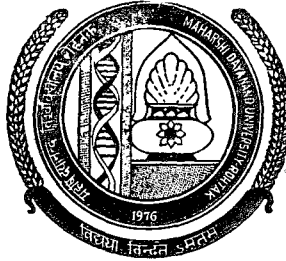


# Maharshi Dayanand University Rohtak



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## Ordinances, Syllabus and Courses of Reading for

*M.A.* M.Sc. (Prev.) Geography  
Examination

Session—2002-2003

*Available from :*

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## **ORDINANCE - 'MASTER OF SCIENCE EXAMINATION'**

1. The Master of Science Examination shall be held in two parts. Part-I examination shall be held at the end of the first year and Part-II Examination at the end of the second year.
2. The Examination in Part-I and Part-II shall be held once a year ordinarily in the month of April on such dates as may be fixed by the Vice-Chancellor. A supplementary examination in Part-II of M.Sc. will be held in December for those candidates who have passed all the papers of part-I examination but have got 'reappear' or have failed or want to improve their score in paper(s) of part-II examination. However, total number of chances will not exceed as given in the Ordinance.
3. The last date for the receipt of admission form and fee without late fee as fixed by the Vice-Chancellor shall be notified to the Heads of the University Teaching Departments and the Colleges concerned.
4. A candidate's admission form and fee may be accepted after the last date on payment of late fee as prescribed from time to time up to the date notified by the University.  
No late fee shall be charged if the admission form and fee are received within three working days of grace after the last date for the receipt of the same without late fee.
5. No one shall be eligible to join the first year (Part-I) class of M.Sc. Course unless he has passed one of the following examination:-
  - a) B.Sc. (Hons.) examination of this University with atleast 45% marks in the aggregate in the subject offered for the M.Sc. Course.
  - b) B.Sc. (Pass) examination with atleast 50% marks in the aggregate.
  - c) An examination of any other university recognised by the University as equivalent to (a) or (b) above.Provided that :
  - i) to be eligible to join M.Sc. Course in Physics, a candidate must have passed B.Sc. Examination with Physics and Mathematics as two of the main subjects:

(ii)

- ii) to be eligible to join M.Sc. Chemistry, a candidates must have passed B.Sc. Examination with Chemistry as one of the main subject.

**Note :** A Minimum of 25% of the total seats shall be filled in by the students who have passed the B.Sc. Examination with Chemistry, Physics and Mathematics. Any seat remaining unfilled out of this quota may be offered to other eligible candidates

- iii) The eligibility condition for admission to M.Sc. courses shall be as follows :

**Bio-Chemistry and Bio-Technology:**

B.Sc. (Hons.) exam. of this university in the subject offered for the M.Sc. course or an examination of another University recognised as equivalent thereto with atleast 45% marks in the aggregate.

OR

B.Sc. (Pass) examination of this University or an examination of another University recognised as equivalent thereto with atleast 50% marks in the aggregate provided that a candidate must have passed B.Sc. examination with any three of the subjects Botany, Zoology, Chemistry, Microbiology, Genetics, Environmental Science, Medical Bio-Chemistry, Bio-Technology, Bio-Chemistry, Bio-Chemical Engineering, Fermentation Technology, Food Processing, Medical Laboratory Technology, Industrial Chemistry, Applied Haematology and Industrial Microbiology.

**Note :**

Out of the three subjects atleast one should be related to Biology.

OR

Bachelor degree with 50% marks in Pharmacy/Home Science/Agriculture/Veterinary Science from a recognised University.

**M.Sc. (Previous) in Botany, Environmental Sciences, Genetics and Zoology.**

- a) B.Sc. (Hons.) examination of this university in the subject offered for the M.Sc. course or an examination of another University recognised as equivalent thereto with atleast 45% marks in the aggregate.

(iii)

OR

- b) B.Sc. (Pass) examination of this University or an examination of another University recognised as equivalent thereto with atleast 50% marks in the aggregate provided that :
- i) to be eligible to join M.Sc. Botany, a candidate must have passed B.Sc. examination with Botany and any two of the subjects viz. Zoology, Chemistry, Microbiology, Environmental Science, Bio-Chemistry, Bio-Technology, Anthropology, Fisheries and Genetics.
  - ii) to be eligible to join M.Sc. Environmental Science a candidate must have passed B.Sc. examination with any three of the subjects viz. Botany, Zoology, Chemistry, Microbiology, Environmental Science, Bio-Chemistry, Bio-Technology, Anthropology, Fisheries and Genetics.
  - iii) to be eligible to join M.Sc. Genetics a candidate must have passed B.Sc. examination with any three of the subjects viz. Botany, Zoology, Chemistry, Microbiology, Environmental Science, Bio-Chemistry, Bio-Technology, Anthropology, Fisheries, Geology and Genetics.
  - iv) to be eligible to join M.Sc. Zoology, a candidate must have passed B.Sc. examination with Zoology and any two of the subjects viz. Botany, Chemistry, Microbiology, Environmental Science, Bio-Chemistry, Bio-Technology, Anthropology, Fisheries and Genetics.
- iv) conditions for admission to M.Sc. Course in Mathematics shall be same as prescribed for admission viz. M.A. Course in this subject.
- v) To be eligible to join M.Sc. Course in Geology, a candidate must have passed B.Sc. Examination with atleast 50% marks in the aggregate with Geology and any of two of the subjects viz. Physics, Mathematics, Chemistry, Botany, Zoology, Bio-Science and Geography;
- vi) to be eligible to join M.Sc. Course in

(iv)

Mathematical Statistics and Operations Research a candidate must have passed B.A./B.Sc. (Pass) Examination with atleast 50% marks in the aggregate with Mathematics or Statistics as one of the subjects or have passed B.A./B.Sc. (Hons.) Examination in Mathematics or Statistics with atleast 45% marks in Mathematics/Statistics.

