloined Letter'.	BA (Hons) English, II Year (Core)	American Literature (12031301)
October-November	Theory+ Tutorials	Discussions on Folklore and American literature. Native American literature and its concerns. Short stories: Flannery O' Connor's 'Everything that Rises must Converge', William Faulkner's 'Dry September', and Leslie Marmon Silko's 'The Man to send Rain Clouds'.	BA (Hons) English, II Year (Core)	American Literature (12031301)


Jalpa Singh
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Name of the Faculty Member: Dr. Karen Gabriel
Department: English. Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory+ Tutorials	Introduction to 20 th Century British Literature; Social, Political and Intellectual Climate of early 20 th Century England. Critique of Modernity; Impact of two world wars of literary expression and form.	BA (Hons) English, III Year (Core)	British Literature: The Early 20 th Century (12031502)
February	Theory+ Tutorials	Critique of Imperialism and Colonialism. Introduction to Joseph Conrad. Study Conrad's novel 'Heart of Darkness'.	BA (Hons) English, III Year (Core)	British Literature: The Early 20 th Century (12031502)
March	Theory+ Tutorials	Introduction to Modernism and the features of Modernist fiction, such as 'stream of consciousness', individualism, self-hood, subjectivity, and experimentation with form.	BA (Hons) English, III Year (Core)	British Literature: The Early 20 th Century (12031502)
April	Theory+ Tutorials	Introduction to Virginia Woolf and her literary concerns. Feminism and British Literature. Study Woolf's novel 'Mrs. Dalloway'.	BA (Hons) English, III Year (Core)	British Literature: The Early 20 th Century (12031502)

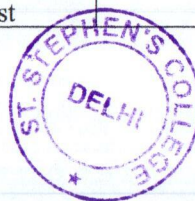

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Name: Dr. Smita Gandotra
Department: English. Year: 2020-21

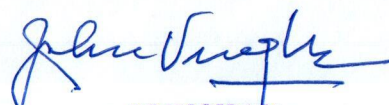
Month	Theory and Tutorials	Topics	Course and Paper Title	Paper code
July	(a) Selections from the Mahabharata, Book 2 (b) Rabindranath Tagore's Gitanjali; Premchand's story "Kafan" and Perumal Murugan's story "The Well"	(a) Genre in Indian classical literature (b) Literary influences on Tagore, Premchand and debates on caste, caste and gender in Indian literature	(c) English Honours; Indian Classical Literature (d) English Honours; Modern Indian Writings in English Translation	(a) Indian Classical Literature, 12031101 (b) Modern Indian Writings in English Translation, 12037501
August	(a) Selections from the Mahabharata, Books 2 and 5 (b) Arupa Patangia Kalita's "Doiboki's Day"; Fakir Mohan Senapati's Six Acres and a Third	(a) Individual portraits in the Mahabharata, war and conflict, martial codes (b) Caste and gender in modern Indian literature	(c) English Honours, Indian Classical Literature (d) English Honours, Modern Indian Writings in English Translation	(a) Indian Classical Literature, 12031101 (b) Modern Indian Writings in English Translation, 12037501
September	(a) Selections from the Mahabharata, Books 5 and 11 (b) Fakir Mohan Senapati's Six Acres and a Third	(a) Karna, Draupadi, Dhritarashtra and Gandhari, Arjuna and the Pandavas (b) The early Indian novel, influences on Senapati	(c) English Honours, Indian Classical Literature (d) English Honours, Modern Indian Writings in English Translation	(a) Indian Classical Literature, 12031101 (b) Modern Indian Writings in English Translation, 12037501
October	(a) Selections from the Mahabharata, Book 11 (b) Muktibodh's Brahmarakshas and Thangjam Ibopishak's poetry	(a) Karna, Draupadi, Dhritarashtra and Gandhari, Arjuna and the Pandavas (b) Hindi poetry and poetry from the Northeast	(c) English Honours, Indian Classical Literature (d) English Honours, Modern Indian Writings in English Translation	(a) Indian Classical Literature, 12031101 (b) Modern Indian Writings in English Translation, 12037501





Name: Dr. Smita Gandotra
Department: English. Years: 2020-21

Month	Theory/ Tutorials	Topics	Course and Paper Title	Paper code/ Name
January	(a) Anita Desai's In Custody (b) Chinua Achebe's Things Fall Apart	(a) Indian writing in English, history, reception and significant periods (b) The postcolonial novel	(c) English Honours, Indian Writings in English (d) English Honours, Postcolonial Literatures	(a) Indian Writings in English; 12031201 (b) Postcolonial Literatures; 12031602
February	(a) Anita Desai's In Custody (b) Chinua Achebe's Things Fall Apart	(a) Deven and Nur, In Custody, the Hindi-Urdu debate (b) Okonkwo, Nwoye, the structures of Igbo society	(c) English Honours, Indian Writings in English (d) English Honours, Postcolonial Literatures	(a) Indian Writings in English; 12031201 (b) Postcolonial Literatures; 12031602
March	(a) Anita Desai's In Custody and Kamala Das's poetry (b) Pablo Neruda, Derek Walcott's and Mamang Dai's poetry	(a) The women of In Custody and gender in Indian poetry (b) Postcolonial poetry, resistance, and alternative locations	(c) English Honours, Indian Writings in English (d) English Honours, Postcolonial Literatures	(a) Indian Writings in English; 12031201 (b) Postcolonial Literatures; 12031602
April	(a) Nissim Ezekiel, Robin Ngangom and Meena Kandasamy's poetry (b) The short stories of Bessie Head, Ama Ata Aidoo and M. M. Vinodini	(a) The Indian poets of the 1960s in Mumbai, the Shillong school of poetry and gender and caste in Indian poetry (b) Gender and the postcolonial story	(c) English Honours, Indian Writings in English (d) English Honours, Postcolonial Literatures	(a) Indian Writings in English; 12031201 (b) Postcolonial Literatures; 12031602


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Name of the Faculty Member: Themeem T
Department: English
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	1) Introduction to the Course. 2) Poetry Passage to India by Walt Whitman, 'O Captain! My Captain', by Walt Whitman	B A Hons II Year	American Literature
August	Theory and Tutorial	"The Prologue" by Anne Bradstreet	B A Hons II Year	American Literature
September	Theory	"Crow Testament" and "Evolution" by Sherman Alexie	B A Hons II Year	American Literature
October	Theory	Tennessee Williams <i>The Glass Menagerie</i>	B A Hons II Year	American Literature



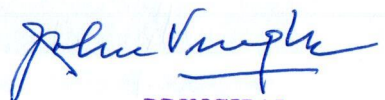
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Name of the Faculty Member: Themeem T.
Department: English
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	Introduction. Manto, 'Toba Tek Singh '	III BA Hons	Partition Literature
February	Theory	"A Leaf in A storm" by Lalithambika Andarjanam	III BA Hons	Partition Literature
March	Theory	"Alam's Own House" by Dibyendu Palit	III BA Hons	Partition Literature
April	Theory	<i>Basti</i> by Intizar Hussain	III BA Hons	Partition Literature

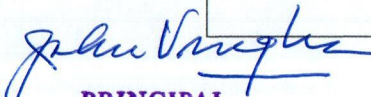

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Name of the Faculty Member: Ann Susan Aleyas
Department: English
Year: 2020-2021

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Introduction to the terms 'Indian', 'Classical' and 'Literature' Introduction (cont..) through discussion of the following allotted readings. Introduction to terms such as "Dharma", "Purusarthas", "Shruti", "Smriti", "Itihasa" etc. Introduction to Ramayana and <i>Mahabharata</i> focusing on its generic classification as 'epics' and as "mahakavyas"/"panchamveda" etc. This session will also involve readings from selections in <i>Adi Parva/ Book of the Beginnings</i>	B.A.English (Hons) – I (Semester I)	Indian Classical Literature
August	Theory	Introduction to "Dicing" and the "Sequel to Dicing" from the <i>Mahabharata</i> Close reading and Discussions of the "Dicing" Close reading and Discussions of the "Sequel to Dicing"	B.A.English (Hons) – I (Semester I)	Indian Classical Literature
September	Theory	Student Presentations and Discussions on <i>Natyashastra</i> . Introduction to Rasa Theory Introduction to <i>Mrcchakatika</i> by Shudraka Close reading and discussion of the various themes in <i>Mrcchakatika</i> .	B.A.English (Hons) – I (Semester I)	Indian Classical Literature
October	Theory	Revision of sections from <i>Mahabharata</i> and <i>Mrcchakatika</i> . Discussion of secondary readings.	B.A.English (Hons) – I (Semester I)	Indian Classical Literature

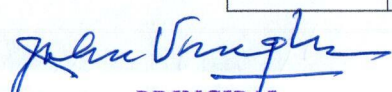

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Name of the Faculty Member: Ann Susan Aleyas
Department: English
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	Introduction to Women's Writing. Introduction to French and American Feminist Theory Feminism in India Introduction to Colour Purple	B.A.English (Hons) – III (Semester V)	Women's Writing
February	Theory	Close reading and analysis of Alice Walker's <i>Colour Purple</i> Thematic Discussion of Alice Walker's <i>Colour Purple</i> Introduction to Womanism Discussion on readings by bell hooks, Patricia Hill Collins and additional short stories of Alice Walker	B.A.English (Hons) – III (Semester V)	Women's Writing
March	Theory	Close reading, discussion and thematic analysis of Charlotte Perkin Gilman's "Yellow Wallpaper". Close reading, discussion and thematic analysis of Katherine Mansfield's "The Yellow Wallpaper". Student Presentations of various themes of "The Yellow Wallpaper" Close reading and discussion of Katherine Mansfield's "Bliss"	B.A.English (Hons) – III (Semester V)	Women's Writing
April	Theory	Close reading, analysis and discussion of Mahasweta Devi's "Draupadi" Student presentations on Mahasweta Devi's <i>Breast Stories</i> and secondary readings Revision of all the texts in the syllabus	B.A.English (Hons) – III (Semester V)	Women's Writing


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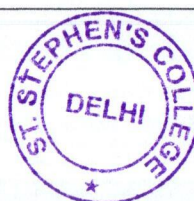




Name of the Faculty Member: Naveen John Panicker
Department: English
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Introduction to Realism, 19 th Century Russian politics and literature, themes and tropes, cultural and social developments etc.	BA (Hons) English, III Year (DSE)	Nineteenth Century European Realism (12037504)
August	Theory+ Tutorials	Introduction to Dostoevsky, Existentialism, Nihilism, Intellectual Ideas in 19 th Century Russia, Enlightenment Influences on Russian thought and literature; start with Crime and Punishment	BA (Hons) English, III Year (DSE)	Nineteenth Century European Realism (12037504)
September	Theory+ Tutorials	Finish Crime and Punishment; Nietzsche's Ubermensch vs Raskolnikov's 'The Extraordinary Man'; Dostoevsky and the notion of Christian suffering	BA (Hons) English, III Year (DSE)	Nineteenth Century European Realism (12037504)
October	Theory+ Tutorials	Introduction to Turgenev; start with Fathers and Sons; social and political and agrarian transformations in 19 th Century Russia; the popularity of intellectual/rational nihilism.	BA (Hons) English, III Year (DSE)	Nineteenth Century European Realism (12037504)

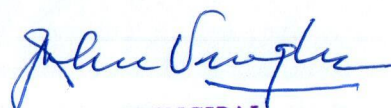
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Name of the Faculty Member: Naveen John Panicker
Department: English
Year: 2020-21

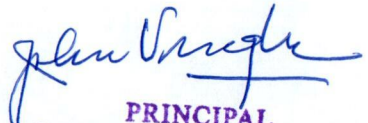
Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	Introduction to the social, political, religious and monarchical changes in 18 th century England; popular intellectual ideas of the time period: Locke, Hobbes, Rousseau, Godwin, Wollstonecraft etc.	BA (Hons) English, II Year (Core)	British Literature: 18 th Century (12031401)
February	Theory+ Tutorials	Introduction to 18 th century drama, Comedy of Manners, 18 th century aristocracy; Introduction to William Congreve; begin with Way of the World.	BA (Hons) English, II Year (Core)	British Literature: 18 th Century (12031401)
March	Theory+ Tutorials	Introduction to satire, its types and objectives; Introduction to Jonathan Swift and Swiftian Satire; rise of travel writing, the fascination with the exotic and the form of the novel; Begin Gulliver's Travels.	BA (Hons) English, II Year (Core)	British Literature: 18 th Century (12031401)
April	Theory+ Tutorials	The satire on England, Science and Religion; finish Books 3 and 4 from Gulliver's Travels; Cinematic adaptations of Gulliver's Travels	BA (Hons) English, II Year (Core)	British Literature: 18 th Century (12031401)


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Philosophy Department


**PRINCIPAL
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Name of the Faculty Member: **Dr Silika Mohapatra**

Department: **Philosophy**

Year: **2020-21**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July		Introduction	BAH Philo I Sem	Indian Philosophy
		Descartes/Spinoza	BAH Philo IV Sem	History of Western Philosophy
		Descartes	BAH Philo VI Sem	Philosophy of Mind
August		Carvaka/Buddhism/Jainism	BAH Philo I Sem	Indian Philosophy
		Leibniz/Locke	BAH Philo IV Sem	History of Western Philosophy
		Gilbert Ryle	BAH Philo VI Sem	Philosophy of Mind
September		Nyaya/Samkhya/Causation	BAH Philo I Sem	Indian Philosophy
		Berkeley/Hume	BAH Philo IV Sem	History of Western Philosophy
		J.J.C. Smart	BAH Philo VI Sem	Philosophy of Mind
October		Vedanta	BAH Philo I Sem	Indian Philosophy
		Kant	BAH Philo IV Sem	History of Western Philosophy
		Hilary Putnam/Frank Jackson	BAH Philo VI Sem	Philosophy of Mind

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Name of the Faculty Member: **Dr Silika Mohapatra**
Department: **Philosophy**
Year: **2020-21**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January		Morality/Relativism	BAH Philo Sem II	Ethics
		Art and Experience	BAH Philo Sem IV	Art and Film Appreciation
		Scepticism	BAH Philo Sem VI	Knowledge and Scepticism
February		Aristotle/Mill/Kant	BAH Philo Sem II	Ethics
		Film as Art Form	BAH Philo Sem IV	Art and Film Appreciation
		Knowledge	BAH Philo Sem VI	Knowledge and Scepticism
March		Applied Ethics	BAH Philo Sem II	Ethics
		Art, Social Values, Morality	BAH Philo Sem IV	Art and Film Appreciation
		Conditional Theory	BAH Philo Sem VI	Knowledge and Scepticism
April		Indian Ethics	BAH Philo Sem II	Ethics
		Art and Communication through Films	BAH Philo Sem IV	Art and Film Appreciation
		Foundationalism	BAH Philo Sem VI	Knowledge and Scepticism

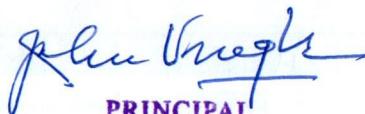
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Name of the Faculty Member: Alphy Geever
Department: Philosophy
Year: 2020-2021

Month	Theory/Tutorials	Topics	Course	Paper Code/ Name
July		Unit I: Law-Concept, Meaning, and Definition The Case of the Speluncean Explorers (Fuller)	BA (Hons) III Year	12107507
August		Unit I: Law-Concept, Meaning, and Definition The Case of the Speluncean Explorers (Fuller) Traditional Natural Law Theory (Aquinas) Legal Positivism: Law as Command (Austin) Primary and Secondary Rules- Criticism of Austin (Hart) Law as Integrity (Dworkin) Unit II: Sources of Law Comparative Constitutional Law- Constitutional Law (Frakenburg) Conventional Law and Statutory Law- The Identity of Legal Systems (Raz)		
September		Unit III: Law and Morality The Obligation to Obey the Law (Mackie) Readings in Legal Philosophy (Dyzenhaus, Reibetanz, Ripstein)		
October		Unit IV: Criminal Responsibility, Desert and Punishment The Oxford Handbook of Philosophy of Criminal Law (Deigh and Dolinko) Crime, Punishment, Responsibility, Mens Rea Theories of Punishment Capital Punishment (Legal Perspective)		

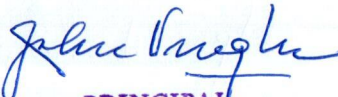

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Name of the Faculty Member: Alphy Geever
Department: Philosophy
Year: 2020-2021

Month	Theory/ Tutorials	Topics	Course	Paper Code/ Name
January		Unit I: Naturalism – Cosmos and Arche (Thales and Anaximander) Early Greek Philosophy (Barnes) A Pre-Socratic Reader (Curd) The Routledge Companion to Ancient Philosophy (Warren and Sheffield) The Pre-Socratic Philosophers (Kirk and Raven)	BA (Hons) II Year	12101201 Greek Philosophy
February		Unit II: Change, Being and Becoming Heraclitus: Doctrine of Flux Parmenides: Doctrine of Being and not-Being [Introduction to Buddhism (Hiriyana)] [Madhyamakarikā (Nagarjuna)] [The Legacy of Parmenides: Eleatic Monism and Later Presocratic Thought (Patricia Curd)]		
March		Unit III: Sophists and Socrates Protagoras: Relativism and Scepticism Socrates: Critical Enquiry Socrates: Virtue is Knowledge		
April		Unit IV: Plato Justice as Virtue Theory of Forms [Justice and Psychic Harmony (Vlastos)] [Analogy of Letters, Myth of the Metals] [Analogy of Sun, Line and Cave]		


