

3. SCHOOL OF LIFE SCIENCES

The pattern of JNUEE 2022-23 will be based on Multiple Choice Questions (MCQs) through Computer Based Test (CBT)

Ph.D.

Sl. No.	Name of School	Sub. Code & Sub. Code Number	Syllabus for Entrance Examination
1	School of Life Sciences (SLS)	Life Sciences – Group-I GONH (892)	<ol style="list-style-type: none"> Candidates will be tested in their basic knowledge on research methodology and core subjects of Life/Biological Sciences. The test will contain questions based on research methodology/experimental techniques related to Life/Biological Sciences research. The test would also contain subject-specific questions encompassing different branches of Life/Biological Sciences taught at the postgraduate level in various UGC affiliated universities/ institutions in the country. There is no specific syllabus designed for the test, but the candidates are advised to consult CSIR/UGC-NET JRF syllabus for guidance.
		Life Sciences Group-II – GTWH (893)	
		Life Sciences Group-III – GTRH (894)	
		Life Sciences Group-IV – GFOH (895)	
		Life Sciences Group-V – GFIH (896)	

4. SCHOOL OF SOCIAL SCIENCES

The pattern of JNUEE 2022-23 will be based on Multiple Choice Questions (MCQs) through Computer Based Test (CBT)

Ph.D.

Sl. No.	Name of Centre	Sub. Code & Sub. Code Number	Syllabus for Entrance Examination
1	Centre for Economic studies and Planning (CESP)	Economics Studies & Planning - ECOH (865)	In the examination, the applicants will be examined in the topics covered by a standard M.A. Economics programme. These would broadly include Microeconomics, Macro-economics, Economic Development, Indian Economy and Statistical and Econometrics methods, Mathematical Methods in Economics, Research methodology. The distribution of questions in the examination would be in conformity with UGC Regulations, 2016.
2	Centre for Historical Studies (CHS)	Modern History-MODH (866)	<p>The exam is structured to test the students on:</p> <p>A. Historical methods</p> <p>B. Historiographical debates and discussions</p> <p>C. Themes related to political, economic and social history and on aspects of religion and culture pertaining to Indian history for the ancient, medieval, modern and contemporary periods (including World history).</p>
3		Medieval History –MEDH (867)	
4		Ancient History – ANCH (868)	

5	Centre for Political Studies (CPS)	Political Science –POLH (869)	<p>Applicants for the PhD programme will be examined for their analytical ability in topics covered by an M.A. programme in Political Science. These would broadly include Philosophy and Methods of the Social Sciences, Key Concepts in Political Theory, Contemporary Debates in Political Philosophy and Thought, Debates in Indian Politics (Constitution, Institutions, Processes and Public Policies), Issues in Comparative Politics, and International Relations. Questions on various quantitative and qualitative research methods commonly used in social science research will also feature in the entrance test. The Ph.D. programme syllabus of the entrance test shall consist of 50% of questions on the Research Methodology and 50% will be on other areas and sub-fields of Political Science as mentioned above.</p> <p>For more details about the programme and courses, please visit JNU website: http://www.jnu.ac.in/ssscps</p>
6	Centre for the Study of Regional Development (CSRD)	Population Studies- POPH (870)	<p>Students will be tested on research methodology and the relevant areas pertaining to the streams they apply for. The syllabus for the JNUEE has been framed keeping in mind the post graduate programs taught in most Indian universities.</p> <p>(i) Regional Development: Geography (code: GEO) Syllabus:</p> <p>(A) Research Methodology: Recent trends in geographical thought and research concerns in the field; Cartographic methods; descriptive statistics; sampling techniques; correlation and regression analysis, geographical information system, Remote sensing, and GPS; Morphometric techniques in areal and linear analysis, hydrograph and runoff estimation, evapotranspiration, methods of soil analysis, ground water mapping and estimation, RS in LU-LC and biodiversity mapping, magnitude-frequency classification of natural disasters, methods of graphical representation of economic loss of disasters, age estimation of landforms. Methods of landscape surveying and mapping; socio-economic field survey methods.</p> <p>(B) i. Physical Geography: Geomorphology, Oceanography, climatology, climate change, Hydrology, Biogeography, Ecosystems, Natural Resources and Natural Disasters (with special reference to India) ii. Human Geography: Population distributed and growth: human settlements, urbanization, migration rural and agricultural geography: Spatial structure and temporal trends of economic activity; Social groups and communities, tourism; (with special reference to India) iii. Regional Development: Concepts, strategies of regional development regional imbalances and levels of development in India; inclusive exclusions and exclusive inclusions, Globalization, natural resources and changing spatial division of labour.</p> <p>(ii) Regional Development: Population Studies (Code: POP) (A) Research Methodology: Basic and advanced statistics, Quantitative methods in population analysis, basic demographic data in India, methods of demographic data analysis, population survey (primary and secondary) methodologies and designs. (B) Nature and scope of population studies; sources of demographic data; Global and regional population trends, growth, distribution, and density; population composition; components of population dynamics namely fertility, mortality and migration; Population growth in relation to economic and social development. India's population policy and family planning programme, population theories, Demographic methods (may need the use of scientific calculator), Population, environment and development, urbanization, Human habitat, human ecology, Food security, Programs related to Population Health and Development, gender and population.</p> <p>(iii) Regional Development: Economics (Code: ECN) (A) Research Methodology: Basic Statistics, Quantitative methods in Economics, Sources of Data on the Indian Economy. (B) Economic theory and development theory (at the Master level); basic issues in Indian economy around themes like poverty, inequality, employment, banking, public finance, industry, agriculture, trade etc; India's development and policy choices; made over the years to address those challenges.</p>
7		Geography- GEOH (871)	
8		Economics- ECNH (872)	