There shall be a Project Report in M.Sc. Mathematical Statistics (Final) and that the project report shall be evaluated by the external examiner on five point grading. The last date for submission of Project Report will be two months after the theory papers which can be extended further by two months with the permission of the Vice-Chancellor.

*Note : A candidate who is placed under compartment in the qualifying Examination shall not be allowed to join M.Sc. Course. He/She will be eligible only after clearing the qualifying Examination.*

- 6.1 A candidate who has failed in one or more papers or fails to appear in the examination shall be allowed two additional subsequent chances only to pass the examination.
- 6.2 A candidate who fails to pass the M.Sc. examination within a period of four years of his admission to the course shall be deemed to be unfit for postgraduate studies in the subject concerned.
- 6.3 A person who has passed the M.Sc. (Previous) examination in the subject concerned from this University shall be eligible to join the M.Sc. final class. This is subject to Clause-6.2 above. However, the candidate who have passed atleast two theory papers out of four or five theory papers or atleast three theory papers out of six or seven theory papers of part-I examination of this University will be promoted to Part-II Class provisionally.
7. M.Sc. Examination in Part-I/Part-II shall be open to a student who :-
  - a) has passed the requisite qualifying Examination or is covered under Clause-6 and
  - b) has his name submitted to the Controller of Examinations by the Head of the University Department/Principal of the College. He has

most recently attended and produces the following certificates signed by him:-

- i) of possessing good character.
  - ii) of having remained on the rolls of the Department/College, during the year preceding the Examination.
  - iii) of having attended not less than 65% of full course of lectures and tutorial separately and 75% of practicals in each part (the course to be counted upto the last day when the classes break up for the preparatory holidays).
8. A candidate whether a regular student or an ex-student shall submit his admission application to the Registrar/Controller of Examination duly signed by the Principal of the College/Head of the University Department he has last attended.
9. Every candidate shall be examined according to the Scheme of examination and syllabus as approved by the Academic Council from time to time.
10. The amount of Examination fee to be paid by a candidate for each part shall be as prescribed from time to time.

Note : A candidate who re-appears in one or more theory or practical papers for the purpose of passing the examination or a candidate who appears in one or more theory papers for the purpose of improvement of score of marks/result shall pay fee as for the whole examination.

11. The medium of instructions and examination shall be English.
- 12.1 The minimum number of marks required to pass the examination shall be as under:-
- i) 33% in each paper (written and practical) separately;
  - ii) 40% in dissertation/viva-voce where prescribed;
  - ii) 40% in aggregate.
- 12.2 A candidate who has completed the prescribed course of instructions in a college/University Teaching Department for Previous/Final examination but has not appeared in it or have appeared fails may be allowed on the recommendation of the Principal of the College/ Head of University Teaching Department concerned to appear in the subsequent years in the

examination paper(s) as the cases may be without attending a fresh course of instructions while re-appearing in the examination, the candidates shall be exempted from re-appearing in the paper(s) and/or practical(s) in which he has obtained atleast 40% marks.

13. As soon as possible, after the termination of the examination the Registrar/Controller of Examinations shall publish the result of the Candidates and issue Detailed Marks Card.
14. The result of candidates who have passed M.Sc. examination shall be classified into divisions, as under and the division obtained by the candidate will be stated in this degree.
  - a) Those who obtain 60% or more marks First Division
  - b) Those who obtain 50% or more but less than 60% marks Second Division
  - c) All below 50% Third Division.
- 15.1 A candidate who has passed M.Sc. Previous examination with atleast 55% marks may offer dissertation wherever prescribed in the Scheme of Examination for the course. The subject of dissertation shall to approved by the Head of Department concerned. A candidate shall submit to the Head of the University Department an application for the approval of the topic for the dissertation alongwith a synopsis within one month of his admission to M.Sc. (Final) examination. Provided in the case of M.Sc, (Geology) exam. there shall be a dissertation based on days field work (surface maping) in the M.Sc. Previous. The work of dissertation will be done in the M.Sc. previous and viva-voce examination of dissertation will be held at the end of M.Sc. previous alongwith practical examination. Provided further that the condition of obtaining 55% marks in M.Sc. previous examination, for offering dissertation in M.Sc. final shall not be applicable in the case of students of M.Sc. (Geology) course.
- 15.2 Every candidate who offers dissertation shall be required to submit three copies of his dissertation alongwith a brief abstract of the same giving an

account of the Investigation research conducted and its main finding (which will not exceed 500 words). The dissertation shall be examined by one external examiner only.

