

## SYLLABI AND PATTERN OF ENTRANCE EXAMINATIONS

1. The questions in the Entrance Examination for admission to a programme will be of the standard which a student, having passed qualifying examination for admission to that programme, is expected to answer. For example, the questions in the Entrance Examination for admission to M.Com. programme will be of the standard which a student, having passed B.Com. or equivalent qualifying examination, is expected to answer. Similarly, the questions in the Entrance Examination for admission to MBA 5-year and LLB 5-year programmes will be of the standard which a student, having passed 12<sup>th</sup> standard with syllabus prescribed by Board of School Education, Haryana, is expected to answer.
2. The syllabi of M.A./M.Sc./M.Com./equivalent examination (Previous & Final both) will constitute the syllabi for setting question papers for Entrance Examinations for admission to the respective M.Phil./Pre-Ph.D. programmes including University Research Scholarship
3. Each Entrance Examination paper will carry 100 questions of one mark each.
4. Duration of the Entrance Examination shall be 75 minutes.
5. The main topics along with no. of questions are given in the table below. Refer to University's website <<http://www.mdurohtak.ac.in>> & <[www.mdurohtak.com](http://www.mdurohtak.com)> for details of the topics.

### PATTERN OF QUESTION PAPERS

S.No.	Name of the Programme	Syllabi	No. of Questions	Medium of Exam.
<b>Master Degree Programmes</b>				
i.	Agricultural Biotechnology, Biochemistry, Bioinformatics, Biotechnology, Botany, Environmental Sciences, Environmental Biotechnology, Zoology, Human Genomics, Fermentation and Microbial Technology, Food Technology, Forensic Science, Genetics, Medical Biotechnology, Clinical Biochemistry, Microbiology.	a) Botany b) Zoology c) Modern Biology  (Cell Biology, Genetics, Evolutionary Biology, Biochemistry, Microbiology, Environmental Biology, Animal & Plant Physiology, Molecular Biology, Development Biology, Biotechnology and Biostatistics)	25 25 50	English

	<b>Note:</b> There will be a Common Entrance Exam. for the above programmes			
ii.	Chemistry	a) Organic Chemistry b) Inorganic Chemistry c) Physical Chemistry	34 33 33	English
iii.	Commerce	a) Financial Accounting b) Business Mgt. c) Mercantile Law d) Comp. Law & Secretarial Practice e) Money & Banking f) Business Statistics g) Higher Accountancy h) Cost Accounting i) Income Tax Law & Problems j) Indian Economic Problems k) Mgt. Accounting & Fin. Mgt. l) Auditing	10 10 08 08 08 08 08 08 08 08 08 08	English
iv.	Economics	a) Microeconomics b) Macroeconomics c) Economic Development d) Indian Economy e) Reasoning & Quantitative Aptitude	20 20 20 20 20	English
v.	English	a) Applied Grammar b) Comprehension (Poetry) c) Comprehension (Prose) d) General Awareness of English Literature e) Art and Culture in India (Persons, Places, Events, Awards etc. Relating to Current Cultural and Literary Scenes) f) Vocabulary	35 08 07 25 15 10	English
vi.	Geography	a) Physical Geography b) India c) Economic Geography d) Human Geography e) Cartography	25 25 20 20 10	English
vii.	History	a) B.A. Part-I History of India (From earliest times to AD 1526) or History of Haryana b) B.A. Part-II History of India (From AD 1526	30 30	English

