

SECTION-III: 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 12th 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> for details of the topics.
6. The Entrance Exam.(s) question papers shall be both in Hindi and English, as before.

PATTERN OF QUESTION PAPERS

Sr.No.	Name of the Programme	Syllabi	No. of Questions
Master Degree Programmes			
i.	Chemistry	a) Organic Chemistry b) Inorganic Chemistry c) Physical Chemistry	34 33 33
ii.	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
iii.	Economics (UTD)	a) Microeconomics b) Macroeconomics c) Economic Development d) Indian Economy e) Reasoning & Quantitative Aptitude	20 20 20 20 20
iv.	English (UTD) and DCRUST Murthal	a) Applied Grammar b) Comprehension (Poetry)	35 08

		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	07 25 15 10
v.	Geography	a) Physical Geography b) Geography of India c) Economic Geography d) Human Geography e) Cartography	25 25 20 20 10
vi.	Hindi	a) History of Hindi Literature b) Kavya Shastra c) Grammar and Language	70 20 10
vii.	History (UTD).	B.A. Ist Year (MDU) Option I: History of India (earliest times to A.D. 1526) Option II: History of Haryana B.A. IInd Year (MDU) Option I: History of India (1526-1857) Option II: History of India (1857-1950) B.A. IIIrd Year (MDU) Option I: Ancient and Medieval World Option II: History of Modern World	15 15 15 15 20 20
viii.	Journalism and Mass Communication	a) Current Affairs b) Aptitude Test c) Language Test (English-Hindi)	50 25 25
ix.	LL.M	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
x.	MCA 2 nd year (Lateral Entry Scheme)	a) Computer Fundamental b) Programming in C and C++ c) Mathematics d) Digital Design & Computer Organization e) Data Structure f) Database Management System g) Operating System h) Computer Networks i) Internet and Web Technology j) Software Engineering	10 10 10 10 10 10 10 10 10 10

xi	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
xii.	Physics	a) B.Sc. Part-I b) B.Sc. Part-II c) B.Sc. Part-III MDU Syllabus	30 30 40
xiii.	Political Science	a) B.A. Part-I Option- I : Pol. Theory Option-II : Pol. Theory, Concepts b) B.A. Part-II Option- I : Indian Govt. & Politics Option-II : Int. Relations c) B.A. Part-III Option- I : Comp. Govt. & Politics (Govt. of UK, USA, China, Switzerland) Option-II : Pub. Admin. MDU Syllabus	18 18 16 16 16 16
xiv.	Psychology	Introduction of Psychology- Experimental Psychology- Social Psychology- Developmental Psychology- Psychopathology - Applied Psychology- B: Mental Abilities Verbal Reasoning - Numerical Reasoning - Non-Verbal Reasoning - Gen. Science upto 10th standard - (Physics, Chemistry & Biology)	10 10 10 10 10 10 10 10 10 10
xv.	Public Administration	a) B.A.-I b) B.A.-II c) B.A.-III (Option-I) d) B.A.-III (Option-II) MDU Syllabus	30 30 20 20
xvi.	Sanskrit	a) Sanskrit Grammar b) History of Sanskrit Literature c) Chhand Alankar	50 40 10

xvii.	Sociology	a) Sociology Syllabus upto B.A. Level b) Current Affairs c) General Studies	60 20 20
Xviii	Education	a) Mental Ability b) general Knowledge c) Indian educational thinkers d) Numerical ability	30 30 20 20
xix	M.Sc. (Hons.) 5-Year Integrated Mathematics	10+1 & 10+2 level of CBSE/ Haryana Board of School Education, Bhiwani a) 10+1 b) 10+2	40 60
xx	M.A. (Hons.) 5-Year Integrated English	The written test will be of 100 marks and will have 100 questions of one mark each. The standard of questions will be that of the 12th standard as per syllabi prescribed by the Board of School Education, Bhiwani/ CBSE.	100

M.Phil/Pre-Ph.D. programmes including URS

i.	Biotechnology, Biochemistry, Botany, Genetics, Zoology and Medical Biotechnology	<p><u>Part-I</u> Molecules & their Interaction Relevant to Biology Cellular Organization Fundamental Processes Cell Communication & Signaling Development Biology</p> <p><u>Part-II</u> System Physiology-Plant System Physiology-Animal Inheritance Biology Diversity of Life Forms Ecological Principles Evolution and Behaviour Applied Biology Methods in Biology</p> <p>Note 1: For students of Botany (Plant Sciences), syllabus of System Physiology- Animal will</p>	10 07 07 07 05 10 10 07 07 07 06 07 10
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		<p>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>Note 2: 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.	Microbiology	<ul style="list-style-type: none"> i) Microbiology 15 ii) Microscopy 5 iii) Microbial Energetics and Biochemistry 15 iv) Molecular Biology 10 v) Microbial bioprocesses 10 vi) Fermentation Technology 10 vii) Immunology and medical microbiology 10 viii) Genetics Engineering 10 ix) Bioinformatics 10 x) Biostatistics 5 	
iii.	Bio-informatics	<ul style="list-style-type: none"> i) Biological database 10 ii) Computer fundamental and biological algorithm 10 iii) Programming concepts 10 iv) Object oriented programming 10 v) Systems Biology 10 vi) Computational Genomics 10 vii) Proteomics 10 viii) Molecular modeling 10 ix) Drug Designing 10 x) Chemo-informatics 10 	
iv.	Forensic Science	<ul style="list-style-type: none"> 1. General Forensic Science including Criminology & Law 05 2. Questioned Document Examination 05 3. Finger Prints Examination 05 4. Computer Forensics & Forensic Psychology 05 	