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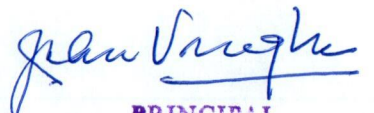
**St. Stephen's College
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Sanskrit Department

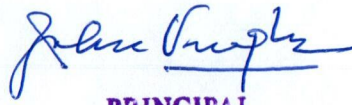

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Name: A.D. Mathur
Department: Sanskrit
Year: 2020-21

Month	Theory/Tutorials	Topics	Course	Paper code/ Name
July	Theory and Tutorials	Nitishatakam	BA (H) I BA (H) II BA (H) III BA (H) III	C -1 Sanskrit Poetry C -7 Indian Social Institutions and Polity C -11 Vedic Literature DSE – 1 Indian System of Logic and Debate
August	Theory and Tutorials	Nitishatakam	BA (H) I BA (H) II BA (H) III BA (H) III	C -1 Sanskrit Poetry C -7 Indian Social Institutions and Polity C -11 Vedic Literature DSE – 1 Indian System of Logic and Debate
September	Theory and Tutorials	Nitishatakam	BA (H) I BA (H) II BA (H) III BA (H) III	C -1 Sanskrit Poetry C -7 Indian Social Institutions and Polity C -11 Vedic Literature DSE – 1 Indian System of Logic and Debate
October	Theory and Tutorials	Nitishatakam	BA (H) I BA (H) II BA (H) III BA (H) III	C -1 Sanskrit Poetry C -7 Indian Social Institutions and Polity C -11 Vedic Literature DSE – 1 Indian System of Logic and Debate

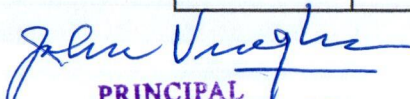

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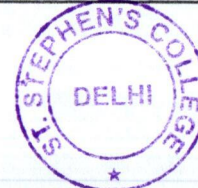




Name: A.D. Mathur
Department: Sanskrit
Year: 2020-21

Month	Theory/Tutorials	Topics	Course	Paper code/ Name
January	Theory and Tutorials	Gītā : Cognitive and emotive apparatus Unit: I Hierarchy of <i>indriya</i> , <i>manas</i> , <i>buddhi</i> and <i>ātman</i> Role of the <i>ātman</i> Mind as a product of <i>prakṛti</i> Properties of three <i>guṇas</i> and their impact on the mind	BA Hons. I BA Hons. II BA (H) III	C-4 Self Management in the Gita C – 10 Sanskrit and World Literature C -13 Indian Ontology and Epistemology
February	Theory and Tutorials	Gītā : Controlling the mind Confusion and conflict in mind Nature of conflict Causal factors – Ignorance; Rajoguṇa Means of controlling the mind Meditation–difficulties in procedure Balanced life, Diet control, Physical, mental discipline.	BA Hons. I BA Hons. II BA (H) III	C-4 Self Management in the Gita C – 10 Sanskrit and World Literature C -13 Indian Ontology and Epistemology
March	Theory and Tutorials	Means of conflict resolution in Gītā Importance of knowledge Clarity of buddhi . Process of decision making Control over senses Surrender of kartṛbhāva ; Desirelessness Putting others before self	BA Hons. I BA Hons. II BA (H) III	C-4 Self Management in the Gita C – 10 Sanskrit and World Literature C -13 Indian Ontology and Epistemology
April	Theory and Tutorials	Gītā : Self-management through devotion Surrender of ego Abandoning frivolous debates Acquisition of moral qualities	BA Hons. I BA Hons. II BA (H) III	C-4 Self Management in the Gita C – 10 Sanskrit and World Literature C -13 Indian Ontology and Epistemology



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Name of the Faculty Member: Abhay Singh
Department: Sanskrit
Year: 2020-21

Month	Theory/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Vedic Literature Teaching various aspects of Saṁhitā (R̥k, Yajur, Sāma, Atharva) time, subject- matter, religion & Philosophy, social life. Brāhmaṇa, Āraṇyaka, Upaniṣad, Vedāṅga (Brief Introduction)	B.A. (hons) Sanskrit	C-2 Critical Survey of Sanskrit Literature
August	Theory	Rāmāyaṇa- Rāmāyaṇa-time, subject-matter. Rāmāyaṇa as a Source Text and its Cultural Importance Rāmāyaṇa as an Ādikāvya. Mahābhārata- Mahābhārata and its Time, Development, and subject matter Encyclopaedic nature, as a Source Text, Cultural Importance. Purāṇas : Subject matter, Characteristics Social, Cultural and Historical Importance.	B.A. (hons) Sanskrit	C-2 Critical Survey of Sanskrit Literature
September	Theory	General Introduction to Vyākaraṇa, Darśana and Sāhityaśāstra Brief History of Vyākaraṇaśāstra Major schools of Indian Philosophy Cārvāka, Bauddha, Jaina, Sāṅkhya- yoga.	B.A. (hons) Sanskrit	C-2 Critical Survey of Sanskrit Literature
October	Theory	Six major Schools of Indian Poetics-Rasa, Alamkāra, Rīti, Dhvani, Vakrokti and Aucitya.	B.A. (hons) Sanskrit	C-2 Critical Survey of Sanskrit Literature

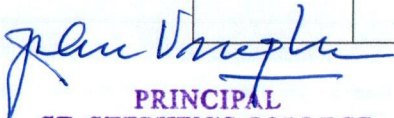

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Name of the Faculty Member: Abhay Singh
Department: Sanskrit
Year: 2020-21

Month	Theory/Tutorials	Topics	Course	Paper code/ Name
January	Theory	Gītā: Cognitive and emotive apparatus Unit: I Hierarchy of <i>indriya</i> , <i>manas</i> , <i>buddhi</i> and <i>ātman</i> Role of the <i>ātman</i> Mind as a product of <i>prakṛti</i> Properties of three <i>guṇas</i> and their impact on the mind.	B.A. (hons) Sanskrit	C-4 Self Management in the Gītā
February	Theory	Gītā: Controlling the mind Confusion and conflict in mind Nature of conflict Causal factors – Ignorance <i>Rajoguṇa</i> Means of controlling the mind Meditation–difficulties procedure Balanced life, Diet control, Physical and mental discipline.	B.A. (hons) Sanskrit	C-4 Self Management in the Gītā
March	Theory	Means of conflict resolution in Gītā Importance of knowledge Clarity of buddhi . Process of decision making Control over senses Surrender of kartṛbhāva ; Desirelessness Putting others before self	B.A. (hons) Sanskrit	C-4 Self Management in the Gītā
April	Theory	Gītā: Self management through devotion Surrender of ego Abandoning frivolous debates Acquisition of moral qualities	B.A. (hons) Sanskrit	C-4 Self Management in the Gītā


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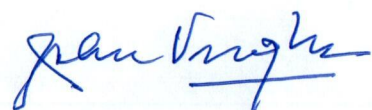


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Hindi Department


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Name of the Faculty Member: Dr. Abhishek Mishra
Department: Hindi
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
November	Theory	Unit 1 Sanmpreshan Ki Avdharana Aur Mahtva	B.A. Prog/Hons 1 st Year, 1 st sem Adhunik Bhartiya Bhasha Aur Sanpreshan	AECC 72052804 for BA prog. 72052803 For BA hons
Dec.	Theory	Unit 1 Snmpreshan Ki Prakriya Sanpreshan Ke Vibhinna Model Abhashik Sanpreshan	B.A. Prog/Hons 1 st Year, 1 st sem Adhunik Bhartiya Bhasha Aur Sanpreshan	AECC 72052804 for BA prog. 72052803 For BA hons

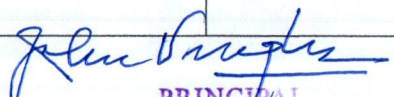
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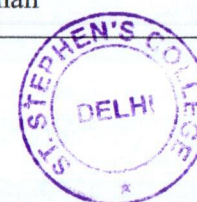




Name of the Faculty Member: Dr. Abhishek Mishra
Department: Hindi.
Year: 2020-21 (Jan-April)

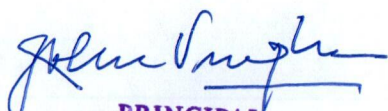
Month	Theory/Tutorials	Topics	Course	Paper code/ Name
January	Theory	Sanpreshan Ke Prakar	B.A. Prog/Hons 1 st Year, 1 st Sem; AECC – Adhunik Bhartiya Bhasha Aur Sanpreshan	AECC: 72052804 for BA prog; 72052803 For BA hons
	Theory & Tutorials	Gadya aur Padya Ka Tulnatmak Adhyayan , Gadya Ke Vibhinna Swaroop	B.A. Prog. 2 nd Year, IVth Sem. MIL Hindi Gadya Ka Uddbhav Aur Vikas	62051412
	Theory & Tutorials	Kala Vidha Ke Roop Men Cinema Aur Uske Siddhant	B.A. Prog 3 rd Year, VIth Sem GE: Hindi Cinema Aur Uska Adhyayan	62055634
February	Theory	Sanpreshan Ke Madhyam Ekalaap, Sanvaad, Saamuhik Kaarya Jansanchaar Madhyam	B.A. Prog/Hons 1 st Year, 1 st Sem; AECC – Adhunik Bhartiya Bhasha Aur Sanpreshan	AECC: 72052804 for BA prog; 72052803 For BA hons
	Theory & Tutorial	Premchand-Bhoodhee Kaaki, Bheeshm Sahnai –Cheef Ki Dawat ChndraDhar Sharma Guleri	B.A. Prog. 2 nd Year, IVth Sem. MIL Hindi Gadya Ka Uddbhav Aur Vikas	62051412
	Theory & Tutorial	Hindi Cinema Uddbhav Aur Vikas; Cinema Men Camera Ki Bhumika	B.A. Prog 3 rd Year, VIth Sem GE: Hindi Cinema Aur Uska Adhyayan	62055634
March	Theory	Vyaktitwa Aur Prabhavi Bhashik Sanpreshan	B.A. Prog/Hons 1 st Year, 1 st sem Adhunik Bhartiya Bhasha Aur Sanpreshan	AECC: 72052804 for BA prog; 72052803 For BA hons


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	Theory & Tutorial	Baalmukund Gupta – Mele Ka Oont Dharmveer Bharti - Thele Par Himalaya ; Harishankar Parsaayi – Sadaachaar Ka Taabeez	B.A. Prog. 2 nd Year, IVth Sem. MIL Hindi Gadya Ka Uddbhav Aur Vikas	62051412
	Theory & Tutorial	Unit 4 - Cinema Aur Takneek, Film Mother India	B.A. Prog 3 rd Year, VIth Sem GE:Hindi Cinema Aur Uska Adhyyan	62055634
April	Theory & Tutorial	Unit -4 Bhartendu Harischand – Andher Nagaree; Mahadevi Verma – Bbiya	B.A. Prog. 2 nd Year, IVth Sem. MIL Hindi Gadya Ka Uddbhav Aur Vikas	62051412
	Theory & Tutorial	Unit-4 Film Deewar , Mughal-E-Aazam, and PK	B.A. Prog 3 rd Year, VIth Sem , GE Hindi Cinema Aur Uska Adhyyan	62055634


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Urdu Department

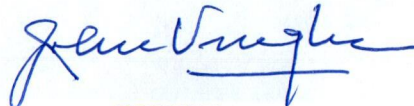
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Name of the Faculty Member: Dr. Shamim Ahmed
Department: Urdu & Persian
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Sawere Jo Kal Aankh Meri kuli by Pitrus Bukhari Ghazals By Hasrat Mohani	B A Programme I year	AECC Urdu B 72142802
August	Theory	Lajwanti by Bedi Ghazals By Fani Chand Aur Taare by Iqbal	B A Programme I year	AECC Urdu B 72142802
September	Theory	Qual E Faisal By Azad Naya Qanoon by Manto Toota hua Sitara by Sardar Jafri	B A Programme I year	AECC Urdu B 72142802
October	Theory	Ghazal By Majrooh Kisaan By Josh	B A Programme I year	AECC Urdu B 72142802
November	Theory	Qalandar By Qurrat	B A Programme I year	AECC Urdu B 72142802

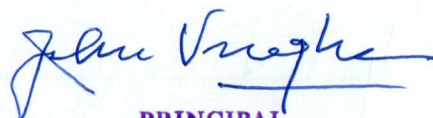

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Name of the Faculty Member: Dr. Shamim Ahmed
Department: Urdu & Persian
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	Rajinder Singh Bedi : Shakhsyat aur Sawaneh afsana nigari, Lajwanti	B A Programme III year	Study of Rajinder Singh Bedi 62145913
February	Theory	Lambi Ladki Babbal Apne Dukh Mujhe dedo	B A Programme III year	Study of Rajinder Singh Bedi 621459 13
March	Theory	Terminus se pare Hajjam Allahbad ke	B A Programme III year	Study of Rajinder Singh Bedi 62145913
April	Theory	Diwala Eucalyptus	B A Programme III year	Study of Rajinder Singh Bedi 62145913


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Chemistry Department

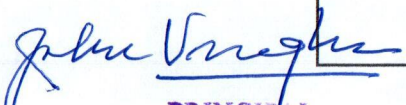
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Name of the Faculty Member: Shabnam Johry
Department: Chemistry
Year: 2020-21


Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory and Practicals	Amino acids, Peptides and their classification. α -Amino Acids – Synthesis 1.Acetylation of one of amines and phenols 2.Extraction of Caffeine from tea leaves	Chemistry Honours Semester-V 1.Chemistry Honours Semester-III 2.Chemistry Honours Semester-III	Chemistry - C XI: Organic Chemistry IV 1. C VI: Organic Chemistry II 2. SEC: Pharmaceutical Chemistry
August	Theory and Practicals	Zwitterions, pKa values, isoelectric point and electrophoresis; Study of peptides: determination of their primary structure-end group analysis. Synthesis of peptides using N-protecting, C-protecting and C-activating groups, Solid-phase synthesis. Study of the action of salivary amylase on starch under optimum conditions. Hydrolysis of esters.	Chemistry Honours Semester-V Chemistry Honours Semester-V 2.Chemistry Honours Semester-III	Chemistry - C XI: Organic Chemistry IV 1.Chemistry - C XI: Organic Chemistry IV 2.C VI: Organic Chemistry II
September	Theory and Practicals	Primary, secondary and tertiary structures of proteins, Denaturation of proteins.	Chemistry Honours Semester-V 1.Chemistry Honours	Chemistry - C XI: Organic Chemistry IV


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		<p>Introduction, classification and characteristics of enzymes. Salient features of active site of enzymes.</p> <p>Mechanism of enzyme action (taking chymotrypsin as an example), factors affecting enzyme action, coenzymes and cofactors (NAD,FAD), specificity of enzyme action (including stereospecificity)</p> <p>1.Saponification value of the given oil.</p> <p>2.Preparation of Aspirin.</p>	<p>Semester-V</p> <p>2. Chemistry Honours Semester-III</p>	<p>1.Chemistry - C XI: Organic Chemistry IV</p> <p>2. SEC: Pharmaceutical Chemistry</p>
October	Theory and Practicals	<p>Enzyme inhibitors and their importance. Introduction to oils and fats; common fatty acids present in oils and fats, Hydrogenation of fats and oils, Saponification value, acid value, iodine number. Reversion and rancidity.</p> <p>1.Preparation of S-Benzylisothiuronium salt of one each of water soluble and water insoluble acids.</p>	<p>Chemistry Honours Semester-V</p> <p>1. Chemistry Honours Semester-III</p>	<p>Chemistry - C XI: Organic Chemistry IV</p> <p>1.C VI: Organic Chemistry II</p>

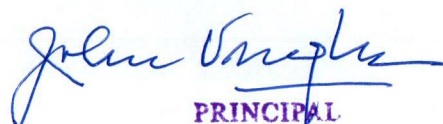

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Name of the Faculty Member: Shabnam Johry
Department: Chemistry
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory and Practicals	Aromatic Hydrocarbons, Alkyl halides 1. Qualitative analysis of unknown organic compounds containing monofunctional groups 2. Qualitative analysis of unknown organic compounds containing simple functional groups	BSc Program (with Chemistry) Semester-II Chemistry Honours Semester-VI Chemistry Honours Semester-IV	Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I C XIV: Organic Chemistry V C IX: Organic Chemistry III
February	Theory and Practicals	Aryl Halides, Alcohols, Diols 1. Qualitative analysis of unknown organic compounds containing monofunctional groups 2. Qualitative analysis of unknown organic compounds containing simple functional groups 3. Detection of extra elements.	BSc Program (with Chemistry) Semester-II Chemistry Honours Semester-VI Chemistry Honours Semester-IV Chemistry Honours Semester-II	Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I C XIV: Organic Chemistry V C IX: Organic Chemistry III C III: Organic Chemistry I


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March	Theory and Practicals	Phenols, Ethers 1. Qualitative analysis of unknown organic compounds containing monofunctional groups 2. Qualitative analysis of unknown organic compounds containing simple functional groups 3. Detection of extra elements.	BSc Program (with Chemistry) Semester-II Chemistry Honours Semester-VI Chemistry Honours Semester-IV Chemistry Honours Semester-II	Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I C XIV: Organic Chemistry V C IX: Organic Chemistry III C III: Organic Chemistry I
April	Theory and Practicals	Aldehydes and Ketones Qualitative analysis of unknown organic compounds containing bifunctional groups. Qualitative analysis of unknown organic compounds containing simple functional groups. Determination of boiling point of liquid compounds	BSc Prog (With Chemistry), Semester II Chemistry Honours Sem-VI Chemistry Honours Sem-IV Chemistry Honours, Sem II	Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I C XIV: Organic Chemistry V C IX: Organic Chemistry III C III: Organic Chemistry I