- 15.3. The last date for receipt of the dissertation in the office of the Controller of Examinations shall be one month before the commencement of the theory examination : Provided that in exceptional cases; the Vice-Chancellor shall have the power to extend, on the recommendation of the Head of the Department the last date for receipt of the dissertation upto three months. If a candidate fails to submit the dissertation even during the extended period he will be considered to have absented in the dissertation paper and his result shall be declared accordingly.
- 15.4. A candidate who has submitted a dissertation as part of his examination may withdraw the same before it has been examined but once it is examined and the candidate obtains the minimum pass marks he shall not be permitted to withdraw it or submit another dissertation in lieu thereof. The marks obtained by him for the dissertation shall be taken into account when he appears in any future examination for the purpose of passing therein or for improving score of marks/result.
16. A candidate who has already passed the Master of Science examination from this University, in a subject in which different optional papers are permitted, may appear in one or more optional paper(s) of that subject at an subsequent examination when held as a regular student only. The examination fee shall be as prescribed from time to time.  
Such a candidate shall in order to pass, be required to obtain atleast 40% marks in each paper in theory and practical separately.
- 17.1. A person who has passed the M.Sc. previous examinations of this University will be allowed to appear as an ex-student in the M.Sc. previous examinations for improvement alongwith M.Sc. final examinations respectively, only once, in one or more theory paper(s) within a period of 3 years of passing M.Sc. previous examination.



A person who has passed the M.Sc. examination of this University, and desirous of improving his score of marks will be allowed to appear as an ex-student in the M.Sc. final examinations, for improvement only once in one or more theory paper(s) within a period of two years of his passing the M.Sc. examination. In all a candidate will be allowed to avail one chance within the period specified above. Improvement in practical paper is not permissible.

The result of such a candidate shall be declared only if he improves his score of marks, by taking into account the marks obtained by him in the paper(s) in which he re-appeared and the marks obtained by him earlier in the remaining paper(s).

The fact that the candidate has improved the division shall be mentioned in the Detail Marks Cards. If a candidate opts to appear in both previous and final examinations for the purpose of improvement but finds that he has improved the score of marks obtained by him in the previous examination, he may not appear in the final examination as the case may be and inform the Controller of Examinations for the declaration of his result.

Provided further that the candidate will take the examination according to the syllabus in force for the regular students for that examination. Provided that the syllabus for the candidates for the special examination to be held in September/October shall be the same as was in force for the regular student in the last annual examination.

18. Notwithstanding the integrated nature of this course which is spread over more than one academic year, the Ordinance in force at the time a student joins the course shall hold good only for the examination held during or at the end of the academic year and nothing in this ordinance shall be deemed to debar the University from amending the Ordinance and the amended Ordinance, if any, shall apply to all students whether old or new.
19. candidate admitted to M.Sc. Course in 1990-91 or earlier shall be governed by the old rules. The new rules shall be applicable w.e.f. the admission of academic Session 1991-92.

## **ORDINANCE : MASTER OF ARTS EXAMINATION**

1. The Master of Arts Examination shall be held in two Parts, Part-I examination shall be held at the end of the first year and Part-II examination at the end of second year.
2. The examination in Part-I and Part-II shall be held once a year ordinarily in the month of April/May, on such dates as may be fixed by the Vice-Chancellor.

A supplementary examination in Part-II of M.A. will be held in December or on such dates as may be fixed by the Vice-Chancellor for those candidates who have passed all the Papers of Part-I exam, but have got 're-appear' or have failed or want to improve their number of chances will not exceed as given in the Ordinance.

3. The last date for the receipt of admission form and fee without late fee as fixed by the Vice-Chancellor, shall be notified to the Heads of the University Teaching Departments, P.G. Regional Centre and the colleges concerned.
4. A candidate's admission form and fee may be accepted after the last date on Payment of late fee of Rs. 105/- upto the date notified by the University.

*Note : No late fee shall be charged if the admission form and fee are received within three working days of grace after the last date for the receipt of the same without late fee.*

5. A person who has passed one of the following Examinations, shall be eligible to join the first year (Part-I) class of Master of Arts course; (except Master of Physical Education).
  - (i) B.A./B.Sc./B.Com. (Hons.) Examination in the subject of Postgraduate Course.
  - (ii) B.A./B.Sc./B.Com. (Hons.) in a subject other than the subject of Post-graduate Course with atleast 50% marks in the aggregate.
  - (iii) 1st Bachelor's degree with atleast 50% marks in aggregate or 45% marks in the subject of P.G. Course in which the candidate wishes to seek admission.
  - (iv) Shastri Examination (New Scheme) of this University in the manner prescribed in (i) and (ii) above.
  - (v) Master's degree examination in another subject.

- (vi) The B.A. degree obtained through English only etc. shall be considered for admission to M.A. in various subjects at par with B.A. degree.
- (vii) An examination of any other University recognised by this University as equivalent to (i) or (ii) or (iii) or (iv) or (v) or (vi) above.

**Provide that**

- a) A candidate who has passed B.Com. Examination with atleast 45% marks in the subject(s)/paper (s) related to Economics including Statistics shall also be eligible to take up M.A. Economics course.
- b) A candidate who has passed B.Sc. (Agri.) with Agricultures Economics as one of the paper/subject shall also be eligible to take up M.A. Economic course.
- c) A candidates who has passed B.A. examination with atleast 455 marks in Public Administration or Sociology shall be eligible to thake up M.A. Political Science.
- d) A candidate getting atleast 55% makrs in Hindi (Compulsory) subject may also be considered eligible for admission to M.A. Hindi.
- e) A candidate who has passed B.A. (Hons.) in Sanskrit with atleast 45% in Sanskri (Elective) may also be considered eligible to tade up M.A. (Hindi), if the candidates who have passed B.A. (Hons.) Hindi or B.A. with Hindi (Elective) obtaining 45% marks are not available
- f) A candidate who has passed Bachelors Degree Examination in Music (B.Mus. from any Indian University shall be eligible for admission to M.A. course without any condition of minimum percentage of but no one who did not take up Music as one of his subject for the B.A. Examination shall be eligible to take up M.A. Music provided he is working as a teacher of Music in a college admitted to the Privileges of this University or in a recognised Higher Secondary School within the jurisdiction of the University or in addition to passing B.A./B.Sc. he has passed one of the following examination :

Sangeet Visharad : From Bhatkhade Sangeet Vidyapeeth  
Lucknow or from Gandharya  
Mahavidyalaya, Bombay.