9	Centre of Social Medicine and Community Health (CSMCH)	Social Sciences in Health- CSMH (873)	<p>PhD in Social Sciences and Health at the Centre of Social Medicine and Community Health is an interdisciplinary programme. The candidates are expected to have an understanding of diseases, health and wellbeing through the study of social, behavioural, economic, political, regional, spatial, cultural and environmental influences on health, health planning, policies and programmes and the application of social epidemiology and social science theories, concepts and methodologies for research in public health.</p> <p>Basic concepts in Social Sciences and its relevance to public health</p> <ol style="list-style-type: none"> 1. Social Stratification 2. Social Institutions and Groups 3. Culture 4. Characteristics of Rural and Urban Society 5. Sanskritisation 6. Social Capital and Cultural Capital 7. Poverty 8. Inequality 9. Globalization, liberalization, privatization 10. Motivation 11. Attitude, Perception and Behavior 12. Socialisation 13. Power 14. Conflict 15. Civil Rights, Democratic Rights and Human Rights 16. Social change 17. Social movements and civil society 18. Understanding Interconnections Between Economy, Polity And Society 19. Current Debates in Health <p>2. Application of Social Sciences to Health</p> <ol style="list-style-type: none"> 1. Social Determinants of Health 2. Development and Health 3. Social inequalities and marginalisation in health 4. Climate change and its impact on health 5. Population and development 6. Social exclusion, discrimination and health 7. Importance of large data sets for public health 8. Health promotion and Illness prevention 9. Mental Health and Disability 10. Medical Pluralism 11. Accessibility, Availability and Affordability of Health Care 12. Universal Health Care 13. Recent social issues and their implications for health <p>3. Research Methodology</p> <ol style="list-style-type: none"> 1. Qualitative methods in Social Sciences 2. Quantitative methods in Social Sciences 3. Importance of Qualitative and quantitative research methods used in public health 4. Mixed methods 5. Ethics in Research 6. Statistical Methods
10		Public Health – PUBH (874)	<p>PhD in Public Health at the Centre of Social Medicine and Community Health is an interdisciplinary programme. The candidates are expected to have an understanding of diseases, health and wellbeing through the study of Biomedical, social, behavioural, economic, political, regional, spatial, cultural and environmental influences on health, health policies and programmes and the application of public health and health systems research concepts and methodologies.</p> <p>1. Basic concepts in public health</p> <ol style="list-style-type: none"> 1. History of Public Health 2. Concepts in Public Health 3. Epidemiology 4. Epidemiology of Specific Diseases 5. Health planning, policy and Public Health Administration