John Vaughan

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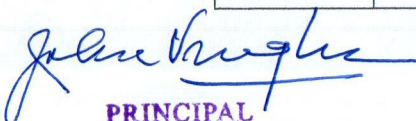




Name of the Faculty Member: **Dr. Vibha Sharma**

Department: **Chemistry** Year: **2020-2021 Odd Semester**

Month	Theory/ Practical	Topics	Course	Paper code/ Name
August	Theory	Introduction to Syllabus and reference books. Introduction to Analytical Chemistry. Nature and Role; Applications; Assignment ; Components of analytical Sciences; Steps involved in Analytical Chemistry; Steps involved in sampling; Separation Techniques -Solvent Extraction	B.Sc. Hons. Chemistry Semester V	DSE Analytical Methods in Chemistry; 32177904
August	Theory	Introduction to syllabus and references etc.; Electronic configuration of Transition elements; Electronic configuration for metal ions and anomalies.	B.Sc. Prog. with Chemistry Semester V	DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
	Practical	Introduction to syllabus. Review study on General Chemistry Laboratory Safety Rules; Introduction to titrimetry and various terms used in titrimetry.	B.Sc. Hons. Chemistry Semester I	LAB: Inorganic Chemistry-I: Atomic Structure & Chemical Bonding; 32171101
August	Practical	Introduction to Syllabus. Theory: Introduction, Basic laws of light, Beer-Lambert's law, Limitations, Spectrophotometry, Colorimetry - KMnO ₄ Colorimetry; pH meter, Instrument, types of electrodes calibration working.	B.Sc. Hons. Chemistry Semester V	LAB: DSE Analytical Methods in Chemistry, 32177904
August	Practical	Introduction to syllabus; Gravimetry - Introduction and various steps involved. Gravimetric estimation of ammonium aluminium sulphate solution gravimetrically	B.Sc. Prog. with Chemistry Semester V	LAB: DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
September	Theory	Efficiency of solvent extraction; single step and Multiple extraction ; Techniques of solvent extraction; Solid Phase extraction and Mechanism involved in extraction; Extraction by Chelation; Ion-pair formation. Separation of organic compounds from aqueous; non-aqueous media.	B.Sc. Hons. Chemistry Semester V	DSE Analytical Methods in Chemistry; 32177904
September	Theory	Characteristics properties of Transition elements and trends in some of the properties; Complex formation; Magnetic behaviour; Their reactivity	B.Sc. Prog. with	DSE Chemistry of d-block elements, Quantum


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		and Reducing nature; Stability of different oxidation states - Latimer diagram; Colour of Transition metal ions compounds.	Chemistry Semester V	Chemistry and Spectroscopy; 42177925
	Practical	Calibration and handling of glass apparatus. Preparation of Standard solution. Use of Analytical balance; Introduction to Titration techniques. Acid base titrations - Estimation of sodium carbonate solution; Acid-base Indicators; estimation of Na ₂ CO ₃ & NaOH; Selection of Indicator. Estimation of Mixture of alkali Assignments.	B.Sc. Hons. Chemistry Semester I	LAB: Inorganic Chemistry-I: Atomic Structure & Chemical Bonding; 32171101
September	Practical	pH of Soil Sample; Qualitative analysis of given soil sample for the presence of nitrate and phosphate ions. Strength of calcium and magnesium ions as Calcium carbonate in soil. Ascending paper chromatography for a mixture of metal ions Co(II) and Ni(II). Assignments; Paper chromatography - separation of amino acids	B.Sc. Hons. Chemistry Semester V	LAB: DSE Analytical Methods in Chemistry, 32177904
September	Practical	Gravimetric estimation of ammonium nickel sulphate solution Introduction to Complexometric titrations; Assignment	B.Sc. Prog. with Chemistry Semester V	LAB: DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
October	Theory	Separation of mixture of organic compounds from aqueous and non-aqueous media. Chromatograph; Principle and Efficiency Internal Assessment Test	B.Sc. Hons. Chemistry Semester V	DSE Analytical Methods in Chemistry; 32177904
October	Theory	Coordination Chemistry; Nomenclature; Rules to write the formulae; Assignment on Transition elements Internal Assessment Test	B.Sc. Prog. with Chemistry Semester V	DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
	Practical	Free alkali in given soap / detergent solution Redox titrations using KMnO ₄ . Quiz based assignment. Mohr's salt - KMnO ₄	B.Sc. Hons. Chemistry Semester I	LAB: Inorganic Chemistry-I: Atomic Structure & Chemical Bonding; 32171101
October	Practical	Estimation of total soluble salts content in the given soil sample. Paper chromatography To separate and identify the components of a given mixture of two metal ions Fe(III) and Al(III)	B.Sc. Hons. Chemistry Semester V	LAB: DSE Analytical Methods in Chemistry, 32177904

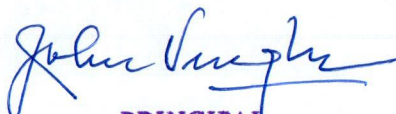


October	Practical	Estimation of the strength of zinc sulphate ($\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$) solution complexometric titration	B.Sc. Prog. with Chemistry Semester V	LAB: DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
November	Theory	Chromatography Efficiency; Mechanism involved in chromatography; Methods of development of chromatogram; Chromatography Separation process and efficiency; Qualitative and quantitative aspects of analysis	B.Sc. Hons. Chemistry Semester V	DSE Analytical Methods in Chemistry; 32177904
November	Theory	Assignment on Nomenclature; Naming of bridging ligands and bridged complexes. Isomerism; VBT; CFT; Question bank on Isomerism, VBT and CFT	B.Sc. Prog. with Chemistry Semester V	DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
	Practical	Oxalic acid & Sodium oxalate mixture - KMnO_4 titration. Assignment Redox titrations - $\text{K}_2\text{Cr}_2\text{O}_7$ using internal and external indicator	B.Sc. Hons. Chemistry Semester I	LAB: Inorganic Chemistry-I: Atomic Structure & Chemical Bonding; 32171101
November	Practical	Ion Exchange Chromatography - To separate given mixture of amino acids and a carboxylic acid; Viva voce questions Practical Written Examination	B.Sc. Hons. Chemistry Semester V	LAB: DSE Analytical Methods in Chemistry, 32177904
November	Practical	Written viva voce questions; Assignment Hardness of water sample by complexometric titration Composition of a complex in solution by Job's method.	B.Sc. Prog. with Chemistry Semester V	LAB: DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
	Practical	Written Practical Examination	B.Sc. Hons. Chemistry Semester I	LAB: Inorganic Chemistry-I: Atomic Structure & Chemical Bonding; 32171101
December	Theory	Lanthanides and Actinides Internal Assessment Test	B.Sc. Prog. with Chemistry Semester V	DSE Chemistry of d-block elements, Quantum Chemistry and Spectroscopy; 42177925
December	Practical	Viva voce questions; Final written practical examination	Same as Above	LAB: Same as Above



Name of the Faculty Member: **Dr. Vibha Sharma**
Department: **Chemistry** Year: **2020-2021 Even Semester**

Month	Theory/ Practical	Topics	Course	Paper code/ Name
January	Theory	Introduction to syllabus; reference books Coordination Chemistry – Introduction; Scope and Applications Werner's theory; Questions	B.Sc. Hons. Chemistry Semester IV	C-VIII Inorganic Chemistry- III: Coordination Chemistry, 32171401
	Theory	Introduction to syllabus and qualitative analysis All possible tests for dilute sulphuric acid; concentrated sulphuric acid and third category groups anions	B.Sc. Hons. Chemistry Semester VI	CC XIII Inorganic Chemistry IV: Organometallic Chemistry, 32171601
	Practical	Gravimetric Analysis – Introduction and steps involved; Handling of apparatus; Cleaning and weighing of sintered glass crucible Estimation of Al(III) by precipitating with oxine	B.Sc. Hons. Chemistry Semester IV	LAB: C-VIII Lab Inorganic Chemistry-III: Coordination Chemistry; 32171401
	Practical	Introduction to syllabus and qualitative analysis Known tests for dilute sulphuric acid; concentrated sulphuric acid and third category groups anions	B.Sc. Hons. Chemistry Semester VI	LAB: CC XIII Inorganic Chemistry IV: Organometallic Chemistry; 32171601
	Practical	Introduction to syllabus and qualitative analysis Known tests for dilute sulphuric acid; concentrated sulphuric acid and third category groups anions	B.Sc. Prog. with Chemistry Semester IV	LAB: CC IV Chemistry of s- and p- block elements, States of matter & Chemical Kinetics; 42174404
February	Theory	IUPAC nomenclature of coordination compounds; Isomerism; Stereochemistry of complexes with 4 and 6 coordination numbers. Bonding theories; Electronic structure of complexes and magnetic behaviour; Questions	B.Sc. Hons. Chemistry Semester IV	C-VIII Inorganic Chemistry- III: Coordination Chemistry, 32171401


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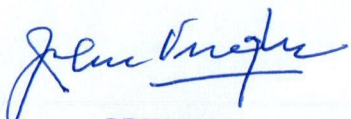




	Theory	Anion analysis scheme; Anions combination tests	B.Sc. Hons. Chemistry Semester VI	CC XIII Inorganic Chemistry IV: Organometallic Chemistry, 32171601
	Practical	Preparation of Potassium tris(oxalato)ferrate(III) Estimation of nickel (II); Estimation of iron; Estimation of copper as CuSCN	B.Sc. Hons. Chemistry Semester IV	LAB: C-VIII Lab Inorganic Chemistry-III: Coordination Chemistry; 32171401
	Practical	Anion analysis – mixture of six anions; Combination tests for various anions; Group 0 and I cation analysis	B.Sc. Hons. Chemistry Semester VI	LAB: CC XIII Inorganic Chemistry IV: Organometallic Chemistry; 32171601
	Practical	Anion analysis – mixture of six anions; Combination tests for various anions; Group 0 and I cation analysis	B.Sc. Prog. with Chemistry Semester IV	LAB: CC IV Chemistry of s- and p- block elements, States of matter & Chemical Kinetics; 42174404
March	Theory	Valence bond theory; electroneutrality principle and back bonding. Crystal field theory, measurement of 10 Dq (Δ_o), CFSE in weak and strong fields, pairing energies, factors affecting the magnitude of 10 Dq (Δ_o , Δ_t); Jahn-Teller theorem, square planar geometry; Questions	B.Sc. Hons. Chemistry Semester IV	C-VIII Inorganic Chemistry- III: Coordination Chemistry, 32171401
	Theory	Cations Group 0 – VI; Insoluble salt mixture analysis Dry tests for cations; Layer tests for halides	B.Sc. Hons. Chemistry Semester VI	CC XIII Inorganic Chemistry IV: Organometallic Chemistry, 32171601
	Practical	Preparations of Tetraamminecopper (II) sulphate, $[\text{Cu}(\text{NH}_3)_4]\text{SO}_4 \cdot \text{H}_2\text{O}$ Preparations of Acetylacetonate complexes of Cu(II) and Fe(III)	B.Sc. Hons. Chemistry Semester IV	LAB: C-VIII Lab Inorganic Chemistry-III: Coordination Chemistry; 32171401
	Practical	Anions and cations up to group II analysis; Cation analysis till group IV Salt Mixture Analysis for three anions and three cations	B.Sc. Hons. Chemistry Semester VI	LAB: CC XIII Inorganic Chemistry IV: Organometallic Chemistry; 32171601



	Practical	Anions and cations up to group II analysis; Cation analysis till group IV Salt Mixture Analysis for two anions and two cations	B.Sc. Prog. with Chemistry Semester IV	LAB: CC IV Chemistry of s- and p- block elements, States of matter & Chemical Kinetics; 42174404
April	Theory	Crystal field effects; LFT and MO Theory. Chelate effect, polynuclear complexes, Labile and inert complexes. Inorganic Reaction Mechanism - Introduction. Substitution reactions in square planar complexes, Trans-effect. Thermodynamic and Kinetic stability. Questions	B.Sc. Hons. Chemistry Semester IV	C-VIII Inorganic Chemistry-III: Coordination Chemistry, 32171401
	Theory	Solubility product and common ion effect; Anions and cation analysis – revision of scheme	B.Sc. Hons. Chemistry Semester VI	CC XIII Inorganic Chemistry IV: Organometallic Chemistry, 32171601
	Practical	Measurement of 10 Dq by spectrophotometric method ii. Verification of spectrochemical series. iii. Synthesis of ammine complexes of Ni(II) and its ligand exchange reactions by substitution method. May – Written practical examination	B.Sc. Hons. Chemistry Semester IV	LAB: C-VIII Lab Inorganic Chemistry-III: Coordination Chemistry; 32171401
	Practical	Salt mixture analysis; Insoluble salt mixture Final written practical examination	B.Sc. Hons. Chemistry Semester VI	LAB: CC XIII Inorganic Chemistry IV: Organometallic Chemistry; 32171601
	Practical	Salt mixture analysis Final written practical examination	B.Sc. Prog. with Chemistry Semester IV	LAB: CC IV Chemistry of s- and p- block elements, States of matter & Chemical Kinetics; 42174404



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Name of the Faculty Member: Dr. Jaspreet Kaur
Department: Chemistry. Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory	Phase Equilibrium	B.Sc (H) IIyr	PHYSICAL CHEMISTRY III
	Practical	Determination of critical solution temperature		
August	Theory	One-component and two-component systems	B.Sc (H) IIyr	PHYSICAL CHEMISTRY III
	Practical	Construction of the phase diagram using cooling curves		
September	Theory	Solutions	B.Sc (H) IIyr	PHYSICAL CHEMISTRY III
	Practical	Distribution of solute in immiscible solvents		
October	Theory	Surface Chemistry	B.Sc (H) IIyr	PHYSICAL CHEMISTRY III
	Practical	Study of equilibrium		


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Name of the Faculty Member: Dr. Jaspreet Kaur
Department: Chemistry. Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	Chemical Kinetics: Order and molecularity, rate laws, differential and integrated form of rate expressions	B.Sc (H) Ilyr	Conductance & Chemical Kinetics
	Practical	Determination of conductivity, molar conductivity, degree of dissociation and dissociation constant		
February	Theory	kinetics of complex reactions, Arrhenius equation	B.Sc (H) Ilyr	Conductance & Chemical Kinetics
	Practical	conductometric titrations		
March	Theory	theories of reaction rates, Lindemann mechanism	B.Sc (H) Ilyr	Conductance & Chemical Kinetics
	Practical	kinetics of Acid hydrolysis, Iodide-persulphate reaction, iodine clock reaction		
April	Theory	Catalysis	B.Sc (H) Ilyr	Conductance & Chemical Kinetics
	Practical	kinetics of Saponification of ethyl acetate, determine the degree of hydrolysis and hydrolysis constant		

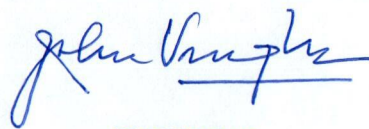
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Name of the Faculty Member: Dr. Jyotirmoy Maity
Department: Chemistry
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Pharmaceutical Chemistry (T,P)	Synthesis and application of medicines	IIC/ II PS	32173909
	Organic Chemistry (P)	Detection of functional groups	II PS	NA
	Green Chemistry (T,P)	Rules and examples of Green Chemistry	IIIC	32177908
	Environmental Studies (T)	Ecosystem, Biodiversity, Natural Resources, Pollution	I PS	72182801
August	Same as above			
September	Same as above			
October	Same as above			


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Name of the Faculty Member: Dr. Jyotirmoy Maity
Department: Chemistry
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Cosmetic Chemistry (T,P)	Preparation of cosmetics	IIC/III PS	32173910
	Organic Chemistry (T,P)	Heterocyclic Chem	IIC	32171402
	Polymer Chemistry (T,P)	Synthesis and application of polymers	IIIC	32177906
	Environmental Studies (T)	Ecosystem, Biodiversity, Natural Resources, Pollution	I Eco	72182801
February	Same as above			
March	Same as above			
April	Same as above			

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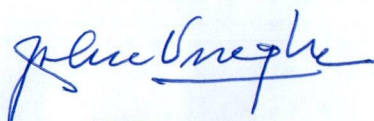


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Physics Department


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Name of the Faculty Member: Sanjay Kumar
Department: Physics
Year: 2020-21

Odd Semester	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July-Nov	Theory	All topics in the University CBCS BSc(H) Physics V Sem Syllabus for Solid State Physics were covered. Due to Covid lockdown classes were held online. Lecture notes on 13 topics totaling over 46,000 words were written and distributed to students. Nine problem-based assignments were also given and discussed.	BSc(H) Physics V Semester	Solid State Physics
July-Nov	Laboratory	CBCS BSc(H) Physics III Sem Technical Drawing Syllabus. Topics covered were (i) Projections of points, straight lines, plane figures and three-dimensional figures (ii) Sections and (iii) Development of Surfaces	BSc(H) III Semester	32223906 Technical Drawing SEC Paper
July -Nov	Laboratory	CBCS BSc(P) I Sem Physics Laboratory Syllabus. Classes were conducted online. Students were given online lectures on (i) Significant Figures and (ii) Errors and Uncertainty in experiments. Lecture notes for these were also given to students. Students were given instructions to prepare a simple pendulum at home and perform an experiment on it. Other experiments were done on simulations.	BSc(P) I Semester	Physics Laboratory (Mechanics)