		5. Criminalistics 6. Research Methodology and Biostatistics 7. Instrumental Analysis 8. Forensic Ballistics 9. Forensic Chemistry 10. Forensic Toxicology 11. Forensic Biology 12. Forensic Serology including DNA forensics 13. Forensic Physical Anthropology and Forensic Medicine	05 05 10 10 10 10 10 10
v.	Chemistry	<u>Part I</u> Inorganic Chemistry Physical Chemistry Organic Chemistry Spectroscopy <u>Part II</u> Inorganic Chemistry or Physical Chemistry or Organic Chemistry	10 10 10 10 60 60 60
vi.	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
vii.	Computer Science & Applications	<u>Unit I</u> Computer Organization & Arithmetic Programming Languages Data Structure <u>Unit II</u> System programming and Compiler Software Engineering Computer Graphics <u>Unit III</u> Database Data Warehousing Data mining	10 05 10 08 09 08 10 08 07

		Unit IV Computer Network Web-developments Operating System	09 09 07
viii.	Defence & Strategic Studies	Unit I Theories and Concepts Unit II Problems of place & security Unit III Global Security Issues Unit IV Issues in Conflict Resolution Unit V Economic, Science and Technology issues and National Security Note: Admission to M.Phil programme shall be made on the basis of academic merit in the qualifying examination.	20 20 20 20 20 20
ix.	Economics	Microeconomics Macroeconomics Development economics Indian Economy Public Economy Mathematics for Economics Statistical Techniques International Economics	20 20 10 10 10 10 10 10
x.	Education	Phil. Fdns. of Education Socio. Fdns of Education Psychological Fdns. of Education Educational Research	17 17 33 33
xi.	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
xii.	Environmental Biotechnology and Environmental Sciences	Unit I Fundamentals of Environmental Chemistry; Chemical composition of air water Chemistry; Toxic chemicals in the environment; Principles of analytical methods	25

		<p><u>Unit II</u> Ecosystems; Population Ecology; Common flora and fauna in India; Biodiversity and its conservation; Natural Resources</p> <p><u>Unit III</u> Environmental Geosciences; The Earth Systems and Biosphere; Earth's Processes and Geological Hazards; Mineral resources and environment; Water resources and environment; Environmental Geochemistry</p> <p><u>Unit IV</u> Environmental Biotechnology; Biosensors; Genetic Engineering; Environmental Genomics; Biosafety</p>	25 25 25
xiii.	Food Technology	<p>Introductory Food Technology</p> <p>Fruits and Vegetable Processing</p> <p>Cereals, Pulses and Oil seeds Processing</p> <p>Technology of Milk & Milk Products</p> <p>Technology of Meat/Fish/Poultry Products</p> <p>Food Quality Management</p> <p>Food Engineering/Packaging and Labeling</p> <p>Food Biotechnology</p>	15 15 15 15 10 10 10 10
xiv.	Geography	<p>Geomorphology</p> <p>Climatology</p> <p>Geographical Thought</p> <p>Population Geography</p> <p>Economic Geography</p> <p>Political Geography</p> <p>Social Geography</p> <p>Geography of India</p> <p>Regional Planning</p> <p>Statistical Methods</p>	10 10 10 10 10 10 10 10 10 10
xv.	Hindi	<p>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)</p> <p>History of Hindi literature</p> <p>Kavya Shastra</p> <p>Language</p>	60 20 20