Sangeet Prabhakar : From Prayag Sangeet Smiti, Allahabad  
or  
from Rajsthan Sangeet Sansthan,  
Jaipur.

Sangeet Visharad : From Prachin Kala Kender Chandigarh.

- g) A candidate who has passed B.A. Examination with Sociology or an allied subject such as Psychology, Political Science, Economics, History and Geography, as one of the subjects with 45% marks in aggregate and 45% marks in Sociology or allied subject mentioned above shall be eligible to take up M.A. Sociology.
- h) A candidate who has passed B.A. Examination with History or in any other subject listed in the Faculty of Social Sciences (i.e. Political Science, Sociology, Public Administration, Geography, Psychology etc.) obtaining at least 45% marks in the subject shall be eligible to take up M.A. History.
- i) A candidate who has not passed B.A./B.Sc. (Pass or Hons.) with Mathematics as one of the subjects shall not be eligible to join M.A. Mathematics Course.
- j) A candidate who has studied the subject of Sanskrit at B.A. level, whether elective or compulsory, for a full span of three years shall be eligible to seek admission to M.A. Sanskrit Course. The minimum percentage of marks for those who have studied Sanskrit compulsory should be 55 % in the subject.
- k) For admission to M.A. (Rural Development) a candidate must have passed Sc. (Agriculture) with Agricultural Economics as one of the papers/subjects 50% marks in aggregate or B.A. with 45% marks in any subject of Social Science.

#### **For M.A. Physical Education**

Eligibility condition for admission to M.A. Physical Education :

*Note : A person who has passed one of the following examinations shall be eligible to join the 1st year (Part-I) of the Master of Arts (Physical Education) course :-*

- A i) A Bachelor's Degree examination in Humanities of the M.D. University, Rohtak or an examination recognised as equivalent thereto with at least 45% marks in the aggregate with English as one of the subjects at the under-graduate level or B.Com./B.Sc./B.Sc. (Home Science) B.Sc. (Agri.) with 50% marks.
- ii) B.P.Ed./D.P. Ed. one year course after graduation with at least 50% marks.

- iii) Bachelor of Physical Education (B.P.F.), three year degree course with atleast 50% marks.
- iv) B.S.H. and P.E. five years course with atleast 50% marks.

**AND**

- B The candidate has taken part in the Inter-University Zonal or All India Inter-University Tournaments in the game and sports recognised by the Inter-University Sports Board.

**OR**

After having won position at the University, Inter-College Tournaments he/she has represented the State at Inter-State or National Tournaments in the game and sports recognised by T.U.S.B. Such candidates will, however, have to submit additional certificates as mentioned in the note of Appendix of the Hand Book of Information.

**M.A. (Fine Arts) Drawing and Painting (Previous)**

A candidate who has passed B.A. or an equivalent examination with Fine Arts as open of the subjects obtaining atleast 50% marks in aggregate and 45% marks in the subject of Fine Arts.

**Important Note**

A person who has passed Post-graduate examination shall not ordinarily be allowed to seek admission to P.G. Course in another subject as a regular student.

- 6. A candidate who is placed under compartment in the qualifying exam. shall not be allowed to join M.A. Course.
- 7. A candidate who has failed in one or more paper(s) or fails to appear in M.A. Examination shall be allowed two additional subsequent chances only to pass the M.A. examination. This is however, subjects to the provision in Clause-8 below.
- 8. A candidate who fails to pass the M.A. Examination within a period of four years of his admission to the course shall be deemed to be unfit for Post-graduate Studies in the subject concerned.
- 9. A person who has passed the following Examinations shall be eligible to join the M.A. Part-II.
  - a) M.A. Part-II Examination from M.D. University, in the subject concerned. This is however, subject to Clause-7. However, the candidates who have passed atleast two theory papers out not four or five theory papers or atleast three theory papers out of six or seven theory papers of Part-I exam. of the University will be promoted to Part-II class, provisionally.

OR

- b) M.A. Part-I Examination of the subject offered from the Kurukshetra University or Panjab University or Punjabi University, or Guru Nanak Dev University or Himachal Pradesh University, provided that the Head of the University Departments/Principal of the college concerned is satisfied that the contents of papers already passed by him are almost the same as in the M.A. Part-I Examination this University; in this case the marks obtained in M.A. Part-I of course at any of these Universities shall be counted towards division of successful candidates by increasing or reducing the marks obtained in accordance with maximum marks prescribed for M.A. Part-II Examination of this University.

10. The M.A. Examination in Part-I/Part-II shall be open to a student who :-

- a) has passed the requisite qualifying Exam. or is covered under Clause-5 and 8 and.
- b) has name submitted to the Controller of Examinations by the Head of the University Dept./Principal of the college he has most recently attended and produces the following certificates, signed by him:-
- i) of possessing good character
  - ii) of having/remained on the rolls of Department/College during the year preceding the Examination and of having attended not less than 65% of the full course of lectures and tutorials separately and 75% of practicals (the courses to be counted upto the last day when the classes break up for the preparatory holidays).