		to AD 1947) or History of Indian Freedom Movement c) B.A. Part-III Modern World or Ancient and Medieval World  Note: Attempt 100 questions only as per options.	40	
viii.	Hindi	a) History of Hindi Literature b) Kavya Shastra c) Grammar and Language	70 20 10	Hindi
ix.	Journalism and Mass Communication	a) Current Affairs b) Aptitude Test c) Language Test (English-Hindi)	50 25 25	English
x.	Electronic Media	a) Current Affairs b) Aptitude Test c) Language Test (English-Hindi)	50 25 25	English
xi.	LLM	a) Indian Constitutional Law b) Jurisprudence c) Law of Contract d) Law of Marriage & Divorce e) Indian Penal Code f) Public International Law	20 20 15 15 15 15	English
Xii	Maths & Maths with Computer Science	a) B.A./B.Sc.-I* b) B.A./B.Sc.-II* c) B.A./B.Sc.-III* * MDU Syllabus	30 30 40	English
xiii.	Music	a) Vilambit Khayal/Maseet Khani Gat in any of the following ragas: Yaman Kalyan, Shudh Sarang, Mal Kauns, Bhairav, Gaud Sarang b) Drut khayal/Raza Khani in any of the following : Yaman, Shudh Kalyan, Jai Jai Wanti, Bhairav Chhaya Nat c) One Tarana or Dhrupad (Vocal Music) Gat in Jhap taal or Rupak Taal (Instrumental Music) d) Tunning of Tanpura/Sitar e) Knowledge of the following Taals: Teen Taal, Ektaal, Rupak, Kehraw, Dadra, Chautal	20 20 20 20 20	
xiv.	Physics	a) B.Sc. Part-I* b) B.Sc. Part-II* c) B.Sc. Part-III*	30 30 40	English

		* MDU Syllabus		
xv.	Political Science	a) B.A. Part-I* Option- I : Pol. Theory 18 Option-II : Pol. Theory, Concepts 18 b) B.A. Part-II* Option- I : Indain Govt. & Politics 16 Option-II : Int. Relations 16 c) B.A. Part-III* Paper- I : Comp. Govt. & Politics 16 (Govt. of UK, USA, China, Switzerland) Paper-II : Pub. Admin. 16 * MDU Syllabus		English
xvi.	Psychology	a) Mental Abilities 30 b) General Science (Phy., Chem., & Bio. at par with 10th standard) 10 c) Numerical Ability (at par with Indian Adaptation of DAT) 10 d) Social/Physiological Psychology 10 e) Experimental Psychology 15 f) Abnormal Psychology 25		English
xvii.	Sociology	a) Sociology Syllabus upto B.A. Level 60 b) Current Affairs 20 c) General Studies 20		English
xviii.	Statistics	a) Matrices & Determinants 10 b) Functions, Limits & Continuity 10 c) Differentiations & Applications of Derivatives 10 d) Indefinite Integrals & Definite Integrals 10 e) Differential Equations & Vectors 10 f) Classification, Tabulations & Representation of Data 10 g. Measures of Central Tendency 10 h. Measures of Dispersion 10 i. Correlation & Regression 10 j. Probability & Probability Distributions 10		English
xix.	Public Administration	a) B.A.-I* 30 b) B.A.-II* 30 c) B.A.-III (Option-I)* 20 d) B.A.-III (Option-II) * 20 * MDU Syllabus		English
xx.	Sanskrit	a) Sanskrit Grammar 50 b) History of Sanskrit Literature 40 c) Chhand Alankar 10		Sanskrit
<b>M.Phil./Pre-Ph.D. programmes including URS</b>				
i.	Biotechnology,	<b>Part-I</b>		English

	Biochemistry, Botany, Genetics, and Zoology	<p>Molecules &amp; their Interaction  Relevant to Biology 10  Cellular Organization 07  Fundamental Processes 07  Cell Communication &amp; Signaling 07  Development Biology 05</p> <p><b><u>Part-II</u></b>  System Physiology-Plant 10  System Physiology-Animal 10  Inheritance Biology 07  Diversity of Life Forms 07  Ecological Principles 07  Evolution and Behaviour 06  Applied Biology 07  Methods in Biology 10</p> <p><b>Note 1:</b>  For students of Botany (Plant Sciences), syllabus of System Physiology- Animal will be considered deleted and 10 marks meant for System Physiology-Plant shall be doubled. The same criteria shall be applicable on students of Zoology (Animal Sciences) i.e. System Physiology, Plant will be considered as deleted and 10 marks of System Physiology, Animal shall be doubled.</p> <p><b>Note 2:</b>  For students of Life Sciences subjects other than Botany (Plant Sciences) or Zoology (Animal Sciences), there will be 50% choice of questions from system Physiology-Plant and System Physiology-Animal i.e. they will be required to attempt 10 questions out of 20 questions from each system of Physiology.</p>		
ii.	Chemistry	<p><b><u>Part I</u></b>  Inorganic Chemistry 10  Physical Chemistry 10  Organic Chemistry 10  Spectroscopy 10</p> <p><b><u>Part II</u></b></p>		

