

M.Phil & Ph.D.

Sl. No.	Name of Centre	Sub. Code & Sub. Code Number	Syllabus for Entrance Examination
1	School of Environmental Sciences (SES)	Research Area I- ONEP (153) & 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- TWOP (154) & 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- THRP (155) & THRH (887)	Part-B
4		Research Area IV- FORP (156) & FORH (888)	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 2020-21 will be based on Multiple Choice Questions (MCQs) through Computer Based Test
(CBT)
MCA

Sl. No.	Name of Centre	Sub. Code & Sub. Code (Number)	Syllabus for Entrance Examination
1	School of Computer & Systems Sciences (SC&SS)	Master of Computer Applications- MCAM (224)	Syllabus: General aptitude, reasoning and 10+2 and Bachelor's level mathematics and Computer Science as per the topics specified as under: Maths: Differential and Integral Calculus, Vector Algebra, Trigonometry, 2D-3-D Geometry, Modern Algebra, Numerical Analysis, Probability & Statistics, Real Analysis, Theory of Real Function, Matrices and Determinants Computer Science: Digital Systems Design & Architecture, Programming Languages (C), Data structures, Discrete mathematics.

M.Phil. & Ph.D.

Sl. No.	Name of Centre	Sub. Code & Sub. Code (Number)	Syllabus for Entrance Examination
1	School of Computer & Systems Sciences (SC&SS)	M.Phil - SCSP (158) & Ph.D. - SCSH (890)	<p>Syllabus: 50% of the questions will be from Research Methodology and remaining 50% from Bachelor's/Master's level Mathematics and Computer Science. The topics for both are specified as under:</p> <p>Research Methodology: Experimental Design; Fundamentals of Sampling; Data: types, quality measurement; Processing and Analysis of data; Hypothesis Testing (parametric, nonparametric), Theory of Probability.</p> <p>Maths: Integral and Differential Calculus, Linear Algebra, Numerical Analysis, Modern Algebra.</p> <p>Computer Science: Data Structures and Algorithms, Programming Languages (C, C++), Operating Systems, Discrete Mathematics, Automata Theory, Computer Architecture, Computer Networks, Database Management System.</p>

M.Tech. (Computer Science and Technology)

Sl. No.	Name of Centre	Sub. Code & Sub. Code (Number)	Syllabus for Entrance Examination
1	School of Computer & Systems Sciences (SC&SS)	M.Tech – MTCT (157)	<p>Syllabus: General aptitude, reasoning and Bachelor's/Master's level Mathematics and Computer Science as per the topics as under:</p> <p>Maths: Differential and Integral Calculus, Linear Algebra, Numerical Analysis, Modern Algebra, Probability and Statistics.</p> <p>Computer Science: Data structures, Programming Languages (C, C++), algorithms, Operating Systems, Database Management System, Computer Architecture, Computer Network, Discrete Mathematics, Automata Theory.</p>

M.Tech. (Statistical Computing)

Sl. No.	Name of Centre	Sub. Code & Sub. Code (Number)	Syllabus for Entrance Examination
1	School of Computer & Systems Sciences (SC&SS)	Statistical Computing (Data Science) - MTST (183) Statistical Computing (Data Communication) – MTDT (189)	<p>Syllabus: General aptitude, reasoning and Bachelor's/Master's level mathematics, Statistics and Computer Science as per the topics specified below:</p> <p>PART A</p> <p>Maths and Stats: Probability, Statistics, Operations Research, Real Analysis, Linear Algebra, Modern Algebra.</p> <p>Computer Science: Data structures, Programming Languages (C, C++), Operating Systems, Automata Theory, Discrete Mathematics, Digital Systems Design.</p> <p>PART B</p> <p>Syllabus for Data Science Stream: Databases, Artificial Intelligence and Machine Learning, Data Warehousing, Data Mining.</p> <p>Syllabus for Data Communication Stream: Computer Networks, Network Security, Network Programming, Mobile Computing, Wireless Communication.</p>