			6. Health Management 7. Health economics 8. Nutrition 9. Environmental Sanitation 10. Demography and Family Planning 11. Mental Health 12. Application of Social Sciences in Health 13. Impact of urbanisation on health and disease. 14. School Health 15. Urban health 2. Research Methodology 1. Qualitative methods in Social Sciences 2. Quantitative methods in Social Sciences 3. Importance of Qualitative and quantitative research methods used in public health 4. Mixed methods 5. Ethics in Research 6. Statistical Methods
11	Centre for the Study of Social Systems (CSSS)	Social Systems - SOCH (875)	Candidates are expected to display a good research aptitude, analytical skills and usage of social science perspectives in answering questions from the following list of themes. 1. Thinkers Classical Thinkers: a. Karl Marx, Emile Durkheim, Max Weber b. Advanced Social Theories: Postmodernism, Postcolonialism and Poststructuralism c Study of Monographs: Evans-Pritchard, Bronislaw Malinowski, Edmund Leach, Margaret Mead, Clifford Geertz 2. Philosophical Foundation of Theories and Methodology 3. Social Research/Research Methodology: Quantitative and Qualitative, Positivism, Interpretivism 4. Social Structure, Continuity and Change 5. Theories of Culture 6. Social Stratification: Gender, Caste, Class, Tribe, Ethnicity, Disability 7. Kinship, Family and Marriage 8. Social Inequalities and Movements 9. Education and Society 10. Religion and Society 11. State, Polity and Society 12. Economy and Society 13. Social Issues 14. Agrarian and Urban Sociology 15. Indian Sociology 16. Industrial/Corporate Sociology 17. Modernization, Globalization and Development 18. Media Studies
12	Zakir Husain Centre for Educational Studies (ZHCES)	Educational Studies- EDUH (876)	Zakir Husain Centre for Educational Studies is a multi-disciplinary Centre which approaches the field of education from four social science disciplines such as Economics, Sociology, History and Psychology. The students are expected to fit into any one of these disciplinary areas to carry out their research studies. The syllabus for the entrance examination under each of these areas of specialization is as follows (the list is only indicative, not exhaustive): A. History of Education Historical method and historiography; Modern Indian history; The educational debates; Woods Dispatch; The revolt of 1857; Establishment of modern universities; The Hunter Commission; India's freedom movement; Imperialism and nationalism. European History; Enlightenment; Reformation; Revolutions; Global History of modernization; introduction of modern sciences and science education. Education and knowledge-systems in pre-colonial India. B. Sociology of Education Classical and contemporary sociological theory and thinkers; Perspectives, Themes and issues in the Indian society; Rural and urban Sociology; Sociology of backward, marginalized and excluded; Sociology of education; Sociology of development; Sociology of knowledge; Sociology of organizations; Sociology of