11. Every candidate shall be examined according to the scheme of examination and syllabus as approved by the Academic Council from time to time.

12. The amount of Examination fee to be paid by a candidate for each year shall be as follows :

Regular	Ex-Student
Rs. 100/- (Plus Rs. 20/- per practical)	Rs. 110/- Subject

13. A candidate who re-appears in one more paper(s) Practical(s) for the purpose of passing/improvement of score of marks/result shall pay fee as for the whole Examination.

- i) The medium of instructions shall be :-
  - a) Hindi in case of Hindi and English in case of English.
  - b) English or Hindi or Sanskrit in case of Sanskrit and
  - c) English/Hindi in case of other subjects.
- ii) The question papers will be set :
  - a) in Hindi in case of Hindi, Sanskrit and Music and
  - b) in English and Hindi in case of other subjects.
- iii) The candidate shall write their answer as under :-
  - a) in Hindi in case of Hindi;
  - b) in English or Hindi or Sanskrit in case of Sanskrit
  - c) in English in case of English and Mathematics and
  - d) in English/Hindi in case of other subject.

14. The minimum number of marks required to pass the Examination shall be as under :

- A) In all subjects except Physical Education
  - i) 33% in each paper (written and practical separately);
  - ii) 40% in each practical in the case of Music;
  - iii) 40% in Dissertation/Viva-Voce, where prescribed;
- B) In Physical Education
  - i) 35% in each theory paper;
  - ii) 40% in practical; and
  - iii) 40% in aggregate

15. A candidate who has completed the prescribed course of instructions in College/University Teaching Department for previous/ final examination but has not appeared in it or recommendation of the Principal of the College/Head of University Teaching Department concerned to appear in the subsequent year in the examination paper(s) as the case may reappearing in the examinations the candidate shall be exempted from reappearing in paper(s) and/or practical(s) in which he has obtained atleast 40% marks.

16.1. A candidate who has passed M.A. Part-I Examination obtaining at least 55% marks in aggregate may offer dissertation wherever prescribed in the Scheme of Examination for the course. The subject of the dissertation shall be approved by the Head of the Department

concerned. A candidate shall submit to the Head of the Department an application for the approval of the topic for the dissertation alongwith a synopsis within one month of his admission to M.A. Part-II.

- 16.2. Every candidate who offers dissertation shall be required to submit three copies of his dissertation alongwith a brief abstract of the same giving an account of the investigation/research conducted and its main findings (which will not exceed 500 words). The dissertation shall be examined by one external Examiner only.
- 16.3. The last date for receipt of the dissertation in the office of the Controller of Examinations shall be one month before the commencement of the Theory Examination, provided that in exceptional cases, Vice-Chancellor shall have the power, to extend, on the recommendation of the Head of the Department, the last date for receipt of the dissertation upto three months. If a candidate fails to submit his dissertation even during the extended period he will be considered to have absented in the dissertation paper and his result shall be declared accordingly.
- 16.4. A candidate who has submitted a dissertation as part of the Examination may withdraw the same before it has been examined but once is examined and candidate obtains the minimum pass marks he shall not be permitted to withdraw it or submit another dissertation in lieu thereof. The marks obtained by him for the dissertation shall be taken in to account when he appears in any future examination for the purpose of passing therein or for improving the score of marks/result.
17. As soon as possible, after the termination of the examination the Registrar/Controller of Examinations shall publish the result of candidates and issue Detailed Marks Card.
18. The result of candidates who have passed the M.A. examination shall be classified into division as under, the division obtained by the candidate will be stated in his degree :-
- a) Those who obtain 60 percent or more marks First Division
  - b) Those who obtain 50 percent or more  
but less than 60 percent marks Second Divison
  - c) All below 50 percent Third Diviosn



19. A candidate who has already passed the Master of Arts Examination from this University, in a subject in which different optional papers are permitted, may appear in one or more other optional papers of that subject, at any subsequent examination when held, without attending a regular course of study on payment of fee as prescribed for the whole exam. Provided that if there is any corresponding practical work involved he must attend the prescribed number of practicals etc. in the Department. Such a candidate shall, in order to pass, be required to obtain at least 40 percent marks in each paper.
20. A candidate who has passed Part-II of M.A. Examination of this University will be allowed to appear for improvement of his result as an ex-student in one more theory paper(s) of the M.A. Part-II. Examination once within a period of two years of his passing the Part-II Examination.

The result of such a candidate shall be declared only if he improves his score of marks by taking into account the marks obtained by him in the paper(s) in which he reappeared and the marks obtained by his earlier in the remaining paper(s) etc. The fact that the candidate has improved shall be mentioned in the Detailed -Marks Card.

Provided further that the candidate will take the Examination according to syllabus in force for the regular student for that examination.

21. Notwithstanding the integrated nature of this course which is spread over more than one academic year, the Ordinance in force at the time a student joins the course shall hold good only for the examination held during or at the end of the academic year and nothing in this Ordinance shall be deemed to debar the University from amending the ordinance and the amended Ordinance, if any shall apply to all students, whether old or new.