xvi	History	M.A.(Previous) a) Ancient Societies 10 b) Medieval Societies 10 c) Modern world 10 d) State in India 10 e) History of Haryana 10 M.A. (Final) a) Historiography; concepts, methods and tools 10 b) Indian Archaeology 10 c) Ancient Indian History 10 d) Medieval Indian History 10 e) Modern Indian History 10	
xvii.	Law	Jurisprudence 20 Constitution of India 16 Law of Contract 16 Indian Penal Code 16 Law of Torts 16 International Law 16	
xviii.	Business Management	Managerial Economics 10 Organizational Behavior 10 Human Resource Mgt. 10 Financial Management 10 Marketing Management 10 Production Management 10 Statistical Tools for Business Research 20 Use of Computers and Software in Management Subjects 20	
xix.	Journalism and Mass Communication	Basic Concepts in Communication 10 Mass Media and Society 10 Essential of Journalism 10 Evolution of Media in India 10 Development Communication 10 Communication Research 10 Inter-national Communication 10 Radio, T.V. & New Media Production 10 Advertising and Public Relations 10 Media Writing 10	
xx	Mathematics	Advanced Abstract Algebra; Real Analysis; Topology; Complex Analysis; Differential Equations; Integration Theory and Functional Analysis; Partial Differential Equations; Mechanics	100
xxi	Music	Analytic study of Ragas 10 Comparative study of Ragas 10 Detailed knowledge of different Musical forms 10	

		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 Note: Admission to M.Phil will made on the basis of academic merit in the qualifying examination	10 10 10 10 10 10 10
xxii	Pharmaceutical Sciences	Natural Products Pharmacology Medicinal Chemistry Pharmaceutics Pharmaceutical Jurisprudence Pharmaceutical Analysis Biochemistry Microbiology Clinical Pharmacy	10 15 15 10 10 10 10 10 10
xxiii	Physical Education	Sports Psychology History & principles of Physical Education & Sports Kinesiology Anatomy, Physiology, Physiology Exercise and Sports Medicine Sports Sociology Bio-mechanics in Physical Education Officiating and Coaching (rules, dimensions, regulations of major athletic & sports (games event) Health Education Yoga Research Methodology Test Measurement and Evaluation in Physical Education Sports Management Computer Applications Current Affairs Sports Training	08 08 08 10 05 08 08 05 05 08 08 04 05 05 05
xxiv	Physics	<u>Unit –I</u> Mathematical Physics Classical Mechanics Quantum Mechanics-I Electronic Devices <u>Unit-II</u> Statistical Mechanics	6 6 6 7 6

		Quantum Mechanics-II Nuclear and Particle Physics Atomic and Molecular Physics-I Unit-III Computational Methods & Programming Atomic & Molecular Physics-II Solid State Electronics Digital Electronics Unit-IV Electrodynamics & Wave Propagation Condensed Matter Physics Informatics-I Electronics-II	6 6 7 6 6 6 7 6 6 6 7
xxv	Political Science	Political Theory and Thought Comparative Politics and Political Analysis Indian Government and Politics Public Administration Inter-national Relations	20 20 20 20 20
xxvi	Psychology	Fundamentals of Psychology Applied Psychology Research Methods & Statistics	40 30 30
xxvii	Public Administration	Administrative Theory and Thoughts Indian Administration Development Administration Research Method	25 25 25 25
xxviii	Sanskrit	Part-I Vedic Literature Indian Philosophy Sanskrit Grammar Classical Literature Linguistics (Bhasha Vigyan) Indian Culture Part-II Sanskrit Grammer or Indian Philosophy or Classical Literature or Vedic Literature	10 10 10 10 10 10 40 40 40 40
xxix	Statistics	Probability theory Statistical Methods Statistical Inference	15 15 15

		Sampling Techniques Design of Experiments Applied Statistics Complex Analyst Numerical Methods Linear Programming	10 08 12 07 08 10
xxx	Sociology	Introduction to Sociology/ Basic Concepts Sociological Thinkers Classical Sociology Theories Research Methodology Society and culture in India Advanced Sociological Theories Understanding Indian Society Rural Sociology Quantitative Techniques	15 10 10 15 10 10 10 10 10 10
xxxii	Visual Arts	Art Introduction & Appreciation Methods & Materials Art Appreciation History of Art	10 10 30 50
xxxiii	Computer Science & Engg.	i) Database Management system ii) Operating system iii) Data Structures iv) Computer Networks v) Software Engg. vi) Automata Theory vii) Analysis & Design of Algorithms viii) Advanced Computer Architecture ix) Programming Languages x) Discrete Structures	10 10 10 10 10 10 10 10 10 10
xxxiiii	Bio-technology Engg.	i) Molecular Biology and genetics engineering ii) Immunology and diagnostics iii) Biotechniques iv) Plant biotechnology v) Industrial Biotechnology and fermentation technology vi) Drug and Vaccine development vii) Animal Biotechnology viii) Bioprocess Engineering ix) Bioinformatics x) Genomics & Proteomics xi) Biosensors xii) IPR, Bioethics and Biosafety xiii) Environmental Biotechnology xiv) Stem, cells xv) Biostatistics	10 10 10 10 10 5 5 5 5 5 5 5 5 5 5