			<p>Science and Technology; Methodology and methods in Sociological research.</p> <p>C. Psychology of Education</p> <p>1. Fundamental Psychological Processes: Attention, Perception, Learning, Perception, Memory, Thinking and Problem Solving, Emotion and motivation; Intelligence: Theories and Measurement; Personality Theories; Theories of Human Development: Cognition, Emotion, Moral, Social;</p> <p>2. Social Psychology: Social Influence Process, Social Cognition, Group Processes, Intergroup Relations; Research Methods in Psychology: Survey, Experiment, Case Study, Qualitative Approach: Narrative, Discourse Analysis, Interview; Cross-cultural indigenous, and critical perspectives in Psychology.</p> <p>D. Economics of Education</p> <p>1. Microeconomics: Theory of Consumer Behaviour- price effect and substitution effects; theory of revealed preference, elasticity of demand; Theory of Production function, short run and long run, isoquants, cost functions. Theory of the Market Structure: various forms of market and price-output decisions (perfect competition, monopoly, monopolistic competition, oligopoly); Neo-classical theory of distribution, Welfare Economics and General Equilibrium</p> <p>2. Macroeconomics: National Income Accounting- national income as a measure of welfare and economic progress; Theories of consumption and investment- Models of income determination; Simple Keynesian model, IS-LM model; Theories of supply and demand for money; Phillips curve and theories inflation; Open economy macroeconomics and Balance of Payments; and international trade.</p> <p>3. Theories of growth and development and the Indian Economy: Employment and labour; Income Inequality; Globalization and Internationalization; New Economic Policy and its impact on social sector and physical infrastructure in the context of India; Human development in India.</p> <p>Research Methodology:</p> <p>Research methods and research methodology- nature of the field and their distinct concerns; Philosophy and methods of the sciences, social sciences and humanities; qualitative and quantitative research methods, hypothesis, concepts and variables, sampling procedures, data gathering; testing and experimentation, procedures of validation; steps in the research process; research paradigms and frameworks; ethnography; and historiographic methods.</p> <p>Measures of Central Tendency of Dispersion (Mean, Median, Mode, Standard Deviation, Variance), Skewness and kurtosis, correlation Coefficient, Regression Analysis, Basic Probability Theory, Sampling Theory, Testing of Hypothesis, Data interpretation, Sources of Data on the Indian Education.</p>
13	Centre for Studies in Science Policy (CSSP)	Studies in Science Policy- SSPH (877)	<p>Question in the entrance test will be based on the current affairs on science, technology, innovations and related policy debates. To test the domain knowledge of students, questions based on the various Masters level courses will also be asked. Questions on the various quantitative and qualitative research methods commonly used in social science research will also feature in the entrance test. For more details about our programme and courses, Please visit: http://www.jnu.ac.in/sss/cssp-programme_of_study</p> <p>The Centre is pursuing research in areas/fields such as:</p> <ol style="list-style-type: none"> Science and technology policies including various sectors of economy, S&T in government and S&T policies and development issues in India and other countries; Sociological and Historical Studies on S&T; Social shaping of technology; Scientists in laboratories and organizations; Scientific communities and professionalization of science; Frugal and Grassroots Innovations; Responsible Research and Innovation (RRI); Waste Management; Law, Science and Technology; Cyber & Information Technology Law; Intellectual Property Rights; International S&T Treaties; Economics of technological change and innovation studies; national, sectoral and regional innovation systems; clusters and technological change; Technology Foresight and Assessment; Risk R&D and technology; Technology and hazards including disaster management related to technical change,

			<p>innovation, methodologies, etc.;</p> <p>i) Gender issues in S&T;</p> <p>j) Globalisation and Emerging Technology; TNCs, FDI and impact on R&D; International affairs and relations in S&T for development; Area studies in science and technology policies and development covering developing and developed countries;</p> <p>k) h) Epidemiology, health service structure, health policy analysis, health planning, health economics, biomedical waste management, importance of social sciences in public health, urbanization and health.</p>
14	Centre for Philosophy (CP)	Philosophy-SPHH (878)	<p>Questions would be based on the M.A syllabus taught at the Centre for Philosophy. Please visit http://www.jnu.ac.in/ssss/cop-mphil Each Unit will have 20 percent representation (20%) in the total number of questions.</p> <p>Please note that as per admission policy 50% of questions in the entrance examination for the Ph.D. Program will be from Research Methodology and rest 50% from domain knowledge.</p> <p>Apart from the above the candidate is expected to have sufficient knowledge of the following:</p> <p>UNIT –I</p> <p>Research Methodology:</p> <ol style="list-style-type: none"> 1. Inductive, Deductive and probabilistic reasoning 2. Fallacies formal and informal 3. Logical positivism 4. Dialectics 5. Positivism 6. Hermeneutics 7. Deconstruction s 8. Pragmatism 9. Sceptical method 10. Linguistic analysis 11. Phenomenology and existentialism 12. Thought experiments 13. Principles of Verifiability and Falsifiability 14. Holism and methodological individualism 15. Types of arguments in Indian philosophy 16. Nature of inference (<i>Anumāna</i>) in Indian philosophy 17. Types of inferences 18. Nature of concomitance (<i>vyāpti</i>) according to different schools of Indian philosophy 19. Hypothetical reasoning (<i>arthāpatti</i>) <p>UNIT – II</p> <p>Philosophical Theories and Concepts</p> <ol style="list-style-type: none"> 1. Metaphysics <ol style="list-style-type: none"> i. Theories of mind and consciousness ii. Theories of meaning and truth iii. Realism and anti-realism iv. Freewill: Determinism, Indeterminism and Compatibalism v. Form and matter vi. Theories of Self vii. Theories of Causation viii. Problem of personal identity ix. Problem of other minds