## M.A./M.Sc. (Previous) Geography 2002-2003

Paper Code	Nomenclature	Marks	Duration of Examination
Paper-I	Geomorphology	100	3 Hours
Paper-II	Climatology & Bio-geography	100	3 Hours
Paper-III	Resource Geography (With special reference to India)	100	3 Hours
Paper-IV	Geographic Thought Historical Development	75	3 Hours
Paper-V (a)	Quantitative Methods in Geography	50	3 Hours
Paper-V (b)	Practicals	75	4 Hours
	i) Lab work test	30	
	ii) Field work report	20	
	iii) Record on lab work	15(5 marks for stencil work)	
	iv) Viva-voce on lab work and Field work report	10	

**MAHARSHI DAYANAND UNIVERSITY ROHTAK**  
**M.A. / M.Sc. (Previous) Geography 2002-2003**

M.A.(P) examination in Geography shall consist of four theory papers-three papers of 100 marks each and one of 75 marks. Paper V shall be of two parts-Part a of 50 marks and Part-B of 75 marks. Paper V(Part-A) shall be a theory paper and its examination shall be conducted alongwith the main theory examinations. Paper V(Part-B) shall contain practicals and field work (Socio-economic survey/physical survey). All the theory papers shall be of three hours duration and the practical paper V(Part-B) shall be of four hours duration. The students shall have to submit a field report on the topic allotted by the teacher concerned after the completion of the field work. The field work shall be conducted by the department/college under the supervision of the teachers with the provision that there will be one teacher to accompany and supervise a group of ten students. The teachers conducting the fields work shall be paid TA/DA as per University rules. The practical examination shall be conducted by a board of two external examiners.

**Paper-I**

**GEOMORPHOLOGY**

Max. Marks : 100

Time : 3 Hours

**Section-I**

Geomorphology - Nature, Scope, Development of Geomorphic ideas, Recent trends in Geomorphology, Fundamental Concepts (uniformitarianism, Structure, Process and Stage).

Earth's Interior-Structure and Constitution.

Plate Tectonics - Meaning and concept, Plates, Plate margins and boundaries, Plate motion, Tectonic activities along the boundaries (Mountain building, Earthquake and Vulcanicity), Distribution of Plates.

**Section-II**

Faulting, Folding and their Geomorphic expressions.

Earthquake-concept, causes, classification, Intensity and Magnitude, Effects of Earthquake, Geographical distribution.

Vulcanism-Mechanism and Causes, Landforms associated with Vulcanism; Volcanoes-Components, Classification and Geographical distribution.

**Section-III**

The study of slopes-Main theories of slope development-Davis, King, Penck and Strahler.

Weathering-Meaning and concept, Controlling factors, Types and Processes, Geomorphic significance of weathering; Mass Movement-concept, classification and factors.

Geomorphic processes and Landforms-Fluvial, Aeolian, Glacial and Karst.

**Section-IV**

Geomorphological mapping-Legends, Techniques and methods of mapping, case study.

Applied Geomorphology-Applications of Geomorphology in Regional Planning, Engineering projects, Mineral Exploration, Hydrology and Military.

Regional Geomorphology of Punjab Plain, Aravalli region and Thar desert of India.

*Note: Question paper will consist of three sections. Section-I consisting of one question with ten parts of 2 marks each covering the whole syllabus shall be compulsory. In section-II, 10 questions will be set selecting atleast two questions from each unit. The candidates will be required to attempt any seven questions each of five marks. In Section-III, five questions will be set, atleast one from each unit. The candidates will be required to attempt any three questions each of 15 marks.*

**Books Recommended**

1. Bloom, A.L. (1992) Geomorphology, Prentice Hall of India, New Delhi.
2. Dayal, P. (1990), A Text book of Geomorphology, Shukla Book Depot, Patna.
3. Singh Savindra (1998), Geomorphology, Prayag Pustak Bhawan, Allahabad.
4. Singh Savindra (1993), Physical Geography, Prayag Pustak Bhawan, Allahabad.
5. Strahler, A.N. and Strahler, A.H. (1996), Introducing Physical Geography, John Wiley and Sons, New York.
6. Strahler, A.N. ( ), Earth Sciences, Harper and Row Publishers, New Delhi.
7. Thornbury, W.D. (1991) Principles of Geomorphology, John Wiley, New Delhi.
8. Wooldridge, S.W. & Morgan, R.S. (1991), An outline of Geomorphology, Orient Longmans, Calcutta.

**Paper-II****CLIMATOLOGY & BIO-GEOGRAPHY**

Max. Marks : 100

Time : 3 Hours

**Section-I**

General Climatology-Nature and scope of Climatology, Climatic controls; Climatic elements, Atmospheric Temperature, Pressure, Moisture (Water Vapour, Humidity, condensation and precipitation), Atmospheric Circulation-general atmospheric circulation, Planetary winds, Seasonal winds, local winds, jet stream, clouds, Weather disturbances-airmasses, fronts, cyclones.

**Section-II**

Global Climatic Systems-Approaches to climatic classification. Classification of climate with special reference to Koeppen, Classification of climate with special reference to Koeppen, Thornthwaite and Trewartha (theoretical aspects only). South Asian Monsoon-The recent theories.

**Section-III**

Applied Climatology-Climatic changes-Introducing, assessing, past climate, causes of climatic change and forecasting future change. Climate and agriculture with special reference to crop yield, phenology, atmospheric pollution, its environmental effects and global climatic change.

**Section-IV**

Biogeography-Nature, Field and Functions : biosphere definition, nature and composition; biospheric cycles, ecosystem-concept and functioning; evolution of living organism and factors influencing their distribution on the earth; Biomas and biogeographical realms-floristic regions and zoo geographical realms.