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Name of the Faculty Member: Sanjay Kumar

Department: Physics

Year: 2020-21

Even Semester	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
April July 2021	Theory	All topics in the University CBCS Syllabus for Electricity and Magnetism for BSc(H) Physics II semester course was covered. 1. Classes were held online. 2. Lecture notes on 17 topic totaling 47,000 words were prepared and distributed to students. 3. Lectures were conducted with the help of Power Point presentations, which were distributed to students. 4. Nine problem-based assignments were given to students. Their solutions were also prepared and distributed.	BSc(H) Physics II Semester	BSc(H) Physics II Semester Electricity and Magnetism
Jan -April 2021	Laboratory	CBCS Computational Physics Syllabus. BSc(H) IV Semester	BSc(H) IV Semester	Computational Physics SEC
April –July 2021	Laboratory	CBCS BSc(P) II Sem Physics Laboratory Syllabus. 1. Laboratory classes were held online. 2. Students were given online lectures on all experiments. 3. Students performed experiments on simulations and submitted laboratory reports online. 4. Two quizzes and an end semester test was conducted to assess their progress and understanding.	BSc(P) II Semester	Physics Laboratory (Electricity and Mechanics)
Jan -April 2021	Laboratory	BSc(P) IV Semester Optics Laboratory Laboratory classes were held online. Students worked on simulations and submitted laboratory reports online. Live demonstrations of diffraction and interference experiments were given to students online.	BSc(P) IV Semester	BSc(P) IV Semester Optics Lab




Name of the Faculty Member: Abhinav Gupta
Department: Physics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
July	Theory: Mechanics Practicals: MP2 Computational Lab Quantum Mechanics Lab	Fundamentals of Dynamics: Newton's Laws, Variable mass systems, Dynamics of System of particles. Work and Energy: Work Energy Theorem, Conservative and non- conservative forces, Potential Energy. Interpolation: Newton, Laplace and Chebyshev Interpolation. Discretizing Schrodinger Equation. Solution to one-dimensional eigenvalue problems through matrix diagonalization.	BSc (H) Physics	
August	Theory: Mechanics Practicals: MP2 Lab QM Lab	Collisions: Elastic and Inelastic Collisions, CM and Lab frames. Rotational Dynamics: Angular momentum of a particle and system of particles. Torque. Principle of conservation of angular momentum. Fixed axis rotation. Solving first and second order Differential Equations. Time evolution problems through matrix diagonalization. QM Scattering.	BSc (H) Physics	
September	Theory: Mechanics Practicals: MP2 Lab QM Lab	Gravitation and Central Force Motion: Law of gravitation. Gravitational potential Energy. Motion of a particle under a central force field: Two-body problem. Kepler's Laws. Oscillations: Differential equation of driven, damped Harmonic Oscillator. Kinetic, Potential and Total Mechanical Energy. Transients, resonance and Quality Factor. Generating Special Functions. Legendre Polynomials. Solving three-dimensional eigenvalue problems through matrix diagonalization.	BSc (H) Physics	
October	Theory: Mechanics Practicals: MP2 Lab QM Lab	Non-Inertial Systems: Galilean transformations. Inertial and Non-inertial frames and fictitious forces. Uniformly rotating frame. Centrifugal and Coriolis Forces. Special Theory of Relativity: Michelson-Morley Experiment. Postulates of Special Theory of Relativity. Lorentz Transformations. Simultaneity, Length contraction, Time dilation. Relativistic transformation of velocity, acceleration, frequency and wave number. Mass-energy Equivalence. Relativistic Doppler effect. Relativistic Kinematics. Transformation of Energy and Momentum. Solutions of system of Linear Equations. Solving Eigenvalue Problems using the Shooting Method.	BSc (H) Physics	



Name of the Faculty Member: Abhinav Gupta
Department: Physics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
January	Theory: Statistical Mechanics Practicals: Statistical Mechanics Lab MP3 Lab	Classical Statistics. Macrostate, Microstate and Phase Space. Entropy and Thermodynamic Probability. Boltzmann Distribution, Partition Function. Applications to Ideal Gas. Two state systems and Negative Temperatures. Thermal equilibrium of a system of hard disks: approach to equilibrium, entropy, phase transitions, Maxwell Distribution. The Dirac Delta Function. Fourier Series.	BSc (H) Physics	
February	Theory: Statistical Mechanics Practicals: Statistical Mechanics Lab MP3 Lab	Bose-Einstein Statistics. Bose-Einstein Distribution, Thermodynamic functions of strongly degenerate Bose gas. Bose Einstein Condensation. Radiation as a Bose Gas. The Lennard Jones Gas. The Verlet Algorithm, conservation of energy. The method of least squares.	BSc (H) Physics	
March	Theory: Statistical Mechanics Practicals: Statistical Mechanics Lab MP3 Lab	Fermi-Dirac Statistics. Fermi-Dirac Distribution. Thermodynamic Functions of a strongly degenerate Fermi Gas. Electrons in a metal. White Dwarf Stars and the Chandrasekhar Limit. Equilibrium Distributions for a Lennard Jones system. The Maxwell Speed Distribution. Partial Differential Equations. The Wave Equation, Heat Conduction Equation, Laplace's Equation.	BSc (H) Physics	
April	Theory: Statistical Mechanics Practicals: Statistical Mechanics Lab MP3 Lab	Theory of Radiation. Properties of Thermal Radiation. Stefan-Boltzmann Law. Wien's Law. Saha's Ionization Potential. Black Body radiation and Planck's Law. Phase transitions in a Lennard Jones system. Fast Fourier Transform.	BSc (H) Physics	


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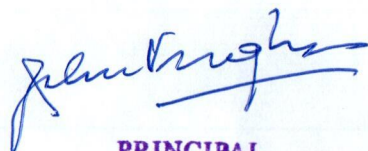
Name of the Faculty Member: Dr. Annu Malhotra

Department: Physics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
July	Theory	Zeroth and First Law of Thermodynamics: Extensive and intensive Thermodynamic Variables, Thermodynamic Equilibrium, Zeroth Law of Thermodynamics & Concept of Temperature, Concept of Work & Heat, State Functions, First Law of Thermodynamics and its differential form, Internal Energy, First Law & various processes, Applications of First Law: General Relation between CP and CV, Work Done during Isothermal and Adiabatic Processes, Compressibility and Expansion Co-efficient	B.Sc. (Hons) Physics Semester III	PHYSICS-C VI/ THERMAL PHYSICS
August	Theory	Second Law of Thermodynamics: Reversible and Irreversible process with examples. Conversion of Work into Heat and Heat into Work. Heat Engines. Carnot's Cycle, Carnot engine & efficiency. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Carnot's Theorem. Applications of Second Law of Thermodynamics: Thermodynamic Scale of Temperature and its Equivalence to Perfect Gas Scale. Entropy: Concept of Entropy, Clausius Theorem. Clausius Inequality, Second Law of Thermodynamics in terms of Entropy. Entropy of a perfect gas. Principle of Increase of Entropy. Entropy Changes in Reversible and Irreversible processes with examples. Entropy of the Universe. Entropy Changes in Reversible and Irreversible Processes. Principle of Increase of Entropy. Temperature-Entropy diagrams for Carnot's Cycle. Third Law of Thermodynamics. Unattainability of Absolute Zero.	B.Sc. (Hons) Physics Semester III	PHYSICS-C VI/ THERMAL PHYSICS
September	Theory	Thermodynamic Potentials: Thermodynamic Potentials: Internal Energy, Enthalpy, Helmholtz Free Energy, Gibb's Free Energy. Their Definitions, Properties and Applications. Magnetic Work, Cooling due to adiabatic demagnetization, First and second order Phase Transitions with examples, Clausius Clapeyron Equation and Ehrenfest equations Maxwell's Thermodynamic Relations: Derivation of Maxwell's	B.Sc. (Hons) Physics Semester III	PHYSICS-C VI/ THERMAL PHYSICS



		thermodynamic Relations and their applications, Maxwell's Relations: (1) Clausius Clapeyron equation, (2) Value of $C_p - C_v$, (3) Tds Equations, (4) Energy equations. Kinetic Theory of Gases Distribution of Velocities: Maxwell-Boltzmann Law of Distribution of Velocities in an Ideal Gas and its Experimental Verification		
October/ November	Theory	Mean, RMS and Most Probable Speeds. Degrees of Freedom. Law of Equipartition of Energy (No proof required). Specific heats of Gases Molecular Collisions: Mean Free Path. Collision Probability. Estimation of Mean Free Path. Transport Phenomenon in Ideal Gases: (1) Viscosity, (2) Thermal Conductivity and (3) Diffusion. Brownian Motion and its Significance. Real Gases: Behavior of Real Gases: Deviations from the Ideal Gas Equation. Andrew's Experiments on CO ₂ Gas. Virial Equation. Critical Constants. Continuity of Liquid and Gaseous State. Vapour and Gas. Boyle Temperature. van der Waal's Equation of State for Real Gases. Values of Critical Constants. Law of Corresponding States. Comparison with Experimental Curves. p-V Diagrams. Free Adiabatic Expansion of a Perfect Gas. Joule-Thomson Porous Plug Experiment. Joule-Thomson Effect for Real and van der Waal Gases. Temperature of Inversion. Joule-Thomson Cooling.	B.Sc. (Hons) Physics Semester III	PHYSICS-C VI/ THERMAL PHYSICS


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Name of the Faculty Member: Dr. Annu Malhotra
Department: Physics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
January	Theory	Complex Analysis: Brief Revision of Complex Numbers and their Graphical Representation. Euler's formula, De Moivre's theorem, Roots of Complex Numbers. Functions of Complex Variables. Analyticity and Cauchy-Riemann Conditions. Examples of analytic functions. Singular functions: poles and branch points, order of singularity, branch cuts.	B.Sc. (Hons) Physics Semester IV	PHYSICS-VIII/ MATHEMATICAL PHYSICS-III
February	Theory	Integration of a function of a complex variable. Cauchy's Inequality. Cauchy's Integral formula. Simply and multiply connected region. Laurent and Taylor's expansion. Residues and Residue Theorem. Application in solving Definite Integrals. Integrals Transforms: 25 Fourier Transforms: Fourier Integral theorem.	B.Sc. (Hons) Physics Semester IV	PHYSICS-VIII/ MATHEMATICAL PHYSICS-III
March	Theory	Fourier Transform. Examples. Fourier transform of trigonometric, Gaussian, finite wave train and other functions. Representation of Dirac delta function as a Fourier Integral. Fourier transform of derivatives, Inverse Fourier transform, Convolution theorem. Properties of Fourier transforms (translation, change of scale, complex conjugation, etc.). One dimensional Wave Equations, Dirac delta function, definition and properties.	B.Sc. (Hons) Physics Semester IV	PHYSICS-VIII/ MATHEMATICAL PHYSICS-III
April	Theory	Laplace Transforms: Laplace Transform (LT) of Elementary functions. Properties of LTs: Change of Scale Theorem, Shifting Theorem. LTs of 1st and 2nd order Derivatives and Integrals of Functions, Derivatives and Integrals of LTs. LT of Unit Step function, Dirac Delta function, Periodic Functions. Convolution Theorem. Inverse LT. Application of Laplace Transforms to 2nd order Differential Equations: Coupled differential equations of 1st order. Solution of heat flow along semi infinite bar using Laplace transform.	B.Sc. (Hons) Physics Semester IV	PHYSICS-VIII/ MATHEMATICAL PHYSICS-III

Annu Malhotra
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Name of Faculty Member: Dr. Rekha
Department: Physics. Year: 2020-21

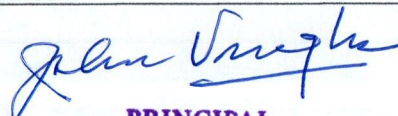
Month	Theory/ Practical	Topics	Course	Paper Name
July- August	Theory	<p>Introduction to Thermodynamics</p> <p>Zeroth and First Law of Thermodynamics: Extensive and intensive Thermodynamic Variables, Thermodynamic Equilibrium, Zeroth Law of Thermodynamics & Concept of Temperature, Concept of Work & Heat, State Functions, First Law of Thermodynamics and its differential form, Internal Energy, First Law & various processes, Applications of First Law: General Relation between CP and CV, Work Done during Isothermal and Adiabatic Processes, Compressibility and Expansion Co-efficient.</p> <p>Second Law of Thermodynamics: Reversible and Irreversible process with examples. Conversion of Work into Heat and Heat into Work. Heat Engines. Carnot's Cycle, Carnot engine & efficiency. Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their Equivalence. Carnot's Theorem. Applications of Second Law of Thermodynamics: Thermodynamic Scale of Temperature and its Equivalence to Perfect Gas Scale.</p>	B.Sc. Physics Hons. Sem- III	Physics- CC-VI Thermal Physics
Septemb er	Theory	<p>Entropy: Concept of Entropy, Clausius Theorem. Clausius Inequality, Second Law of Thermodynamics in terms of Entropy. Entropy of a perfect gas. Principle of Increase of Entropy. Entropy Changes in Reversible and Irreversible processes with examples.</p> <p>Entropy of the Universe. Entropy Changes in Reversible and Irreversible Processes. Principle of Increase of Entropy. Temperature-Entropy diagrams for Carnot's Cycle. Third Law of Thermodynamics. Unattainability of Absolute Zero.</p> <p>Thermodynamic Potentials: Thermodynamic Potentials: Internal Energy, Enthalpy, Helmholtz Free Energy, Gibb's Free Energy. Their Definitions, Properties and Applications. Magnetic Work, Cooling due to adiabatic demagnetization, First and second order Phase Transitions with examples, Clausius Clapeyron Equation and Ehrenfest equations.</p>	B.Sc. Physics Hons. Sem- III	Physics- CC-VI Thermal Physics
October	Theory	<p>Maxwell's Thermodynamic Relations: Derivation of Maxwell's thermodynamic Relations and their applications, Maxwell's Relations: (1) Clausius Clapeyron equation, (2) Value of $C_p - C_v$, (3) Tds Equations, (4) Energy equations.</p>	B.Sc. Physics Hons. Sem- III	Physics- CC-VI

Dr. Rekha
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		Kinetic Theory of Gases Distribution of Velocities: Maxwell-Boltzmann Law of Distribution of Velocities in an Ideal Gas and its Experimental Verification. Mean, RMS and Most Probable Speeds. Degrees of Freedom. Law of Equipartition of Energy. Specific heats of Gases.		Thermal Physics
November	Theory	Molecular Collisions: Mean Free Path. Collision Probability. Estimation of Mean Free Path. Transport Phenomenon in Ideal Gases: (1) Viscosity, (2) Thermal Conductivity and (3) Diffusion. Brownian Motion and its Significance. Real Gases: Behavior of Real Gases: Deviations from the Ideal Gas Equation. Andrew's Experiments on CO ₂ Gas. Virial Equation. Critical Constants. Continuity of Liquid and Gaseous State. Vapour and Gas. Boyle Temperature. van der Waal's Equation of State for Real Gases. Values of Critical Constants. Law of Corresponding States. Comparison with Experimental Curves. p-V Diagrams. Free Adiabatic Expansion of a Perfect Gas. Joule-Thomson Porous Plug Experiment. Joule-Thomson Effect for Real and van der Waal Gases. Temperature of Inversion. Joule-Thomson Cooling.	B.Sc. Physics Hons. Sem-III	Physics-CC-VI Thermal Physics
July-August	Theory	Introduction: Fundamentals of Engineering design, design process and sketching: Scales and dimensioning, Designing to Standards (ISO Norm Elements/ISI), Engineering Curves: Parabola, hyperbola, ellipse and spiral.	B.Sc. Physics Hons. And B.Sc. Prog. Sem-III	Physics SEC Technical Drawing
September	Theory	Projections: Principles of projections, Orthographic projections: straight lines, planes and solids.	B.Sc. Physics Hons. And B.Sc. Prog. Sem-III	Same as above
October	Theory	Development of surfaces of right and oblique solids. Section of solids. Intersection and Interpenetration of solids. Isometric and Oblique parallel projections of solids. CAD Drawing: Introduction to CAD and Auto CAD, precision drawing and drawing aids, Geometric shapes, Demonstrating CAD specific skills (graphical user interface, create, retrieve, edit, and use symbol libraries). Use of Inquiry commands to extract drawing data. Control entity properties.	B.Sc. Physics Hons. And B.Sc. Prog. Sem-III	Same as above


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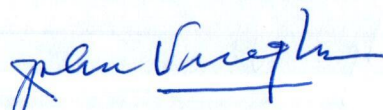