			<ul style="list-style-type: none"> x. Problem of matter xi. Essentialism xii. Atomism xiii. Dualism xiv. Epiphenomenalism xv. Anomalous Monism xvi. Eliminative Materialism xvii. Behaviourism xviii. Substance Dualism xix. Nature of Relations xx. Critique of metaphysics
			<p>2. Epistemology</p> <ul style="list-style-type: none"> i. <i>Theories of perception</i> ii. <i>Theories of knowing</i> iii. <i>Theories of Justification: Internalism and Externalism</i> iv. <i>Gettier Problem</i> v. <i>Definition of knowledge (Pramā) in Classical Indian philosophy</i> vi. <i>Theories of Error in Classical Indian philosophy</i> vii. <i>Sources of knowledge Classical Indian philosophy</i> viii. <i>Theories of Justification in Classical Indian philosophy (pramānyavāda)</i> <p>UNIT –III</p> <p>Ethics</p> <ul style="list-style-type: none"> a. Normative Ethics <ul style="list-style-type: none"> i. Consequentialism ii. Kantian Deontology iii. Virtue Theoretical Ethics iv. Contractarianism and Contractualism v. Natural Rights Theory vi. Feminist Ethics b. Theories of Metaethics <ul style="list-style-type: none"> i. Cognitivism and Non-cognitivism ii. Moore's Non-naturalism iii. Error Theory iv. Prescriptivism v. Relativism vi. Moral Realism and anti-realism c. Applied Ethics <ul style="list-style-type: none"> i. Bio-medical Ethics ii. Animal Ethics iii. Theories of Punishment iv. Environmental Ethics v. Business Ethics d. Indian Ethical Tradition <ul style="list-style-type: none"> i. Mīmāṃsā Theory of <i>Dharma</i>, <i>itikartavyatābodha</i>, <i>artha</i> and <i>bhāvnā</i>, ii. Buddhist Ethics iii. Jaina Ethics iv. Theory of Obligation in Bhagvad Gītā <p>UNIT- IV</p> <p>Social and Political Philosophy</p> <ul style="list-style-type: none"> a. Political Ideas: Equality, Justice, Liberty, Freedom, Rights