*Note: Question paper will consist of three sections. Section-I consisting of one question with ten parts of 2 marks each covering the whole syllabus shall be compulsory. In section-II, 10 questions will be set selecting atleast two questions from each unit. The candidates will be required to attempt any seven questions each of five marks. In Section-III, five questions will be set, atleast one from each unit. The candidates will be required to attempt any three questions each of 15 marks.*

**Books Recommended**

1. Aggarwal, S.K. (1992) Fundamentals of Ecology, Ashish Pub. House, New Delhi.
2. Barry, R.G. and Chorley, R.J. (1982) Atmosphere, Weather and climate ELBS; Methuen & Co. Ltd. London.
3. Critchfield, H.J. (1987) Climatology, Prentice Hall of India, New Delhi.
4. Griffith, J.F. and Driscell, D.M. (1982) Survey of Climatology, Charles Merril.

5. Lal, D.S. (1993) Climatology, Chaitanya Publishing House Allahabad.
6. Pearo, N. (1977) Basic Biogeography, Longman, London.
7. Riehl, H. (1968) Introduction to Atmosphere, Mc Graw Hill, New York.
8. Robinson, H. (1982) Biogeography, ELBS, London.
9. Robinson, P.J. and Henderson-Sellers (1986)-  
Contemporary Climatology Longman, London.
10. Trewartha, G.T. (Latest edition) Introduction to Climate, Mc-Graw Hill, New York.

**Paper-III      RESOURCE GEOGRAPHY (WITH SPECIAL  
REFERENCE TO INDIA)**

Max. Marks : 100

Time : 3 Hours

**Section-I**

Nature, scope and significance of the Geography of Resources; Definition and concept of Resource, classification of Resources; concept of Management of Natural Resources; Natural Resource availability and Economic Development.

Natural Resource Utilization-impact of physical characteristics (total resource base, location and distributional attributes etc) of natural resources; Techno-economic and political perspective in utilizations of natural resources.

**Section-II**

Natural Resource of India-A General survey; Land, Water, Forests and Fisheries and Marine resources; mineral resources; Methods and measures of conservation of natural resources- Land, water, Forests and Fisheries and Marine resources, mineral resources.

**Section-III**

Human Resources: Concept of Human Resource; Human Resource development: Indicators of human resource

development; Literacy and education; Levels of educational attainment in India; occupational structure in India; employment, unemployment and under employment; Human resource planning and regional disparities in human development in India.

#### **Section-IV**

Natural Resource Utilization and Regional Development-some selected case studies:

- i) Tribal Area Development.
- ii) Hill Area Development.
- iii) Drought Prone Area Development.
- iv) National Capital Region.
- v) Indira Gandhi Canal Command Area.

*Note: Question paper will consist of three sections. Section-I consisting of one question with ten parts of 2 marks each covering the whole syllabus shall be compulsory. In section-II, 10 questions will be set selecting atleast two questions from each unit. The candidates will be required to attempt any seven questions each of five marks. In Section-III, five questions will be set, atleast one from each unit. The candidates will be required to attempt any three questions each of 15 marks.*

#### **Books Recommended**

1. Zimmermann, E.W. (1951) World Resources and Industries, New York, Harper and Brothers.
2. Ginsburg, N. (1957) "Natural Resources and Economic Development" AAAG, Vol. 47, pp-197-212.
3. Burton, I and R.W. Kates ( ) Readings in Resource. Management and Conservation. University of Chicago Press, Chicago.
4. Ramesh, A.(1984) Resource Geography(ed) R.P. Mishra, Contributions to Indian Geography, Vol. 5, Haritage Publishers, New Delhi.



5. Chand, M. and V.K. Puri(1985) *Regional Planning in India*, Allied Publishers, New Delhi.
6. Raza, M. (1989) *Renewable Resources, Development*, Concept Pub. New Delhi.
7. Bruce, Mitchell (1989) *Geography and Resource Analysis* John Wiley and Sons, New York.
8. Negi, B.S. (1990) Geography of Resources, Kedar Nath, Ram Nath, Meerut.
9. Ramaseshan.S. (eds) (1991) Current Science, Vol. 61 Number 3 & 4, Hyderabad.
10. Guha, J.L. and P.R. Chattoraj (1994) Economic Geography- A Study of Resources. The World Press Private Ltd. Calcutta.
11. Ansari A.H., Imam, S. and Alamtar Ali (1996) "Ecological Impact of Indira Gandhi Canal Project in Western Rajasthan", Asian Profile, Vol. 24, No. 6, pp 505-510.
12. Mahapatra, A.C. (1998) Regional Development and Planning. Rawat Pub. Jaipur.
13. Singh. A.L. (1998) Land Resource Management, B.R. Publishing New Delhi.
14. Human Development Report (2000), Oxford University Press.

**Paper-IV GEOGRAPHIC THOUGHT HISTORICAL DEVELOPMENT**

Max. Marks : 75

Time : 3 Hours

**Section-I**

The general character of geography in the ancient period- contributions of the Greeks and the Romans with special reference to Eratosthenes, Herodotus, Strabo and Ptolemy. Contributions of Chinese and Indian scholars.

Geography in the Middle Age's and Renaissance- "The Dark Age" of science in Christian Europe. Developments in the Muslim world. Contributions of Arab scholars.

## Section-II

The Beginning and Foundations of Modern Geography: Revival of interest in Geography in the 16th and 17th centuries with special reference to contributions of Kant, Varenius, Humbolt and Ritter.