November	Theory	Demonstrating basic skills to produce 2-D drawings. Annotating in Auto CAD with text and hatching, layers, templates and design centre, advanced plotting (layouts, viewports), office standards, dimensioning, internet and collaboration, Blocks, Drafting symbols, attributes, extracting data. Basic printing and editing tools, plot/print drawing to appropriate scale. Computer Aided Design and Prototyping: 3D modeling with AutoCAD (surfaces and solids), 3D modeling with Sketchup, 3D designs, Assembly: Model Editing; Lattice and surface optimization; 2D and 3D packing algorithms, Additive Manufacturing Ready Model Creation (3D printing), Technical drafting and Documentation.	B.Sc. Physics Hons. And B.Sc. Prog. Sem-III	Same as above
July-November	Practical	Practical based on drawing 2D, 3D curves, and orthographic projections using manual drafter and AutoCAD software.	B.Sc. Physics Hons. And B.Sc. Prog. Sem-III	Same as above
July-November	Practical	Section-A: Digital Circuits Hardware design/Verilog Design 1. To design a combinational logic system for a specified Truth Table. (a) To convert Boolean expression into logic circuit & design it using logic gate ICs (b) To minimize a given logic circuit. 2. Half Adder, Full Adder and 4-bit binary Adder. 3. Half Subtractor, Full Subtractor, Adder-Subtractor using Full Adder I.C. 4. To build Flip-Flop (RS, Clocked RS, D-type and JK) circuits using NAND gates. 5. To build JK Master-slave flip-flop using Flip-Flop ICs 6. To build a 4-bit Counter using D-type/JK Flip-Flop ICs and study timing diagram. 7. To make a 4-bit Shift Register (serial and parallel) using D-type/JK Flip-Flop ICs. 8. To measure (a) Voltage, and (b) Time period of a periodic waveform using CRO and to design an astable multivibrator of given specifications using 555 Timer. 9. To design a monostable multivibrator of given specifications using 555 Timer. Section-B: Programs using 8085 Microprocessor: 1. Addition and subtraction of numbers using direct addressing mode 2. Addition and subtraction of numbers using indirect addressing mode 3. Handling of 16-bit Numbers.	B.Sc. Physics Hons. Sem-III	Physics Practical sCC-VII: Digital Systems and Applications



Name of Faculty Member: Dr. Rekha
Department: Physics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
January	Theory	Superposition of Two Collinear Harmonic oscillations: Simple harmonic motion (SHM). Linearity and Superposition Principle. (1) Oscillations having equal frequencies and (2) Oscillations having different frequencies (Beats). Superposition of Two Perpendicular Harmonic Oscillations: Graphical and Analytical Methods. Lissajous Figures (1:1 and 1:2) and their uses. Waves Motion- General: Transverse waves on a string. Travelling and standing waves on a string. Normal Modes of a string. Group velocity, Phase velocity. Plane waves. Spherical waves, Wave intensity.	B.Sc. Prog. Sem-IV	Physics CC-IVA Waves and Optics
February	Theory	Sound: Sound waves, production and properties. Intensity and loudness of sound. Decibels. Intensity levels. musical notes. musical scale. Acoustics of buildings (General idea). Wave Optics: Electromagnetic nature of light. Definition and Properties of wave front. Huygens Principle. Interference: Interference: Division of amplitude and division of wavefront. Young's Double Slit experiment. Lloyd's Mirror & Fresnel's Biprism. Phase change on reflection: Stokes' treatment.	B.Sc. Prog. Sem-IV	Physics CC-IVA Waves and Optics
March	Theory	Interference in Thin Films: parallel and wedge-shaped films. Fringes of equal inclination (Haidinger Fringes); Fringes of equal thickness (Fizeau Fringes). Newton's Rings: measurement of wavelength and refractive index. Michelson's Interferometer: Construction and working. Idea of form of fringes, Determination of wavelength, Wavelength difference, Refractive index, and Visibility of fringes. Diffraction: Fraunhofer diffraction: Single slit; Double Slit. Multiple slits	B.Sc. Prog. Sem-IV	Physics CC-IVA Waves and Optics
April	Theory	Diffraction grating. Fresnel Diffraction: Half-period zones. Zone plate. Fresnel Diffraction pattern of a straight edge, a slit and a wire using half-period zone analysis. Polarization: Transverse nature of light waves. Plane polarized light – production and analysis. Circular and elliptical polarization.	B.Sc. Prog. Sem-IV	Physics CC-IVA Waves and Optics


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January-April	Practical	<ol style="list-style-type: none"> 1. Synthesis of metal nanoparticles by chemical route. 2. Synthesis of semiconductor nanoparticles. 3. Surface Plasmon study of metal nanoparticles by UV-Visible spectrophotometer. 4. XRD pattern of nanomaterials and estimation of particle size. 5. To study the effect of size on color of nanomaterials. 6. Fabricate a thin film of nanoparticles by spin coating (or chemical route) and study transmittance spectra in UV-Visible region. 7. Prepare a thin film capacitor and measure capacitance as a function of temperature or frequency. 8. Fabricate a PN diode by diffusing Al over the surface of N-type Si and study its V-I characteristic. 	B.Sc. Physics Hons. Sem-VI	Physics Practical-DSE-Nanomaterials and applications
January-April	Practical	<ol style="list-style-type: none"> 1. Photo-electric effect: photo current versus intensity and wavelength of light; maximum energy of photo-electrons versus frequency of light. 2. To determine the Planck's constant using LEDs of at least 4 different colours. 3. To determine the wavelength of H-alpha emission line of Hydrogen atom. 4. To determine the ionization potential of mercury. 5. To determine the absorption lines in the rotational spectrum of Iodine vapour. 6. To determine the value of e/m by (a) Magnetic focusing or (b) Bar magnet. 7. To show the tunneling effect in tunnel diode using I-V characteristics. 8. To determine the wavelength of laser source using diffraction of single slit. 9. To determine the wavelength of laser source using diffraction of double slits. 	B.Sc. Physics Hons. Sem-IV	Physics Lab- CC-IX Elements of Modern Physics
January-April	Practical	<ol style="list-style-type: none"> 1. To verify the law of Malus for plane polarized light. 2. To determine the specific rotation of sugar solution using Polarimeter. 3. To determine refractive index of liquid using hollow prism. 4. To determine the wavelength and velocity of ultrasonic waves in a liquid (Kerosene Oil, Xylene, etc.) by studying the diffraction through ultrasonic grating. 5. To determine the refractive index of liquid by total internal reflection using Wollaston's air-film. 6. To verify the Stefan's law of radiation and to determine Stefan's constant. 	B.Sc. Physics Hons. Sem-VI	Physics Practical-CC XIII Electromagnetic Theory

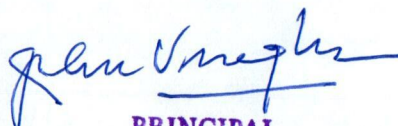


Name of Faculty member: Shruti

Department: Physics

Year: 2020-21

Month	Theory/ Practicals/ Tutorials	Topics	Course	Paper Code/Name
August	Theory & Practical	First order Differential equation Euler, modified Euler methods	B.Sc(H) II Phys	PHYSICS-C V: MATHEMATICAL PHYSICS-II
August	Theory/ Tutorial	General Properties of Nuclei, Nuclear Models.	B.Sc(H) III	Nuclear and Particle Physics
August	Practical	Motion of Spring and calculate (a) Spring constant, (b) Moment of Inertia of a Flywheel, Bar Pendulum, Kater's Pendulum, Random error	B.Sc(P) I	Mechanics: Lab
September	Theory & Practical	RungeKutta (RK) second and Fourth order methods Second order differential equation.	B.Sc(H) Phys	PHYSICS-C V: MATHEMATICAL PHYSICS-II
September	Theory/ Tutorial	Radioactivity decay, Nuclear Reactions:	B.Sc(H) III	Nuclear and Particle Physics


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September	Practical	Motion of Spring and calculate (a)Spring constant, (b) Moment of Inertia of a Flywheel,Bar Pendulum,Kater's Pendulum, Random error	B.Sc(P) I	Mechanics:Lab
October	Theory & Practical	Solution of Linear system of equations by Gauss elimination method and Gauss Seidal method.	B.Sc(H) Phys	PHYSICS-C V: MATHEMATI CAL PHYSICS-II
October	Theory/ Tutorial	Interaction of Nuclear Radiation withmatter,Detector for Nuclear Radiations.	B.Sc(H) III	Nuclear and Particle Physics
October	Practical	Motion of Spring and calculate (a)Spring constant, (b) Moment of Inertia of a Flywheel,Bar Pendulum,Kater's Pendulum, Random error	B.Sc(P) I	Mechanics:Lab
November	Theory & Practical	Diagonalisation of matrices,Inverse of a matrix.	B.Sc(H) Phys	PHYSICS-C V: MATHEMATI CAL PHYSICS-II
November	Theory/ Tutorial	Particle Accelerators,Particlephysics.	B.Sc(H) III	Nuclear and Particle Physics
November	Practical	Motion of Spring and calculate (a)Spring constant, (b) Moment of Inertia of a Flywheel,Bar Pendulum,Kater's Pendulum, Random error	B.Sc(P) I	Mechanics:Lab

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Name of Faculty member: Shruti
Department: Physics
Year: 2020-21

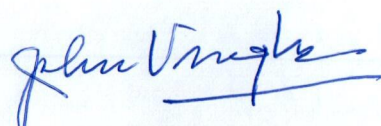
Month	Theory/ Practicals/ Tutorials	Topics	Course	Paper Code/Name
January	Theory/ Tutorial	General Properties of Nuclei, Nuclear Models.	B.Sc(P) III	Nuclear and Particle Physics
January	Practical	Carey Foster' bridge, Response curve of a Series LCR circuit. Circuit analysis, RC circuit. Verify Thevenin theorem.	B.Sc(H) I	Electricity and Magnetism :Lab
January	Practical	least square fitting	B.Sc(H) II	PHYSICS-VIII: MATHEMATIC ALPHYSICS-III
February	Theory/ Tutorial	Radioactivity decay, Nuclear Reactions:	B.Sc(P) III	Nuclear and Particle Physics
February	Practical	Carey Foster' bridge, Response curve of a Series LCR circuit. Circuit analysis, RC circuit. Verify Thevenin theorem.	B.Sc(H) I	Electricity and Magnetism :Lab
February	Practical	least square fitting	B.Sc(H) II	PHYSICS-VIII: MATHEMATIC ALPHYSICS-III
March	Theory/ Tutorial	Interaction of Nuclear Radiation with matter, Detector for Nuclear Radiations.	B.Sc(P) III	Nuclear and Particle Physics

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March	Practical	Carey Foster' bridge, Response curve of a Series LCR circuit. Circuitanalysis, RC circuit. Verify Thevenin theorem.	B.Sc(H) I	Electricity and Magnetism :Lab
March	Practical	Partial Differential Equation	B.Sc(H) II	PHYSICS-VIII: MATHEMATIC ALPHYSICS-III
April	Theory/ Tutorial	Particle Accelerators,Particlephysics.	B.Sc(P) III	Nuclear and Particle Physics
April	Practical	Carey Foster's Bridge,Anderson's bridge.Verify the Thevenin Theorems ,Maximum power transfer theorems,response curve of a SeriesLCR circuit,charge sensitivity, currentsensitivity & CDR of Ballistic Galvanometer	B.Sc(H) I	Electricity and Magnetism :Lab
April	Practical	Partial Differential Equation	B.Sc(H) II	PHYSICS-VIII: MATHEMATIC ALPHYSICS-III


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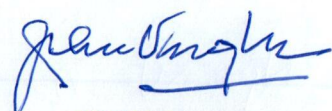
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Mathematics Department


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Name of Faculty Member: Nandita Narain
Department: Mathematics
Year: 2020-21

Month	Course	Paper Code/Name	Theory Covered	Tutorials
July 20 th -31 st	BSc(H) Maths Sem3	Group Theory 1	Sets, Relations, Functions, Operations, Semigroups, Groups, Hereditary properties, Subgroups, Examples, R, C, Integers modulo n,	1: Uniqueness of Identity, inverse, shoes and socs prop, cancellation laws, invertible elements of a semigroup from a group etc Operation such as $a*b = a+b+ab$
August			Functions from a non-empty set to a Group/ semigroup under pointwise operation and applications such as R^2 , R^n , R^N . Real valued Functions on $[a,b]$, Functions from a non-empty set to itself under composite. Permutation Groups, S_3 , Quaternions, Isometries of R^3 , Translations, Rotations, Groups of Symmetry for line segment, square, triangle, etc D_n Subgroups, 3step, 2step, 1 step criteria, closure criteria for finite subset, Union and Intersection of subgroups	2. Conditions under which semigroups are groups 3. Groups of order 4, exercises on groups of symmetry from Gallian
September			HK subgroup iff $HK=KH$, Centraliser of element, subset, subgroup, Normaliser of subset, subgroup, $Z(G)$, Subgroup generated by non-empty set, Cyclic Subgroup $\langle a \rangle$, Every Subgroup of Cyclic Group is cyclic, Order of element, every element of finite group is of finite order, $a^n=e \Rightarrow o(a) \mid n$, order of conjugate, $o(ab)=o(ba)$, $o\langle a \rangle = o(a)$, Lagrange's Thm for cyclic groups and converse, Generators of Cyclic Groups, No of elements of order m, Properties of Left and Right Cosets, Partition Theorem, Lagrange's Theorem, $a^{o(G)}=e$, Fermat's Little	4. Exercises on Subgroups, Cyclic groups, Lagrange's Theorem from Gallian



			<p>Theorem, 1-1 corresp between Left and Right Cosets, Index of Subgroup in Group, Groups with Non Trivial Subgroups, Prime Order=> No NTS=> Cyclic. Infinite=> NTS. Finite, non-prime=> cyclic.</p> <p>Normal subgroups, Characterisations of Normality, Subgroups of Index 2 are normal, Examples from S3, D4, Q8, Quotient Group, Indices and Order in Quotient Group,</p>	
October			<p>Intersection and Product of Normal Subgroups, Homomorphisms, Examples including limits of sequences, Basic properties such as $f(e)=e'$, $f(a^{-1})=f(a)^{-1}$, Homomorphic Image of subgroup and normal subgroup, preservation of abelian, cyclic, $o(f(a)) \mid o(a)$, Kernel, Homom is 1-1 iff $K=\{e\}$, Isomorphism, Natural homomorphism, First Isomorphism Theorem and Converse, Second Isomorphism Theorem, $G/N \cong G/M/N/M$, $G/N \cong G'/N'$, 1-1 correspondence between normal subgroups of G' and those of G containing K. "Isomorphic to" as an equivalence relation, Abstract Groups, Infinite Cyclic Groups isomorphic to \mathbb{Z}, Finite cyclic groups to \mathbb{Z}_n. Examples of isomorphic and non-isomorphic groups.</p> <p>Permutations of non-empty set X, $X \sim Y \Rightarrow S_X \sim S_Y$</p>	5. Exercises from Normal Subgroups, Homomorphisms and Isomorphisms from Gallian
November			<p>Cayley's Theorem and its extension to G/H, S_n, Cycles in S_n, Order of a cycle, Disjoint cycles commute, product of disjoint cycles is not a cycle, order of product of disjoint cycles, every cycle is product of transposition, Disjoint Permutations, Decomposition Theorem, Order of Permutation, Permutation as product of transpositions.</p> <p>Inversion and Parity of a permutation, Parity Lemma Parity of product is congruent to sum of parities mod 2, Even and Odd permutations defined through parity, Parity of a transposition, Permutation is even iff it is a product of even number of transposition, "Always even – always odd" theorem. Orbits and Stabilisers, Orbit-Stabiliser Theorem, Direct Products</p>	6. Exercises on Permutation Groups and Direct Products from Gallian

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Name of Faculty Member: Nandita Narain
Department: Mathematics
Year: 2020-21


Month	Course	Paper Code/Name	Theory	Tutorials
January	BSc(H) Mathematics Sem 2	Riemann Integral	Prerequisites Sup & Inf, Continuity etc Definition of Integrability with motivation Examples Constant Fn, Dirichlet's, Step function Example $f(x) = x$ used for motivation for Pn method Motivation for Lower Int \leq Upper Integral Refinement Theorem Lower In $<$ Upper Int and Applications, Pn- Method Riemann's Condition and Applications Pn Cor to RC and Application, Mesh of P Darboux Condn, Darboux Theorem Darboux Lemma, Application of DT	1. Variations of problems done in class. 2. Applications of Pn Method 3. Applications of Riemann's Condition
February			Alg of Int, $f+g$ kf, f^2, fg $f/g, f $ $\text{Max}\{f, g\}$, Additivity, Intro to Order Pres Composite, Search for Counter Ex, Thomaes' Fn Test No 2 (Darboux Condn and Alg of Int) Order Preservation, Lower Int preserves Strict Order not preserved by Lower Int, Variation of Thomaes Fn Strict Order Preserved by Continuous Fn, Defn of $S(P, f)$ $S(P, f)$ Theorem	4. Algebra of Lower and Upper Integrals 5. Order Preservation by Lower and Upper Integrals 6. Composite of two Integrable fns need not be integrable

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			Cauchy Condition of $S(P, f)$ Monotonic, Continuous \Rightarrow Int	
March			Test no 3(Order Preservation, $S(P, f)$) Bdd and Finite discontinuities \Rightarrow int Bounded, $d(S)$ finite \Rightarrow int, bdd, piece-wise mon \Rightarrow int piece-wise cont \Rightarrow int Composite of Continuous and Int fn Composite of Continuous and Int fn (Contd), Defn of Fa. Examples of Fa, Thm Fa is cont f cont \Rightarrow Fa derivable, Cont \Rightarrow primitive, but not conversely primitive does not imply int, nor conversely FTOIC First Form	7.Applications of C-Lemma,
April			FTOIC Second Form, Int by Parts Method of Substitution, First MVT Generalised First MVT, Int of f and $f^{\wedge}-1$ Improper Integrals I, p Integral Absolute Convergence, BCT, LCT of Impr Int Type I, Beta Function, Impr Int of Type 2, p-int, BCT, LCT Mixed impr Int, Gamma Function Conditionally cgt Int, Int $\sin x/x$ Int $\sin x/x$ is not abs cgt Strict Positivity and At least one pt of continuity, Power Series Unif Cgnce, Sum Fn Cont, Der and int Abel's Lemma and Applications	8. Applications of FTOIC from Ross. 9. Problems on Improper Integrals from Ghorpade and Limaye