		Inorganic Chemistry or Physical Chemistry or Organic Chemistry	60 60 60	
iii.	Commerce	Accounting for Managerial Decisions Management Concepts and Organizational Behaviour Business Environment Managerial Economics Statistical Analysis for Business and Quantitative Techniques for Managerial Decisions Computer Applications to Business Strategic Management Accounting Theory and Practice	13 12 12 12 13 13 12 13	English
iv.	Computer Science & Applications	<b><u>Unit I</u></b> Computer Organization & Arithmetic Programming Languages Data Structure  <b><u>Unit II</u></b> System programming and Compiler Software Engineering Computer Graphics  <b><u>Unit III</u></b> Database Data Warehousing Data mining  <b><u>Unit IV</u></b> Computer Network Web-developments Operating System	10 05 10  08 09 08  10 08 07  09 09 07	English
v.	Defence & Strategic Studies	<b><u>Unit I</u></b> Theories and Concepts <b><u>Unit II</u></b> Problems of place & security  <b><u>Unit III</u></b> Global Security Issues  <b><u>Unit IV</u></b> Issues in Conflict Resolution  <b><u>Unit V</u></b> Economic, Science and Technology issues and National Security	20 20 20 20 20	English

		<b>Note: Admission to M.Phil. programme shall be made on the basis of academic merit in the qualifying examination.</b>		
vi.	Economics	Microeconomics Macroeconomics Development economics Indian Economy Public Economy Mathematics for Economics Statistical Techniques International Economics	20 20 10 10 10 10 10 10	English
vii.	Education	Phil. Fds. of Education Socio. Fds of Education Psychological Fds. of Education Educational Research	17 17 33 33	English
viii.	English	The Entrance Examination paper will consist of 100 questions of one mark each, based on the syllabus of M.A (Previous) and M.A. (Final) for the last year of the University, but not necessarily on the authors and texts prescribed in the syllabus. The paper will consist of two parts. The first part will consist of 50 questions with multiple choice answers. The second part will also have 50 questions.	100	English
ix.	Environmental Biotechnology and Environmental Sciences	<b><u>Unit I</u></b> Fundamentals of Environmental Chemistry; Chemical composition of air water Chemistry; Toxic chemicals in the environment; Principles of analytical methods  <b><u>Unit II</u></b> Ecosystems; Population Ecology; Common flora and fauna in India; Biodiversity and its conservation; natural Resources  <b><u>Unit III</u></b> Environmental Geosciences; The Earth Systems and Biosphere; Earth's Processes and Geological Hazards; Mineral resources and environment; Water resources and environment; Environmental Geochemistry  <b><u>Unit IV</u></b>	25  25  25  25	English

		Environmental Biotechnology; Biosensors; Genetic Engineering; Environmental Genomics; Biosafety		
x.	Food Technology	Introductory Food Technology Fruits and Vegetable Processing Cereals, Pulses and Oil seeds Processing Technology of Milk & Milk Products Technology of Meat/Fish/Poultry Products Food Quality Management Food Engineering/Packaging and Labeling Food Biotechnology	15 15 15 15 10 10 10 10	English
xi.	Geography	Geomorphology Climatology Geographical Thought Population Geography Economic Geography Political Geography Social Geography Geography of India Regional Planning Statistical Methods	10 10 10 10 10 10 10 10 10	English
xii.	Hindi	The entrance examination paper will consist of 100 questions of one mark each, based on the syllabus of M.A. (Previous) and M.A.(Final).  History of Hindi literature Kavya Shastra Language	  60 20 20	Hindi
xiii.	History	<b><u>Part I</u></b> M.A. (Prev.) syllabus (Compulsory for all examinees)  <b><u>Part II</u></b> Indian Archaeology or Ancient Indian History or Medieval Indian History or Modern Indian History	50   50 in each option. Only one option is to be attempted	English
xiv.	Law	Jurisprudence Constitution of India Law of Contract Indian Penal Code Law of Torts International Law	20 16 16 16 16 16	English