			<ul style="list-style-type: none"> b. Individual and State c. Democracy d. Socialism e. Marxism f. Secularism g. Sarvodaya h. Gender equality i. Contemporary theories and debates: Utilitarianism, Rawls's Justice as Fairness, j. Libertarianism, Communitarianism, Political liberalism, Multiculturalism, Feminism <p>UNIT -V</p> <p>Contemporary Indian Philosophy:</p> <ul style="list-style-type: none"> i. Gandhi, Ambedkar, Tagore, Aurobindo, Vivekananda ii. Gandhi Tagore Debate iii. Gandhi Ambedkar Debate iv. Radhakrishnan v. K. C. Bhattacharyya vi. Jyotiba Phule vii. Mohammad Iqbal viii. Amartya Sen
15	Centre for Women Studies (CWS)	Women Studies –WSPH (879)	<p>Since Women's Studies is interdisciplinary in nature, the entrance exam will expect candidates to bring their disciplinary and interdisciplinary training in historical, political, economic, sociological, cultural, literary and representational perspectives in the way women, gender, and sexuality have been constituted as objects of study. Students are expected to have a thorough understanding of the relationship between gender and other analytical categories like class, caste, ethnicity, sexuality, community and nationality not only in a national, but also a cross cultural and transnational context. The candidates are expected to be broadly aware of different dimensions of women, gender and sexuality studies in Feminist Theory; Women's Movements; Gender, Labour and Political Economy; Sexuality Studies; Law; Politics; Development; Globalization and its implications; Religion and Faith Practices; Caste, Ethnicity and Race; Gender and Space; Culture and Modernity; Literature, Art and Performance, and Visuality Studies.</p> <p>Candidates are expected to have knowledge of feminist methodology, especially qualitative research methods such as ethnography, discourse analysis, oral history, archival research, and literary methods, but not just limited to these.</p>
16	Centre for the Study of Social Exclusion and Inclusive Policy	Social Exclusion and Inclusive Policy - SEIH (880)	<p>The examination will deal with topics which are covered in any standard Masters level course pertaining to History, Anthropology, Economics, Political Science and Sociology.</p> <p>In addition, the candidates are expected to have comprehensive understanding on the various dimensions of discrimination and exclusion faced by Scheduled Castes (SC), Scheduled Tribes (ST) Gender, Disability Exclusion in terms of different social aspects and various Minority groups in India. The interpretation of these societal dimensions can only be understood through a proper knowledge of research methodology. The definition of research methodology in itself is a difficult task, divided in terms of approaches ranging from the qualitative to quantitative. In addition to research methods the candidate acquainted in their respective subject at the Master level, is also expected to be familiar with the methods and measurement of exclusion and inclusion.</p> <p>The candidates are expected to be aware of analysis based on large datasets published periodically by the Government and non-governmental agencies. These would include, but not limited to, Decennial Census reports, National Sample Survey Organisation reports (NSSO), National Family and Health Surveys (NFHS), National Crime Records Bureau reports (NCRB) and other alternative reports covering issues of discrimination and exclusion like Sachar Committee Report, Indian Exclusion</p>

			reports, International Organisational reports like UN, ILO etc. Further the candidates should be aware of reports published by National Commission for Scheduled Castes (NCSC), National Commission for Scheduled Tribes (NCST), National Commission for Backward Classes (NCBC), National Human Rights Commission (NHRC). The candidates should have an indepth understanding of various facets of the Indian Constitution, Governmental policies for inclusion and developmental schemes addressing the issues of inter-sectionality of Gender, SCs, STs, disabled and Minority groups.
17	Centre for Media Studies (CMS)	Media Studies- CMSH (881)	<p>Envisaged primarily as a centre for research and academic study, the Centre for Media Studies has been teaching and researching in the fields of media studies, which include: Histories of media, Political economy of Media, Media and issues of language, Media democracy and dimensions of rights and justice, violence and media, Media technologies and cultural industries, Media and the nature of connectivities, visual culture, theories and methods in media studies.</p> <p>The syllabus for the <i>Entrance Examination</i> therefore is carefully prepared to harmonise the broader perspective on Media Studies as envisioned by the Centre and the pedagogic and professional needs in Media studies. It covers the evolution and contemporary nature of media in its myriad forms, i.e., print, visual, electronic and digital, etc. The candidates are expected to have comprehensive understanding of media studies:- history, growth and development of print and electronic media; production content, models and theories of Media effect; Communication for development and social change; language and nature of reporting and principles and practices of editing; role of news rooms; the nature of persuasion and advertising; Corporate communication; Media laws and ethics; Constitution of India: its historical evolution and its importance. It also will have components of visual media covering television and film studies and will include the fundamental dimensions of language, aesthetics and movements in world as well as Indian Cinema. Knowledge of the modern day media management and production, ICT and media is also expected. The candidates are expected to be aware of media research methods in social sciences which includes, apart from qualitative and quantitative methods and various research techniques, critical discussions on language and ethics in media studies.</p> <p>The programme encourages working on the themes related to media studies.</p>