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Name of the Faculty member: Ms. Archana Chopra Department: Mathematics						
Year: 2020-21						
Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name		
July	Theory	Equivalence relations, Functions, Composition of functions.	B.Sc(H) Mathematics 1st Sem	Algebra 32351102		
		Definition of the limit, Sequential criterion for limits, Criterion for non-existence of limit.	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351301		
	Tutorial	Discussion on limits	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351302		
August	Theory	Invertibility and inverse of functions, One-to-one correspondence and the cardinality of a set.	B.Sc(H) Mathematics 1st Sem	Algebra 32351102		
		Algebra of limits of functions with illustrations and examples, Squeeze theorem. Definition and illustration of the concepts of one-sided limits, Infinite limits and limits at infinity. Definitions of continuity at a point and on a set, Sequential criterion for continuity, Algebra of continuous functions, Composition of continuous functions.	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351301		
	Tutorial	Doubts discussion and Exercise Questions	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351302		
September	Theory	The Euclidean algorithm. Well ordering principle, The division algorithm in \mathbb{Z} .	B.Sc(H) Mathematics 1st Sem	Algebra 32351102		
		Various properties of continuous functions defined on an interval, viz., Boundedness theorem, Maximum-minimum theorem, Statement of the location of roots theorem, Intermediate value theorem and the preservation of interval theorem. Definition of uniform continuity, Illustration of non-uniform continuity criteria, Uniform continuity theorem. Test-1	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351301		
	Tutorial	Doubts discussion and Exercise Questions	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351302		

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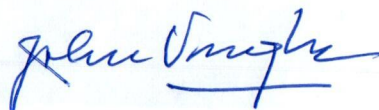
		Divisibility, Modular arithmetic and basic properties of congruences. Test	B.Sc(H) Mathematics 1st Sem	Algebra 32351102
October	Theory	Differentiability of a function, Algebra of differentiable functions, Carathéodory's theorem and chain rule.: Relative extrema, Interior extremum theorem, Mean value theorem and its applications.	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351301
	Tutorial	Doubts session and presentations based on exercise questions	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351302
November	Theory	Statements of the fundamental theorem of arithmetic and principle of mathematical induction.	B.Sc(H) Mathematics 1st Sem	Algebra 32351102
		Intermediate value property of derivatives- Darboux's theorem. Taylor polynomial, Taylor's theorem and its applications, Taylor's series expansions of $\sin x$ and $\cos x$. Test-2	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351301
	Tutorial	Exercise Questions and Presentations	B.Sc(H) Mathematics 3rd Sem	Theory of Real Functions 32351302

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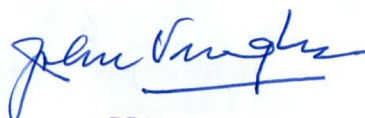
Name of the Faculty member: Ms. Archana Chopra Department: Mathematics						
Year: 2020-21						
Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name		
January	Theory	Definitions and examples of pointwise and uniformly convergent sequence of functions. Motivation for uniform convergence by giving examples. Theorem on the continuity of the limit function of a sequence of functions.	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402		
		Graphs of simple concrete functions such as polynomial, Trigonometric, Inverse trigonometric, Exponential and logarithmic functions. Limits and continuity of a function including epsilon-delta approach, Properties of continuous functions including Intermediate value theorem.	B.Sc(Prog) 2nd Sem	Calculus and Geometry 42351201		
		Finite and infinite sets, Examples of countable and uncountable sets; Absolute value of the real line; Bounded sets, Suprema and infima, Statement of order completeness property of \mathbb{R} , Archimedean property of \mathbb{R} : Real sequences, Convergence, Sum and product of convergent sequences, Order preservation and squeeze theorem.	B.Sc(Prog) 4th Sem	Real Analysis 42354401		
	Tutorial	Practice questions based on exercise.	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402		
		Practice questions based on exercise problems.	B.Sc(Prog) 4th Sem	Real Analysis 42354401		


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Februar y	Theory	The statement of the theorem on the interchange of the limit function and derivative, and its illustration with the help of examples. The interchange of the limit function and integrability of a sequence of functions. Pointwise and uniform convergence of series of functions, Test	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402
		Differentiability, Successive differentiation, Leibnitz theorem, Recursion formulae for higher derivatives.	B.Sc(Prog) 2nd Sem	Calculus and Geometry 42351201
		Monotone sequences and their convergence; Proof of convergence of some simple sequences. Subsequences and the Bolzano-Weierstrass theorem (statement and examples); Limit superior and limit inferior of a bounded sequence (definition and examples); Statement and illustrations of Cauchy convergence criterion for sequences. Definition and a necessary condition for convergence of an infinite series, Geometric series, Cauchy convergence criterion for series;	B.Sc(Prog) 4th Sem	Real Analysis 42354401
	Tutorial	Presentations based on exercise questions and doubt session.	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402
		Presentations based on exercise questions and doubt session.	B.Sc(Prog) 4th Sem	Real Analysis 42354401
		Theorems on the continuity, derivability and integrability of the sum function of a series of functions. Cauchy criterion for the uniform convergence of series of functions, and the Weierstrass M-test for uniform convergence. Definition of a power series, Radius of convergence.	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402


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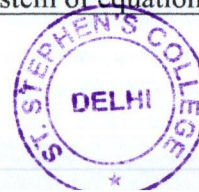
March	Theory	Rolle's theorem, Lagrange's mean value theorem with geometrical interpretations and simple applications, Taylor's theorem, Taylor's series and Maclaurin's series, Maclaurin's expansion of functions such as $\sin x$, $\cos x$, $\log(1+x)$, e^x , $(1+x)^m$.	B.Sc(Prog) 2nd Sem	Calculus and Geometry 42351201
April		Positive term series, State the integral test and prove the convergence of p-series, Comparison test, Limit comparison test and examples. D'Alembert's ratio test, Cauchy's root test; Alternating series, Leibnitz's test; Absolute and conditional convergence. Sequences and series of functions, Pointwise and uniform convergence. Test-1	B.Sc(Prog) 4th Sem	Real Analysis 42354401
	Tutorial	Practice session and doubts discussion.	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402
		Practice session and doubts discussion.	B.Sc(Prog) 4th Sem	Real Analysis 42354401
	Theory	Theorems on the continuity, derivability and integrability of the sum function of a series of functions. Differentiation and integration of power series, Statement of Abel's Theorem and its illustration with the help of examples. Test	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402
		polynomial approximation and error estimation. Functions of two or more variables, Graphs and Level curves of functions of two variables, Partial differentiation up to second order. Test	B.Sc(Prog) 2nd Sem	Calculus and Geometry 42351201
		Uniform norm, Cauchy general principle for uniform convergence of series of functions, Weierstrass M- test. Definition of power series, Radius and interval of convergence, Power series expansions and their properties. Riemann Integration and examples, Integrability of Continuous and Monotone Functions. Test-2.	B.Sc(Prog) 4th Sem	Real Analysis 42354401
	Tutorial	Presentations based on exercise questions and doubt session.	B.Sc(H) Mathematics 4th Sem	Reimann Integration and Series of Functions 32351402
		Presentations based on exercise questions and doubt session.	B.Sc(Prog) 4th Sem	Real Analysis 42354401



Name of the Faculty Member: Dr. Sonia Davar Department: Mathematics. Year: 2020-21

Month	Th/ Prac	Topics	Course	Paper Name
July	Theory	Recap, Concavity and Points of Inflection, Limits involving infinity, L Hospital's rule & Asymptotes	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
		Recap, functions and their graphs	B.Sc. Programme (Sem I)	Calculus and Matrices
	Practical	Plotting the graphs of simple functions	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
August	Theory	Sketching of polynomial, irrational and rational functions, polar coordinates & sketching of polar curves	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
		Successive Differentiation, Sequences	B.Sc. Programme (Sem I)	Calculus and Matrices
	Practical	Plotting the graphs of polynomials of degree 4 & 5 and their derivatives, sketching parametric curves, tracing of conics	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
September	Theory	Parametric curves, reduction formula, volume of solid of revolution	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
		Applications to Mathematical Modelling, Polynomial Approximations of functions	B.Sc. Programme (Sem I)	Calculus and Matrices
	Practical	Obtaining surface of revolution of curves, graph of hyperbolic functions, computation of limits, differentiation, integration & sketching of vector valued functions	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
October	Theory	Volume of solid of revolution, arc length, surface area of solid of revolution & optimization	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus
		Polynomial approximation of functions, functions of several variables and partial derivatives	B.Sc. Programme (Sem I)	Calculus and Matrices
	Practical	Complex numbers and their representation, operations like addition, multiplication, division, modulus, graphical representation, finding numbers between two real numbers, matrix operations and solving a system of equations	B.Sc. (Hons.) Mathematics (Sem I)	C1: Calculus

John Joseph





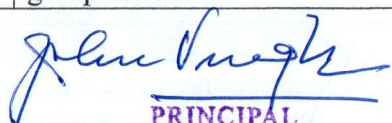
Name of the Faculty Member: Dr. Sonia Davar. Department: Mathematics. Year: 2020-21

Month	Th/ Prac	Topics	Course	Paper Name
January	Theory	Recap, General, particular and singular solution; Separable, reducible and homogenous differential equation, Exact and Non-Exact DE	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
		Recap, Limit-Continuity & Differentiability	B.Sc. Programme (Sem II)	Calculus & Geometry
	Practical	Plotting of second and third order solution family, growth and decay model, lake pollution model, cold pill model, limited growth of pollution	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
February	Theory	Linear & Bernoulli Differential Equations, Mathematical Modelling, Second order Linear DE	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
		Asymptotes, multiple points & curve tracing	B.Sc. Programme (Sem II)	Calculus & Geometry
	Practical	Predator-Prey Model, Epidemic model of influenza, battle model, recursive sequences	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
March	Theory	Method of undetermined coefficients, Cauchy Euler Formula	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
		Polar Curves Sketching, reduction formulae, finding length of a given curve	B.Sc. Programme (Sem II)	Calculus & Geometry
	Practical	Bolzano-Weierstrass Theorem Verification, Convergence & Divergence of infinite series, Cauchy Root Test	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
April	Theory	Method of variation of parameters and acceleration and velocity model	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations
		Finding arc length, area & surface area	B.Sc. Programme (Sem II)	Calculus & Geometry
	Practical	D'Alembert's ratio test, Discussion of convergence of various sequences	B.Sc. (Hons.) Mathematics (Sem II)	Differential Equations



Name of the Faculty Member: Dr. Radha Mohan
Department: Mathematics
Year: 2020-21

Month	Theory/	Topics	Course	Paper code/ Name
July				
Week 3	Automorphism, Inner Automorphism, Automorphism groups, Automorphism groups of cyclic groups	Automorphism	B.Sc. Mathematics	32351502
Week 4	Characteristic subgroups, Commutator subgroup and properties, Applications of factor subgroups to Automorphism groups	Characteristic subgroups and Commutator subgroups.		
August				
Week 1	External direct products and its properties, the groups $U(n)$ as an external direct product	External Direct product if groups.		
Week 2	Internal Direct products	Internal Direct Product if groups		
Week 3	Statement of Fundamental Theorem of finite abelian groups, the isomorphism class of finite abelian groups	The Fundamental Theorem of Finite abelian groups		
Week 4	Group actions	Group actions		
September				
Week 1	Permutation representations of group actions, Stabilizers and kernels of group actions	Group actions		


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Week 2	Groups acting on themselves by left multiplication and consequences	The action of left multiplication	B.Sc. Mathematics	32351502
Week 3	Conjugacy classes in S_n .	Conjugacy classes		
Week 4	Conjugacy classes, class equation and p- groups.	Conjugacy classes		
October				
Week 1	State the three Sylow theorems and applications	Sylow Theorems		
Week 2	Application of Sylow Theorems	Sylow Theorems		
Week 3	Finite simple groups, Non-simplicity tests, Generalized Cayley's Theorems	Finite Groups		
Week 4	Index Theorem, Embedding Theorem and Applications, Simplicity of A_5 .	Finite groups		

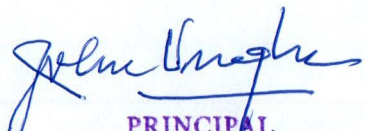
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Name of the Faculty Member: Dr. Radha Mohan
Department: Mathematics
Year: 2020-21

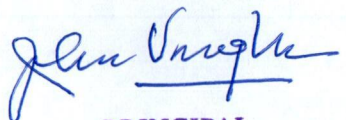
Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January			B. Sc. Mathematics	32351602
Week 1	Polynomial Rings over commutative rings, Division Algorithm and consequences, Principal Ideal Threorem	Polynomial Rings		
Week 2	Factorization of polynomials, Reducibility tests, Irreducibility tests	Polynomial Rings		
Week 3	Eisenstein's criterion, Unique factorization in $\mathbb{Z}[x]$.	Polynomial Rings	B. Sc. Mathematics	32351602
Week 4	Divisibility in integral domains, irreducibles and primes.	Divisibility		
February				
Week 1	Unique Factorization Domains, Euclidean domains	Divisibility		
Week 2	Dual spaces, double dual, Dual basis, Transpose of a linear transformation and its matrix, annihilators	Dual space of a vector spaces		
Week 3	Eigenvalues, eigenvectors, Eigenspaces and characteristic polynomial of a linear transformation	Diagonalizability		


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Week 4	Digonalizablilty, Invariant subspaces and Cayley-Hamilton Theorem, Minimal Polynomial of a linear operator.	Diagonalizability and Minimal polynomial.		
March				
Week1	Inner product spaces and norms	Inner Product spaces		
Week 2	Orthogonal basis, Gram-Schmidt orthogonalization	Orthogonality		
Week 3	Orthogonal completeness, Bessel's Inequality	Orthogonality	B. Sc. Mathematics	32351602
April				
Week 1	Adjoint of a linear operator and properties, Least squares approximation, Minimal solutions to systems of linear equations	Adjoint of a linear operator		
Week 2	Normal and self-adjoint operators	Normal and self-adjoint operators		
Week 3	Unitary and orthogonal operators	Unitary and orthogonal operators		

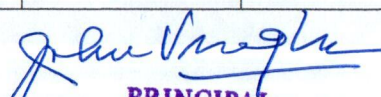

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Name of the Faculty Member: Kashif Ahmed. Department: Mathematics, Year: 2020-21

Month	Theory/Practical	Topics	Course	Paper Name
July	Theory	First order ordinary differential equations: Basic concepts and ideas, First order exact differential equation, Integrating factors and rules to find integrating factors. Linear equations and Bernoulli equations, Orthogonal trajectories and oblique trajectories.	Generic Elective-II	32355301/ Differential Equations
	Theory+Practical	Introduction to structured programming: data types- simple data types, floating data types, character data types, string data types, arithmetic operators and operators precedence, variables and constant declarations, expressions, input using the extraction operator >> and cin, output using the insertion operator << and cout, preprocessor directives.	B.Sc.(H) Maths – III	32357503 / C++ Programming
August	Theory	Basic theory of higher order linear differential equations, Wronskian and its properties, Solving a differential equation by reducing its order. Linear homogenous equations with constant coefficients, Linear non-homogenous equations, The method of undetermined coefficients.	Generic Elective – II	32355301/ Differential Equations
	Theory+Practical	increment(++) and decrement(--) operations, creating a C++ program, input/ output, relational operators, logical operators and logical expressions, if and if-else statement, switch and break statements.	B.Sc.(H) Maths – III	32357503 / C++ Programming
September	Theory	The method of variation of parameters, The Cauchy-Euler equation, Simultaneous differential equations. Partial differential equations: Basic Concepts and definitions, Mathematical problems; First order equations: Classification and construction. “for”, “while” and “do-while” loops and continue statement, nested control statement, value returning functions, value versus reference parameters, local and global variables.	Generic Elective – II	32355301/ Differential Equations
October	Theory	Geometrical interpretation, Method of characteristics, General solutions of first order partial differential equations. Canonical forms and method of separation of variables for first order partial differential equations. Second order partial differential equations: Classification, Reduction to canonical forms, With constant coefficients, General solutions.	Generic Elective-II	32355301/ Differential Equations
	Theory+Practical	one dimensional array, two-dimensional array, pointer data and pointer variables.	B.Sc.(H) Maths – III	32357503 / C++ Programming