xv.	Management	Managerial Economics Organizational Behavior Human Resource Mgt. Financial Management Marketing Management Production Management Statistical Tools for Business Research Use of Computers and Software in Management Subjects	10 10 10 10 10 10 20 20	English
xvi.	Journalism and Mass Communication	Basic Concepts in Communication Mass Media and Society Essential of Journalism Evolution of Media in India Development Communication Communication Research International Communication Radio, T.V. & New Media Production Advertising and Public Relations Media Writing	10 10 10 10 10 10 10 10 10 10	English
xvii.	Mathematics	Advanced Abstract Algebra; Real Analysis; Topology; Complex Analysis; Differential Equations; Integration Theory and Functional Analysis; Partial Differential Equations; Mechanics	100	English
xviii.	Music	Analytic study of Ragas Comparative study of Ragas Detailed knowledge of different musical forms Detailed study of technical study of music Contribution of musicians Introduction of talas Study of granthas of music Origin & development of instruments Research methodology Knowledge of folk music of different states  <b>Note: Admission to M.Phil. will made on the basis of academic merit in the qualifying examination</b>	10 10 10 10 10 10 10 10 10 10	
xix.	Pharmaceutical Sciences	Natural Products Pharmacology Medicinal Chemistry Pharmaceutics Pharmaceutical Jurisprudence Pharmaceutical Analysis Biochemistry	10 15 15 10 10 10 10	English

		Microbiology	10	
		Clinical Pharmacy	10	
xx.	Physical Education	Sports Psychology	08	English
		History & principles of Physical Education & Sports	08	
		Kinesiology	08	
		Anatomy, Physiology, Physiology of Exercise and Sports Medicine	10	
		Sports Sociology	05	
		Bio-mechanics in Physical Education	08	
		Officiating and Coaching (rules, dimensions, regulations of major athletic & sports (games event)	08	
		Health Education	05	
		Yoga	05	
		Research Methodology	08	
		Test Measurement and Evaluation in Physical Education	08	
		Sports Management	04	
		Computer Applications	05	
		Current Affairs	05	
		Sports Training	05	
xxi.	Physics	<b><u>Unit –I</u></b>		English
		Mathematical Physics	6	
		Classical Mechanics	6	
		Quantum Mechanics-I	6	
		Electronic Devices	7	
		<b><u>Unit-II</u></b>		
		Statistical Mechanics	6	
		Quantum Mechanics-II	6	
		Nuclear and Particle Physics	6	
		Atomic and Molecular Physics-I	7	
		<b><u>Unit-III</u></b>		
		Computational Methods & Programming	6	
		Atomic & Molecular Physics-II	6	
		Solid State Electronics	6	
		Digital Electronics	7	
		<b><u>Unit-IV</u></b>		
		Electrodynamics & Wave Propagation	6	
		Condensed Matter Physics	6	
		Informatics-I	6	
		Electronics-II	7	
xxii.	Political Science	Political Theory and Thought	20	English
		Comparative Politics and Political Analysis	20	
		Indian Government and Politics	20	
		Public Administration	20	
		International Relations	20	
xxiii.	Psychology	Theories of Psychology	30	English