Sl. No.	Name of Centre	Sub. Code & Sub. Code Number	Syllabus for Entrance Examination
18	Group of Adult Education (GAE)	Adult Education- GAEH (883)	We insist that the student/candidates should have exposure, understanding and knowledge in wide ranging issues related to adult, continuing education and extension. The main thrust areas include 'Literacy studies' (e.g., basic literacy, adult literacy, digital literacy, financial literacy, consumer literacy, legal literacy, health family, media, citizenship literacy etc.), adult, lifelong education, vocational/skill education, sustainable livelihood education, entrepreneurship education and other related continuing education in India and abroad. Moreover, GAE focuses on problems of contemporary youth & their lifestyles; the impact of globalization and market practices on the local communities and society with special emphasis on consumer rights, movements and awareness. We try to enrol students who have interest do research in areas of formal/non-formal education, policy studies and practice in all these areas. GAE makes special efforts in enhancing learning, and improving professionalism among the students in social and education sectors to play constructive roles in nation-building.
19	Centre for Informal Sector & Labour Studies (CISL)	Informal Sector & Labour Studies- ISLH (884)	The test is intended to evaluate the candidate's general awareness in the following areas. The Ph.D. programme focuses on interdisciplinary research on Indian informal sector and labour scenario. The programme encourages to work on themes such as—Political Economy of State, Development and Underdevelopment in the contemporary world, Labour History, Globalization and the changing forms of Labour, Global Production Systems, Informalisation in various sectors, Labour Market, Forms of Employment, Poverty, Migration, Urbanisation, Labour Rights and Regulation, Workers' Organizations and Politics, Trade Unions, Resistance, Peasant Production, Non-farm Economy, Agrarian Change and Rural Development,

		Political Economy of Care, Discrimination on the basis of Caste, Gender and Community, Common Property Resources, Public Policies in the Unorganised Sector, and Sustainable Development. The objective of the programme is to enable students to understand the linkages between the formal and the informal sectors and between theory and empirical investigations in research work.
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5. SCHOOL OF ENVIRONMENTAL SCIENCES

The pattern of JNUEE 2022-23 will be based on Multiple Choice Questions (MCQs) through Computer Based Test (CBT)

Ph.D.

Sl. No.	Name of School	Sub. Code & Sub. Code Number	Syllabus for Entrance Examination
1	School of Environmental Sciences (SES)	Research Area I-ONEH (885)	All questions would be of the multiple choice type. The questions will be divided into two parts: Part-A
2		Research Area II-TWOH (886)	This part will have questions on Research Methodology broadly covering the topics such as Judging the ability of Searching libraries, web-based information etc., Structuring of articles, referencing etc., Describing visual, audio or written images, Writing review of book/Report etc., importance of seminar/workshop/conference, General idea of plagiarism, Concept of logbook, workbook, field book etc., Names of journals, Important publishers, Site selection criteria, sample number criteria, sample storage methods, sample extraction and digestion methods, Mean, median, mode, standard deviation, standard error, correlation, time series, scatter plots, bars, line diagram, error bars, area plots, contours etc., Accuracy, precision, null hypothesis, errors, uncertainty, Knowledge about software: statistical, GIS and RS etc.
3		Research Area III-THRH (887)	
4		Research Area IV-FORH (888)	
			Part-B This part will have questions of M.Sc. level from Physics, Chemistry, Geology, Biology and Environmental Sciences.

6. SCHOOL OF COMPUTER & SYSTEMS SCIENCES

The pattern of JNUEE 2022-23 will be based on Multiple Choice Questions (MCQs) through Computer Based Test (CBT)

Ph.D.

The School will have two separate streams namely "Computer Science" stream and "Microsystems" stream in the JNU entrance examination for the admissions to the PhD programme. An applicant for the PhD programme should clearly mention only one stream in the application form. The candidature of those applying for both the streams is likely to be rejected. Therefore, the applicants are advised in their own interest not to apply for both the streams. Admission is offered to candidates based on their performance in the Computer Based Test (CBT) and the viva-voce examination, as per University rules. In the entrance examination, besides the common part (PART A), the applicants must answer questions only for the part meant for their choice of stream (PART B). On the basis of the candidates' performance in the entrance examination and as per University rules, the candidates would be called for the viva-voce examination. Separate viva-voce