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Name of the Faculty Member: Dr. Jaspreet Kaur
Department: Mathematics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
July	Group Theory II (Theory 5+Tutorial 6) GE-Calculus Theory 5	Automorphism, Inner automorphism, automorphism groups of finite and infinite cyclic groups, characteristic subgroups, commutator subgroup, applications of factor groups to automorphism groups. Question based on these topics from the recommended book discussed in tutorial classes. Epsilon-delta def of limit of a function, one sided limit, limits at infinity, asymptotes, differential of a function	B.Sc(H) Mathematics IIIrd year B.Sc(H) Physics Ist year	Group Theory II GE-Calculus
August	Same as above	External direct product, Internal direct product, classification of groups of order p^2 , Fundamental theorem of finite abelian group. The isomorphism classes of abelian groups. Question based on these topics from the recommended book discussed in tutorial classes.	Same as above	Same as above
		Concavity, points of inflection, curve tracing, indeterminate forms, L'Hopital rule, volumes by slicing, volumes by washer method, cylindrical shell method		
September	Same as above	Group actions and permutation representations, stabilizers and kernels of group actions. Groups acting on themselves by left multiplication. Conjugacy classes, class equations, p-groups. Question based on these topics from the recommended book discussed in tutorial classes. Length of plane curves, Area of surface of revolution, improper integration, Polar coordinates, Graphs in polar coordinates, Vector valued functions and results on vector valued functions.	Same as above	Same as above
October	Same as above	Sylows theorem and applications, Finite simple groups, non-simplicity test, Cayley's theorem, Index theorem, Embedding theorem and applications. Question based on these topics from the recommended book discussed in tutorial classes. Curvature, Unit normal vector, Torsion, functions of several variables, Directional derivatives, gradients, tangent planes, extreme values, saddle points.	Same as above	Same as above


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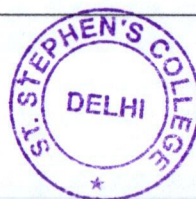




Name of the Faculty Member: Dr. Jaspreet Kaur
Department: Mathematics. Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper Name
January	Complex Analysis Theory (4) Complex Analysis Practical (8) GE- Elements of Analysis Theory (3) GE-Elements of Analysis Tutorial (2)	History of complex numbers, Functions of complex variable, Limit and continuity of functions of complex variables. Practical: finding modulus, conjugate and argument of complex numbers, Geo. Interpretation of addition/sub and multiplication/division of complex nos., roots of unity and factors of polynomial. Finite and infinite sets, countable and uncountable set results, axioms/ field properties of real nos. Question based on these topics from recommended book discussed in tutorial classes.	B.Sc(H) Mathematics III rd Year B.Sc(H) Eco, Phy, Chem IInd year	Complex Analysis GE- Elements of Analysis
February	Same as above	Differentiability of complex functions, Cauchy-Riemann equations, Analytic functions, Elementary functions such as complex exponential, Complex log and Complex trigonometric functions. Practical: Image of certain sets such as unit circle, disk, line segments under elementary function and bilinear mappings. Absolute value of reals, order property of reals. Concept of Supremum and infimum, Archimedean property of reals.	Same as above	Same as above
March	Same as above	Contour integration, ML-inequality theorem and applications, antiderivatives, Cauchy – Goursat theorem, Liouville's theorem, fundamental theorem of algebra, Cauchy integral formula. Practical: Verification of CR-equations Computation of contour integrals. Graphs of real and imaginary parts of complex functions. Infinite series of reals introduction, geometric series, pseries convergence. Positive term series comparison test, limit comparison test, ratio test.	Same as above	Same as above
April and May	Same as above	Complex sequences and series, complex power series, Taylor's theorem, Laurent theorem, Singular points, Types of singular points, Poles and residues. Practicals based on the above topics. Integral tests Root test, Alternating series, Leibnitz test, Absolute and conditional convergence, Power series, Cauchy-Hadamard theorem, term by term Differentiation and integration of power series, power series expansion of some elementary functions.	Same as above	Same as above

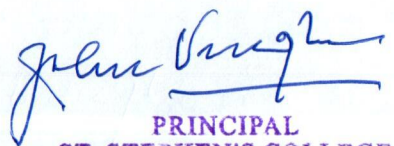
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Name of the Faculty Member: Sonali Batra
Department: Mathematics
Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory & Tutorials	Basic Principles, Interest Rates	B.sc (H) III Mathematics	Mathematical Finance- 32357504
August	Theory & Tutorials	Net Present Value and Internal rate of return , Bonds – Prices , yields durations and convexity, immunization	B.sc (H) III Mathematics	Mathematical Finance- 32357504
September	Theory & Tutorials	Asset return, Short Selling, Portfolio Mean variance theory , Markowitz Model , two fund theorem and one fund theorem , Capital Mkt line and Security mkt line ,Capital asset pricing model (CAPM) , Beta of Stocks, Sharpe index , Jensen's index,	B.sc (H) III Mathematics	Mathematical Finance- 32357504
October	Theory & Tutorials	Derivatives- Futures, Forwards, options, Swaps. Lognormal Distribution for Stock prices, Binomial tree model	B.sc (H) Mathematics	Mathematical Finance- 32357504

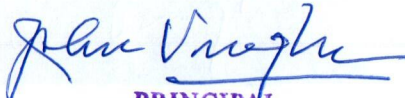

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**Name of the Faculty Member: Sonali Batra
Department: Mathematics
Year: 2020-21**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory & Tutorials	Fundamental Operations in \mathbb{R}^n . Linear combinations , dot product, Cauchy- Schwartz inequality, Triangle inequality, Projection vectors. Matrices: Gauss- Jordan row reduction , Reduced Echelon form , Row equivalence, Rank , Row space, Eigenvalue , eigen vectors, characteristic Polynomial, Diagonalization of matrices.	I B.A. (H) Economics	Linear Algebra – GE 32355202
February	Theory & Tutorials	Definition and Examples of Vector- Spaces, Elementary Properties, Subspaces, Span , Spanning set for Eigenspace, Linear dependence & independence , Dimension of a vector space, Maximal Linearly independent set and Minimal Spanning set	I B.A. (H) Economics	Linear Algebra – GE 32355202
March	Theory & Tutorials	Applications of rank, Coordinates of vector in ordered basis, Transition matrix, Linear transformation, Linear operator and similarity, compositions, inverse, Isomorphic vector space,	I B.A. (H) Economics	Linear Algebra – GE 32355202
April	Theory & Tutorials	Orthogonal and orthonormal vectors and bases, orthogonal complement, Projection thm, Orthogonal Projections over a subspace, Least square solution for inconsistent system	I B.A. (H) Economics	Linear Algebra – GE 32355202

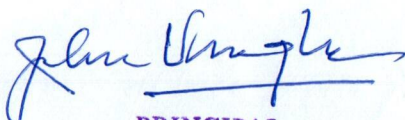

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**Name of the Faculty Member: Krishma Babbar
Department: Mathematics
Year: 2020-2021**

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
July	Theory & Practical	Introduction to TeX and LaTeX	B.Sc (H) Mathematics	32353301/LaTeX and HTML
August	Theory & Practical	Typesetting a simple document, Adding basic information to a document, Environments, Footnotes, Sectioning and displayed material. Accents of symbols, Mathematical typesetting (elementary and advanced): Subscript/ Superscript, Fractions, Roots, Ellipsis, Mathematical symbols, Arrays, Delimiters	B.Sc (H) Mathematics	32353301/LaTeX and HTML
September	Theory & Practical	Multiline formulas, Spacing and changing style in math mode. Graphics in LaTeX, Simple pictures using PSTricks, Plotting of functions.	B.Sc (H) Mathematics	32353301/LaTeX and HTML
October	Theory & Practical	Beamer presentation. HTML basics, Creating simple web pages.	B.Sc (H) Mathematics	32353301/LaTeX and HTML
November	Theory & Practical	Adding images and links, Design of web pages.	B.Sc (H) Mathematics	32353301/LaTeX and HTML

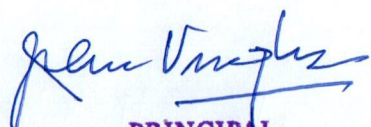

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Name of the Faculty Member: Krishma Babbar
Department: Mathematics
Year: 2020-2021

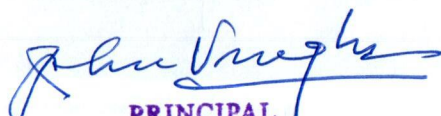
Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory & Tutorials	The first derivative test for relative extrema, Concavity and inflection points, Second derivative test for relative extrema, Curve sketching using first and second derivative tests.	B.Sc. Program	42351201/ Calculus and Geometry
February	Theory & Tutorials	Limits to infinity and infinite limits, Graphs with asymptotes, Vertical tangents and cusps, L'Hôpital's rule.	B.Sc. Program	42351201/ Calculus and Geometry
March	Theory & Tutorials	Parametric representation of curves and tracing of parametric curves (except lines in \mathbb{R}), Polar coordinates and the relationship between Cartesian and polar coordinates. Tracing of curves in polar coordinates. Reduction formulae.	B.Sc. Program	42351201/ Calculus and Geometry
April	Theory & Tutorials	Volumes by slicing disks and method of washers. Volumes by cylindrical shells, Arc length, Arc length of parametric curves. Area of surface of revolution.	B.Sc. Program	42351201/ Calculus and Geometry


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Name of the Faculty member: Ms. Rajni Gupta Department: Mathematics				
Year: 2020-21 (Odd Sem)				
Month	Theory/ Practical	Topics	Course	Paper code/ Name
August	Theory	Introduction to TeX and LaTeX, Typesetting a simple document, Adding basic information to a document, Environments, Footnotes, Sectioning and displayed material.	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301
		Introducing R, using R as a calculator; Explore data and relationships in R	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Computer Algebra Systems (CAS), Use of a CAS as a calculator, Simple programming in a CAS. Computing and plotting functions in 2D.	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
	Practical	Introduction to share latex and texmaker. Practice based on topics discussed in theory classes.	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301
		Introduction to R software and Rstudio. Practice on R based on topics done in theory.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Introduction to mathematica software and practice of commands.	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
		Accents of symbols, Mathematical typesetting (elementary and advanced): subscript/superscript, Fractions, Roots, Ellipsis, Mathematical symbols, Arrays, Delimiters, Multiline formulas, Spacing and changing style in math mode. Theory Test-1	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301


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September	Theory	Reading and getting data into R: Combine and scan commands, viewing named objects and removing objects from R, Types and structures of data items with their properties, Working with history commands, Saving work in R.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Customizing Plots, Animating Plots, Producing table of values, Working with piecewise defined functions, Combining graphics. Factoring, Expanding and finding roots of polynomials, Working with rational and trigonometric functions.	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
	Practical	Practice in Latex. Exercise questions presentations.	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301
		Practice based on the topics covered in theory classes. Exercise questions discussion.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Practice over mathematics and discussion of exercise questions.	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
October	Theory	Graphics in LaTeX, Simple pictures using PS Tricks, Plotting of functions. Beamer presentation.	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301
		Manipulating vectors, Data frames, Matrices and lists; Viewing objects within objects, Constructing data objects and their conversion. Summary statistics for vectors. Test-1 . Data frames, Matrices and lists; Summary tables. Stem and leaf plot, Histograms.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Computing limits, First and higher order derivatives, Maxima and minima, Integration, computing definite and indefinite integrals. Solving general equations. Test-1	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
		Practice of topics covered in theory. Beamer presentation. Practical Test 1	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301



	Practical	Practice based on the topics covered in theory classes. Practical Test -1 . Discussion based on sample questions.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Practice based on topics done in theory. Practical Test-1	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
November	Theory	HTML basics, Creating simple web pages. Adding images and links, Design of web pages. Theory Test-2	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301
		Density function and its plotting, The Shapiro-Wilk test for normality, The Kolmogorov-Smirnov test. Plotting in R: Box-whisker plots, Scatter plots, Pairs plots, Line charts, Pie charts, Cleveland dot charts, Bar charts; Copy and save graphics to other applications. Test-2.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Performing Gaussian elimination, Operations(transpose, determinant, and inverse), Minors and cofactors, Solving systems of linear equations, Rank and nullity of a matrix, Eigenvalue, Eigenvector and diagonalization. Test-2	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
		Techniques of sketching conics: Parabola, Ellipse and Hyperbola.	B.Sc(H) Mathematics 1st sem	Calculus 32351101
	Practical	Creating web pages. Presentations. Doubts discussion. Practical Test-2	B.Sc(H) Mathematics 3rd Sem	SEC-1 Latex and HTML 32353301
		Practice based on the topics covered in theory classes. Practical Test -2. Working based on bigger data excel sheets from websites.	B.Sc(Prog) 5th Sem	SEC-3 Statistical Software:R 42353503
		Doubts and discussion based on topics done in theory. Practical Test-2.	B.Sc(Prog) 3rd Sem	SEC-1 Computer Algebra Systems 42353328
		Introduction to Maxima and basics	B.Sc(H) Mathematics 1st	Calculus 32351101



			sem	
Dec	Theory	Reflection properties of conics, Rotation of axes, Second degree equations introduction and their classification into conics using the discriminant.	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
	Practical	Practical 1 ,4 and 6	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
Jan	Theory	Second degree equations and their classification into conics using the discriminant. Introduction to vector functions and their graphs	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
	Practical	Practical 3, 8, and 9	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
Feb	Theory	Operations with vector functions, Limits and continuity of vector functions, Differentiation and tangent vectors. Properties of vector derivatives and integration of vector functions; Modeling ballistics and planetary motion.	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
	Practical	Practical 2 and 7. Practice Practical Questions	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
March	Theory	Kepler's second law. Unit tangent, Normal and binormal vectors, Curvature. Theory Test	B.Sc(H) Mathematics 1st Sem	Calculus 32351101
	Practical	Practical 5 and 10. Practical Test	B.Sc(H) Mathematics 1st Sem	Calculus 32351101

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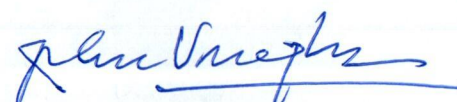
Name of the Faculty member: Ms. Rajni Gupta Department: Mathematics				
Year: 2020-21 (Even Sem)				
Month	Theory/ Practical	Topics	Course	Paper code/ Name
January	Theory	R as a calculator, Explore data and relationships in R. Reading and getting data into R: Combine and scan commands, Types and structure of data items with their properties. Manipulating vectors, Data frames, Matrices and Lists. Viewing objects within objects. Constructing data objects and conversions.	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
	Practical	Introduction to RStudio, R, online compilers. Practice of topics done in theory classes.	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
February	Theory	Summary commands: Summary statistics for vectors, Data frames, Matrices and lists. Summary tables. Stem and leaf plot, histograms. Plotting in R: Box-whisker plots, Scatter plots, Pairs plots, Line charts, Pie charts, Cleveland dot charts and Bar charts. Copy and save graphics to other applications.	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
	Practical	Practical based on theory topics along with bigger file taken from govt. websites. Practice with bigger data. Assign project.	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
March	Theory	Computer Algebra System (CAS), Use of a CAS as a calculator, Computing and plotting functions in 2D, Producing tables of values, Working with piecewise defined functions, Combining graphics. Simple programming in a CAS. Theory Test-1 based on R.	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401

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	Practical	Practice in Mathematica based on topics covered in theory. Discussion based on Exercise Questions. Practical Test-1 based on R	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
April	Theory	Plotting parametric curves surfaces, Customizing plots, Animating plots. Working with matrices, Performing Gauss elimination, Operations (Transpose, Determinant, Inverse), Minors and cofactors, Working with large matrices, Solving system of linear equations, Rank and nullity of a matrix, Eigenvalue, Eigenvector and diagonalization. Theory Test-2 based on Mathematica	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
		Introduction to compartmental models, Lake pollution model (with case study of Lake Burley Griffin). Exercise Questions	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351202
	Practical	Practice of questions and commands done in theory classes. Practical Test-2 based on Mathematica. Presentations on Project based on R.	B.Sc(H) Mathematics 4th Sem	SEC-2 CAS AND RELATED SOFTWARE 32353401
		Basics of Maxima and Practical 1 & 2	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351202
May	Theory	Drug assimilation into the blood (case of a single cold pill, case of a course of cold pills, Case study of alcohol in the bloodstream). Exponential growth of population, Density dependent growth, Limited growth with harvesting. Exercise Questions.	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351203


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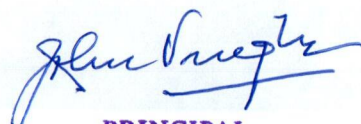
	Practical	Practical 5,6 and 3	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351204
June	Theory	Interacting population models, Epidemic model of influenza and its analysis, Predator-Prey model and its analysis. Exercise Questions	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351205
	Practical	Practical 4, 7, 8 and 9	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351206
July	Theory	Equilibrium points, Interpretation of the phase plane, Battle model and its analysis. Exercise Questions and Test	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351207
	Practical	Practical 10 and 12. Practical Test and Presentations	B.Sc(H) Mathematics 2nd Sem	Differential Equations and Mathematical Modelling 32351208

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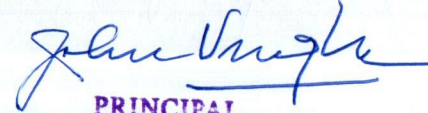
Name of the Faculty member: Mr. Abhishek Sharma			Department: Mathematics	Year: 2020-21 (Even Sem)
Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory	Transportation problem and its mathematical formulation, northwest-corner method least cost method and, Vogel approximation method for determination of starting basic solution.	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC)
	Theory	Introduction, Classification, Construction and geometrical interpretation of first order partial differential equations (PDE), Method of characteristic and general solution of first order PDE, Canonical form of first order PDE, Method of separation of variables for first order PDE.	B.Sc. (H) Mathematics, Second year, Semester 4.	32351401/ Partial Differential Equations (including practicals)
	Practical	Transportation problem on Excel Solver	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC)
	Practical	1) Draw sequence of functions on given intervals and discuss their pointwise convergence. 2) Draw sequence of functions on given intervals and discuss their uniform convergence.	B.Sc. (H) Mathematics, Second year, Semester 4.	32351401/ Partial Differential Equations (including practicals)