		Research Methods and Statistics	30	
		Experimental Psychology and Cognitive Processes	30	
		Current issues in pure and Applied Psychology	10	
xxiv.	Public Administration	Administrative Theory and Thoughts	25	English
		Indian Administration	25	
		Development Administration	25	
		Research Method	25	
xxv.	Sanskrit	<b>Part-I</b>		Sanskrit
		Vedic Literature	10	
		Indian Philosophy	10	
		Sanskrit Grammar	10	
		Classical Literature	10	
		Linguistics (Bhasha Vigyan)	10	
		Indian Culture	10	
		<b>Part-II</b>		
		Sanskrit Grammer	40	
		or		
		Indian Philosophy	40	
		or		
		Classical Literature	40	
		or		
		Vedic Literature	40	
xxvi.	Statistics	Probability theory	20	English
		Statistical Methods	20	
		Inference	20	
		Sampling Techniques	20	
		Design of Experiments	20	
xxvii.	Sociology	Introduction to Sociology/ Basic Concepts	15	English
		Sociological Thinkers	10	
		Classical Sociology Theories	10	
		Research Methodology	15	
		Society and culture and India	10	
		Advanced Sociological Theories	10	
		Understanding Indian Society	10	
		Rural Sociology	10	
		Quantitative Techniques	10	
xxviii	Visual Arts	Art Introduction & Appreciation	10	
		Methods & Materials	10	
		Art Appreciation	30	
		History of Art	50	
<b>Professional Programmes</b>				
xxix.	LLB 3-year (Morning & Evening)	a) General English	25	English
		b) General Hindi	25	
		c) General Knowledge	50	

		<p>The General Knowledge area will cover the following fields of knowledge:</p> <ol style="list-style-type: none"> <li>1) Current Events of National and International Importance;</li> <li>2) General Science;</li> <li>3) History of India;</li> <li>4) Geography; and</li> <li>5) Indian Polity &amp; Economy.</li> </ol> <p>Standard of questions will be as may be expected of a graduate who has not made any special study in any of the areas given above.</p>		
xxx.	LLB 5-year Integrated	<ol style="list-style-type: none"> <li>a) Legal Aptitude</li> <li>b) Reasoning</li> <li>c) General English</li> <li>d) General Hindi</li> <li>e) General Knowledge</li> </ol> <p>The General Knowledge area will cover the following fields of knowledge:-</p> <ol style="list-style-type: none"> <li>1) Current Events of National and International Importance</li> <li>2) General Science</li> <li>3) History of India</li> <li>4) Geography; and</li> <li>5) Indian Polity &amp; Economy</li> </ol> <p><b>Note:</b> The standard of questions will be that of 12<sup>th</sup> standard as prescribed by the Board of School of Education, Haryana.</p>	20 20 20 20 20	English
Xxxi	MBA 2-year	<ol style="list-style-type: none"> <li>a) General English (including comprehension, vocabulary, usage and grammar etc.)</li> <li>b) Numerical Ability and Reasoning</li> <li>c) General Awareness</li> <li>d) Management Aptitude</li> </ol> <p>Standard of questions will be as may be expected of a graduate who has not made any special study in any of the areas given above.</p>	25 25 25 25	English

xxxii.	MBA 5-year	<p>a) General English (including comprehension, vocabulary, usage and grammar etc.) 25</p> <p>b) Numerical Ability and Reasoning 25</p> <p>c) General Awareness 25</p> <p>d) Management Aptitude 25</p> <p><b>Note:</b> The standard of questions for General English and numerical ability will be that of 10<sup>th</sup> standard as prescribed by the Board of School Education Haryana, Bhiwani.</p>		English
xxxiii	M.Ed.	<p>a) Education in Emerging Indian Society 20</p> <p>b) Psychology of Teaching and Learning 20</p> <p>c) Educational Technology 20</p> <p>d) General Awareness of Education and Teacher Education 20</p> <p>e) Mental Ability, Reasoning &amp; Problem Solving 20</p> <p>Standard of questions will be as may be expected of a graduate who has not made any special study in any of the areas given above.</p>		English
xxxiv.	M.P.Ed.	<p>a) Sports Terms 10</p> <p>b) History of Sports 10</p> <p>c) Sports performance 10</p> <p>d) Sportspersons and Games 10</p> <p>e) Sports Awards and their winners 10</p> <p>f) Trophies and Games to which they are associated and winners of these Trophies 10</p> <p>g) Anatomy and Physiology 10</p> <p>h) Allied Sports and Rules &amp; Regulations of various Games played in India 10</p> <p>i) General I.Q./Current Affairs (not necessarily related to Sports) 20</p>		English