xxxiv	Electronics & Communication Engg.	<ul style="list-style-type: none"> i) Analog & Digital Electronics ii) Control system iii) Communication Engg. iv) Satellite Communication v) VLSI vi) Microprocessors vii) DSP viii) Data Communication ix) Wireless Communication x) Optical Network 	<ul style="list-style-type: none"> 5+5 10 10 10 10 10 10 10 10 10
xxxv	Mechanical Engg.	<ul style="list-style-type: none"> i) Manufacturing & production ii) Design iii) Thermal Engg iv) Industrial Engg. v) CAD/CAM/CIM vi) Robotics & Automation 	<ul style="list-style-type: none"> 20 20 20 15 15 10
xxxvi	Textiles Engg.	<p>Group-A: Compulsory :Weightage:-50% i.e., 50 questions, containing general subjects:</p> <ul style="list-style-type: none"> i) Textile Raw Material ii) Fibre Science iii) Testing iv) Fabric Structure v) Technical Textiles <p>Group: B Optional: Weightage:-50% i.e., 50 questions, containing Textile Technology related subjects:</p> <ul style="list-style-type: none"> i) Spinning ii) Weaving iii) Texturising iv) Structure & Properties of Fibres <p>Group C: Optional: Weightage:-50% i.e., 50 questions, containing Textile Chemistry related subjects:</p> <ul style="list-style-type: none"> i) Preparatory processes ii) Dyeing iii) Printing iv) Finishing v) Recent developments in Chemical Processing 	<ul style="list-style-type: none"> 10 10 10 10 10 15 15 10 10 10 10 10 10 10

		Group D: Optional: Weightage: 50% i.e., 50 questions, containing Fashion & Apparel Engineering related subjects: i) Fashion Designing 15 ii) Garment Manufacturing Technology 15 iii) Apparel Construction 10 iv) Pattern Making, grading & draping 10	
xxxvii	Hotel & Tourism Management	i) Guest service management (Front Office, F&B Service) 10 ii) Housekeeping Operations & Management 10 iii) Culinary Services & Management 10 iv) Travel & Tourism Management 10 v) Transport Systems & Management 10 vi) Human Resource Management 10 vii) Marketing Management 10 viii) Statistical tools for Hospitality & Tourism 10 ix) Researching Hospitality & Tourism Management 10 x) Use of Computers and Software in Hospitality & Tourism. 10	
xxxviii	Library & Information Science	Two years integrated M.L.I.Sc of the last year of this University.	100
PROFESSIONAL PROGRAMMES			
i.	LL.B(Hons)3-year (Morning & Evening)	a) General English 25 b) General Hindi 25 c) General Knowledge 50 The General Knowledge area will cover the following fields of knowledge: 1) Current Events of National and International Importance 2) General Science 3) History of India 4) Geography 5) Indian Polity & Economy 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.	

ii.	LLB(Hons)5-year Integrated	<p>a) Legal Aptitude b) Reasoning c) General English d) General Hindi e) General Knowledge</p> <p>The General Knowledge area will cover the following fields of knowledge:-</p> <p>1) Current Events of National and International Importance 2) General Science 3) History of India 4) Geography 5) Indian Polity & Economy</p> <p>Note: The standard of questions will be that of 12th standard as prescribed by the Board of School of Education, Haryana.</p>	20 20 20 20 20
iii.	MBA 2-year	<p>a) General English (including comprehension, vocabulary, usage and grammar etc.) b) Numerical Ability and Reasoning c) General Awareness d) Management Aptitude</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>	25 25 25 25
iv.	MBA 5-year integrated	<p>a) General English (including comprehension, vocabulary, usage and grammar etc.) b) Numerical Ability and Reasoning c) General Awareness d) Management Aptitude</p> <p>Note: The standard of questions for General English and numerical ability will be that of 10th standard as prescribed by the Board of School Education Haryana, Bhiwani.</p>	25 25 25 25

v.	M.P.Ed.	<ul style="list-style-type: none"> a) Sports Terms b) History of Sports c) Sports performance d) Sportspersons and Games e) Sports Awards and their winners f) Trophies and Games to which they are associated and winners of these Trophies g) Anatomy and Physiology h) Allied Sports and Rules & Regulations of various Games played in India i) General I.Q./Current Affairs (not necessarily related to Sports) 	<ul style="list-style-type: none"> 10 10 10 10 10 10 10 10 20
vi.	M.Ed	<ul style="list-style-type: none"> a) Education in emerging Indian society. b) Psychology of teaching c) Educational Technology d) General awareness of education & Teacher education e) Mental ability, Reasoning & Problem solving 	<ul style="list-style-type: none"> 20 20 20 20 20
vii.	B.Pharmacy	<ul style="list-style-type: none"> a) Physics b) Chemistry c) Mathematics OR Biology <p>Note: The standard of questions will be that of the 12th standard, as prescribed by the Board of School Education Haryana, Bhiwani</p>	<ul style="list-style-type: none"> 35 35 30