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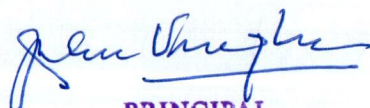
February	Theory	Algorithm for solving transportation problem, assignment problem and its mathematical formulation. Hungarian method for solving assignment problem	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC).
	Theory	Gravitational potential, Conservation laws and Burger's equations, Classification of second order PDE, Reduction to canonical forms, Equations with constant coefficients, General solution.	B.Sc. (H) Mathematics, Second year, Semester 4.	32351401/ Partial Differential Equations (including practicals)
	Practical	Assignment problem on Excel Solver	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC).
	Practical	1) Solving Cauchy Problem of 1st order PDE and plotting the Integral surface. 2) Plotting the characteristics for first order PDE	B.Sc. (H) Mathematics, Second year, Semester 4.	32351401/ Partial Differential Equations (including practicals)
March	Theory	Transshipment problem. Network models, shortest-path problem, minimum spanning tree problem, maximum flow problem	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC)
	Theory	Mathematical modeling of vibrating string and vibrating membrane, Cauchy problem for second order PDE, Homogeneous wave equation, Initial boundary value problems, Nonhomogeneous boundary conditions, Finite strings with fixed ends, Non-	B.Sc. (H) Mathematics, Second year, Semester 4	32351401/ Partial Differential Equations (including practicals)


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		homogeneous wave equation, Goursat problem.		
	Practical	. Practical on shortest-path problem, minimum spanning tree problem, maximum flow problem.	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC)
	Practical	1) Solving system of Ordinary Differential Equations 2) Solution of Wave Equation for the following associated conditions	B.Sc. (H) Mathematics, Second year, Semester 4	32351401/ Partial Differential Equations (including practicals)
April	Theory	Minimum cost flow problem, project network, CPM and PERT.	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC).
	Theory	Method of separation of variables for second order PDE, Vibrating string problem, Existence and uniqueness of solution of vibrating string problem, Heat conduction problem, Existence and uniqueness of solution of heat conduction problem, non-homogeneous problem	B.Sc. (H) Mathematics, Second year, Semester 4	32351401/ Partial Differential Equations (including practicals)
	Practical	Practical on Minimum cost flow problem, CPM and PERT.	B.Sc. Physical Science, Third Year, Semester 6.	42353604/ Transportation and Network Flow Problems (SEC)
	Practical	Solution of One-Dimensional Heat Equation	B.Sc. (H) Mathematics, Second year, Semester 4	32351401/ Partial Differential Equations (including practicals)


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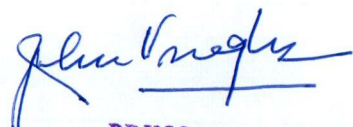
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Computer Science Department


**PRINCIPAL
ST. STEPHEN'S COLLEGE
DELHI-110007**





Name of the Faculty Member: Ms. Hunny Gaur

Department: Computer Science

Year: 2020-21

Month	Theory/ Practical	Topics	Course	Paper code/ Name
August	Theory + Practicals	<ul style="list-style-type: none"> • Hypertext Markup Language: introduction and document structure • Elements of Hypertext Markup Language • Paired and Unpaired elements • Creating web pages using HTML elements 	Generic Elective for BA/BSc Hons, II Year	Computer Networks (32345302)
September	Theory + Practicals	<ul style="list-style-type: none"> • Creating static web forms • Adding images and frames to web pages • Cascading Style Sheet for text formatting and other manipulations • Enhancing web pages using CSS 	Generic Elective for BA/BSc Hons, II Year	Computer Networks (32345302)
October	Theory + Practicals	<ul style="list-style-type: none"> • Computer Network: introduction and components • Types of networks and network models: OSI, TCP/IP, client server • Wired and wireless transmission media 	Generic Elective for BA/BSc Hons, II Year	Computer Networks (32345302)
November	Theory + Practicals	<ul style="list-style-type: none"> • Network topologies • Network devices • Understanding internet terms and applications 	Generic Elective for BA/BSc Hons, II Year	Computer Networks (32345302)

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Name of the Faculty Member: Ms. Hunny Gaur

Department: Computer Science

Year: 2020-21

Month	Theory/ Practical/ Tutorials	Topics	Course	Paper code/ Name
January	Theory + Practicals	<ul style="list-style-type: none"> Definitions: protection, security, exploit, confidentiality, integrity, availability Definitions: plain-text, cipher-text Substitution and transposition cipher Security policies Risk analysis Security assurance 	Generic Elective for BA/BSc Hons, II Year	Information Security & Cyber Laws (32345402)
February	Theory + Practicals	<ul style="list-style-type: none"> Computer forensics and incident response Cyber-attacks: definition and examples DoS and DDoS MITM, Phishing Password attack Social engineering attack etc. 	Generic Elective for BA/BSc Hons, II Year	Information Security & Cyber Laws (32345402)
March	Theory + Practicals	<ul style="list-style-type: none"> Firewall: introduction and types Logging and IDS E-mail security Security issues in operating systems Ethics of hacking and cracking 	Generic Elective for BA/BSc Hons, II Year	Information Security & Cyber Laws (32345402)
April	Theory + Practicals	<ul style="list-style-type: none"> Definitions: Digital signature, electronic signature and digital certificate Cyber Laws Brief introduction of IT infrastructure in India National agencies handling IT 	Generic Elective for BA/BSc Hons, II Year	Information Security & Cyber Laws (32345402)

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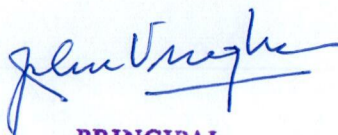
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Physical Education Department


**PRINCIPAL
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Name of the Faculty Member: SUJAY JOHN K
Year: 2020-21

Department: PHYSICAL EDUCATION

Month		Topics	Course	Paper Name	Paper Code
July	Theory	Unit-I: Obesity & its Assessment Causes of Obesity Health Risks Associated with Obesity	GE	OBESITY MANAGEMENT	1255101
	Practical	Measure BMI to identify the actual body weight status and desirable body weight status of self			
	Tutorial				
	Theory	Planning, Administration and Supervision Concept and Scope of Planning and Organization Administration and Supervision with reference to Physical Education		SPORTS ADMINISTRATION AND MANAGEMENT	6255550 3
	Practical				
	Tutorial				
	Theory	INTRODUCTION & WRITING SKILLS vocabulary, spellings, figure of speech, dialect, grammar, punctuation Sports terminators and its use Fundamentals of a sports story/ news. News – types, curtain – raiser, advance follow – up, news – analysis, box news. Design & make – ups: headings, front reading, layout & page making late stories, editorial tools, marks & skills.	SEC	Sports Journalism	6255365 0
	Practical				
	Tutorial				
	Theory	Unit-I Physical Activity and Wellness Benefits of Participation in Physical Activities with Specific Reference to Health Concept, Components, Significance of Positive Lifestyle and Quality of Life.	SEC	WELLNESS AND FITNESS	6255350 3



	Practical		GE	YOGA AND STRESS MANAGEMENT T GE	1255101
	Tutorial				
	Theory	Meaning, Definition and Concept of Yoga Historical Development of Yoga Foundation of Ashtang Yoga			
	Practical	Suryanamaskar: Introduction, Asanas in the routine, Steps involved.			
	Tutorial				
August	Theory	Assessment of Obesity - Body Mass Index (BMI), Waist-Hip Ratio, Skinfold Thickness (Abdomen, triceps, thigh, Supra-iliac)	GE	OBESITY MANAGEMENT T	1255101
	Practical	Use BMI to identify the actual body weight status and desirable body weight status of at ten students.			
	Tutorial				
	Theory	Office Management and Budgeting Maintenance of Records and Accounts		SPORTS ADMINISTRATION AND MANAGEMENT T	6255550 3
	Practical				
	Tutorial				
	Theory	Meaning, scope and changing trends of journalism in sports. Role of journalism in sports promotion Historical development & role of print and electronic media in sports promotion Media, ethics and responsibilities of journalist & editor (social, legal and professional)	SEC	Sports Journalism	6255365 0
	Practical				
	Tutorial				
	Theory	Unit-II Fitness Fitness – Concept, Components (Health Related, Skill Related, Cosmetic	SEC	WELLNESS AND FITNESS	6255350 3

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September	Practical				
	Tutorial				
	Theory	Meaning, Procedure, Precautions and Benefits of the following Asanas: Meditative Asanas; Supine Position Asanas; Prone Position Asanas; Sitting Asanas; Standing Asanas	GE	YOGA AND STRESS MANAGEMENT GE	1255101
	Practical	Pranayams (any two) and Shat-karmas / Kriyas			
	Tutorial				
	Theory	Management of Obesity through Diet and Balanced Diet Aids and Gimmicks management through diet	GE	OBESITY MANAGEMENT	1255101
	Practical	Calculate B.M.R. and Hip Waist Ratio of Self and least ten students.			
	Tutorial				
	Theory	Sports Management Sports Facilities Management Marketing and Publicity Management in Sports Organization and conduct of Intercollege competitions		SPORTS ADMINISTRATION AND MANAGEMENT	62555503
	Practical				
	Tutorial				
	Theory	UNIT-III EXTENDED RELEVANT DIMENSIONS Theory and principles of advertising in sports Public relations in sports, press release, conferences Public Relation Media – advertising, press release, conferences, exhibitions, fairs, street drama, public speaking, radio, televisions, newspapers, films, posters, pictures, and graphics	SEC	Sports Journalism	62553650
	Practical				
	Tutorial				
	Theory	General Principles of Training: Introduction, Significance and Benefits of each Principle	SEC	WELLNESS AND FITNESS	62553503

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October	Practical				
	Tutorial				
	Theory	Pranayamas : Procedure, Precautions and Benefits of the following Anulom-Vilom, Suryabhedan, Ujjayi, Bhrameri, Sheetal, Sheetkari Shatkarmas: Meaning, Procedure, Precautions and Benefits of the following Kapalbhati, Trataka, Neti and VamanDhauti.	Meaning,	GE	YOGA AND STRESS MANAGEMENT T GE
	Practical	Practice Meditation for 10 minutes			
	Tutorial				
	Theory	Weight Management through physical activities and Behaviourmodification Importance of maintaining Healthy Weight; Weight Management and Energy Balance weight management; Aerobic & anaerobic activities Behaviour Modification techniques for weight management	Principles of	GE	OBESITY MANAGEMENT T
	Practical	Measurement of Body Composition for calculating body fat and lean body mass			
	Tutorial				
	Theory	Introduction to different types of Competitions in Sports various kinds in sports competitions	Fixtures of		SPORTS ADMINISTRA TION AND MANAGEMENT T
	Practical				
	Tutorial				
	Theory	Theory and principles of advertising in sports Public relations in sports, press release, conferences Public Relation Media – advertising, press release, conferences, exhibitions, fairs, street drama, public speaking, radio, televisions, newspapers, films, posters, pictures, and graphics Sports photo feature and writing captions of photos		SEC	Sports Journalism



Practical				
Tutorial				
Theory	Effects of Exercise on Skeletal, Muscular, Circulatory and Respiratory	SEC	WELLNESS AND FITNESS	6255350 3
Practical				
Tutorial				
Theory	Stress Management: Concept, Causes and Effects of Stress Non-communicable diseases (due to stress), Stress prevention and good health Stress Management through relaxation techniques Autogenic training and progressive muscle relaxation, deep breathing, meditation Sports, recreational, adventure sports, physical activities as coping strategies	GE	YOGA AND STRESS MANAGEMENT T GE	1255101
Practical	Practice Meditation for 15 minutes			
Tutorial				


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Name of the Faculty Member: SUJAY JOHN K
Year: 2020-21

Department: Physical Education

Month		Topics	Course	Paper Name	Paper Code
January	Theory	Introduction to Aerobics, Evolution of Aerobics Benefits of participation in Aerobics Individualized and Group Training in Aerobics	GE	AEROBIC TRAINING	1255101
	Practical	Developing a 5-10 minute routine of aerobics			
	Tutorial				
	Theory	INTRODUCTION & WRITING SKILLS vocabulary, spellings, figure of speech, dialect, grammar, punctuation Sports terminators and its use Fundamentals of a sports story/ news. News – types, curtain – raiser, advance follow – up, news – analysis, box news. Design & make – ups: headings, front reading, layout & page making late stories, editorial tools, marks & skills.	GE	Sports Journalism	62553650
	Practical				
	Tutorial				
	Theory	Audio-Visual Aids in Physical Education Role of Media and Public Relations in Physical Education	SEC	Media and Careers in Physical Education SEC	62553440
	Practical				
	Tutorial				
	Theory	Introduction to General Psychology Fundamentals of Growth and Development (Infancy, Childhood, Adolescence, Adulthood) Definition, Scope and Importance of Sports Psychology Concept of Sports Psychology Intervention	SEC	SPORTS PSYCHOLOGY	
	Practical				
	Tutorial				

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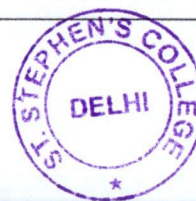


	Theory	Obesity & its Assessment Concept and Causes of Obesity Associated with Obesity Mass index (BMI), Waist-Hip Ratio, Skinfold Thickness (Abdomen, triceps, thigh, Supra-iliac)	Health Risks Assessment of Obesity - Body	GE	Obesity Management	12555260
	Practical	Use BMI to identify the actual body weight status and desirable body weight status of at least ten students.				
	Tutorial					
February	Theory	Forms of Aerobics (Floor, Step, Weight and. Aqua Aerobics) Appropriate Aerobic Gear, Flooring and Required Equipment Need, Benefits and Selection of Music for Aerobics		GE	AEROBIC TRAINING	1255101
	Practical	Compilation of music for low-impact aerobic exercise routine				
	Tutorial					
	Theory	ORGANIZATIONAL AND PRESENTATION SKILLS FOR MEDIA Organizational set-up of a newspaper- printing, process sequences of operations in the printing of a news paper Introduction of various sports organization and agencies- Olympic Games, Asian games, commonwealth games, awards and trophies. Different types of Write-ups		GE	Sports Journalism	62553650
	Practical					
	Tutorial					
	Theory	Professional Courses in Physical Education and Sports Health, Physical Education, Sports Management and Sports Journalism	Careers in Fitness,	SEC	Media and Careers in Physical Education SEC	62553440
	Practical					
	Tutorial					
		Theory	Learning - Concept and Principles of Learning, Learning Curve Types of Learning, Transfer of Training in Sports Personality - Meaning of Personality, Factors Affecting Personality Development of Personality; Relationship of Personality with Sports Performance		SEC	SPORTS PSYCHOLOGY



March	Practical				
	Tutorial				
	Theory	Management of Obesity through Diet Nutrition and Balanced Diet Dietary Aids and Gimmicks weight management through diet	Obesity and	GE	Obesity Management 12555260
	Practical	Calculate BMR and Waist-Hip ratio of at least ten students.			
	Tutorial				
	Theory	Development of Aerobic Fitness Programmes Methods, Group Formation	Group Training	GE	AEROBIC TRAINING 1255101
	Practical	Compilation of music for medium-impact aerobic routine			
	Tutorial				
	Theory	EXTENDED RELEVANT DIMENSIONS Theory and principles of advertising in sports Public relations in sports, press release, conferences Public Relation Media – advertising, press release, conferences, exhibitions, fairs, street drama, public speaking, radio, televisions, newspapers, films, posters, pictures, and graphics		GE	Sports Journalism 62553650
	Practical				
March	Tutorial				
	Theory	Careers in Fitness, Health, Physical Education, Sports Management and Sports Journalism		SEC	Media and Careers in Physical Education SEC 62553440
	Practical				
	Tutorial				
	Theory	Concepts of Positive Thinking and Positive Attitude Emotion, Anxiety and Stress Management in Sports		SEC	SPORTS PSYCHOLOGY
	Practical				
	Tutorial				
	Theory	Weight Management through physical activities and Behaviour modification Importance of maintaining Healthy Weight; Weight Management and Energy Balance		GE	Obesity Management 12555260
	Practical				
	Tutorial				

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	Practical	Measurement of Body Composition for calculating body fat and lean body mass			
	Tutorial				
April	Theory	Prevention and Care Specific to Aerobics - Foot Injuries, Shin Injuries	GE	AEROBIC TRAINING	1255101
	Practical	Demonstrate various group formations in an aerobics routine. Knee Injuries, Multiple Site Injuries			
	Tutorial				
	Theory	Theory and principles of advertising in sports Public relations in sports, press release, conferences developing a sports story Introduction to various types of information technology Satellite communication: use of satellite in radio and T.V. communication for sports information	GE	Sports Journalism	62553650
	Practical				
	Tutorial				
	Theory	Organization of Intramural / Extramural Competitions and/or Physical Education and Sports Events -Seminar, Clinic, Lecture	SEC	Media and Careers in Physical Education	62553440
	Practical				
	Tutorial				
	Theory	Motivation: Concepts of Motivation, Types of Motivation, Role of Motivation in Sports Concepts of Incentive, Achievement	SEC	SPORTS PSYCHOLOGY	
	Practical				
	Tutorial				
	Theory	Principles of weight management; Aerobic & anaerobic. activities Behaviour Modification techniques for weight management	GE	Obesity Management	12555260
	Practical	Revision of Practical 1, 2, 3			
	Tutorial				

John Hughes
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