## Section-III

Post-Ritterian crisis of geography as a dualistic discipline and attempts at resolving the dualism between physical vs human and regional vs. systematic geography; Rise of geography as an integrated discipline: (a) integration in terms of man-land relationships-contributions of Ratzel; (b) integration in terms of chorology-contributions of Richthofen, Hettner and Sauer; Geography as a Landscape science-contributions of Schluter.

## Section-IV

New Development in Geography in France, Great Britain, Russia and the United States, Hartshorne's Nature of geography; the Hartshorne-Schaefer debate and its repercussions.

*Note: Question paper will consist of three sections. Section-I consisting of one question with ten parts of 2 marks each covering the whole syllabus shall be compulsory. In section-II, 10 questions will be set selecting atleast two questions from each unit. The candidates will be required to attempt any seven questions each of five marks. In Section-III, five questions will be set, atleast one from each unit. The candidates will be required to attempt any three questions each of 15 marks.*

## Books Recommended

1. Ali, S.M. (1959) Arab Geography, Aligarh Muslim University Press, Aligarh.
2. Dickinson, R.E. (1969) The Makers of Modern Geography, Routledge and Kegan Paul, London.

3. Dikshit, R.D. (1997) Geographical Thought, Prentice-Hall of India Private Limited, New Delhi.
4. Hartshorn R. (1958) Perspective on the Nature of Geography, Rand Mac Nally, Chicago.
5. Hartshorn R, (1951) The Nature of Geography, Association of American Geographers, Washington, D.C.
6. Holt-Jensen. A. (1980) Geography, Its History and Concepts, Longman, London.
7. Husain. M Jid (1995) Evolution of Geographic Thought, Rawat Publishers, Jaipur.
8. James, P.E. (1972) All Possible World-A History of Geographical Ideas, The Odyssey Press, New York.
9. Kimble, G.H.T. (1948) Geography in the Middle Ages, Methuen (Reprinted Russell & Russell), London.
10. Tozer, H.P. (1951) History of Ancient Geography, Cambridge.

#### **Paper-V (a) QUANTITATIVE METHODS IN GEOGRAPHY**

Max. Marks : 100

Time : 3 Hours

#### **Section-I**

An introduction to quantitative methods-Significance of quantitative analysis in geography, The Nature of Geographical Data: kinds of Measurement:Nominal, Ordinal, Interval and Ratio.

Variables: Discrete and Continuous : Tabulation of Data: Frequency Distribution, Class Boundaries, class intervals and class limits.

Graphical representation of Data: Histograms and Frequency Polygons, Relative Frequency Distributions, Cumulative frequency distributions and Ogives.

#### **Section-II**

Descriptive Statistics: Measures of Central Tendency; Mean,

Median and Mode, Partitioned values (quartiles, deciles and percentiles).

Measures of Dispersion: Range, Mean Deviation, Quartile Deviation, Standard Deviation: Relative Dispersion (co-efficient of variation)

Meaning, importance and Properties of the Normal Distribution; Skewness.

### **Section-III**

Measures of Area Association-Parametric and non-parametric statistics(a general introduction), The Chi Square test: observed and theoretical frequencies, additive property of Chi-Square, contingency tables.

Co-efficient of contingency, co-relation of Attributes.

Correlation and Regression-Spearman's Rank Correlation; Karl Pearson's Linear Product Moment Correlation; Regression Line, Linear Regression Analysis.

### **Section-IV**

Measures of spatial distribution and interaction-near neighbour analysis, Rank-Size Rule, Centographic Techniques (Mean Centre, Median Centre), Combinational Analysis (Weaver's and Doi's methods).

Measures of Disparities: Biasness of scale, composite inequality, Location quotient, Lorenz Curve, Gini's co-efficient.

*Note: Question paper will consist of three sections. Section-I consisting of one question with ten parts of 2 marks each covering the whole syllabus shall be compulsory. In section-II, 10 questions will be set selecting atleast two questions from each unit. The candidates will be required to attempt any seven questions each of five marks. In Section-III, five questions will be set, atleast one from each unit. The candidates will be required to attempt any three questions each of 15 marks.*

**Books Recommended**

1. Avi, Zamir, (1995) Statistical Geography, Rawat Jaipur.
2. Ebdon, D. (1977) Statistics in Geography, Basic Blackwell.
3. Gregory, S. (1978) Statistical Methods and the Geographer, Longman, London.
4. Hammand, R. and Mc. Cullagh, P.S. (1977) Quantitative Techniques in Geography: An Introduction, Clarendon Press.
5. Johnston, R.J. (1978) Multivariats Statistical analysis in Geography Longman, London.
6. Mahmood, A. (1986) Statistical Methods in Geographical Studies, Rajesh Pub. New Delhi.
7. Smith, D.M. (1977) Patterns in Human Geography, Penguin, Harmondsworth.
8. Spiegel, Murray R. (1992) Statistics, Mc Graw Hill, Singapore.

**Paper-V (Part-B) PRACTICAL GEOGRAPHY**

Max. Marks : 75

Time : 4 Hours

**Section-I****Morphometric Analysis of a Drainage Basin**

- A. Hyphometry (i) Drawing of a Drainge Basin (ii) Hypsographic Curve; (iii) Integral Hypsographic Curve (iv) Altimetric Frequency Graph (v) Clinographic Curve (vi) Drainage Density (vii) Dissection Index.
- B. Profiles and Methods of slope Analysis- (i) Serial Profiles; (ii) Super-imposed profiles; (iii) Projected profiles; (iv) Composite Profiles; (v) Longitudinal Profile; (vi) G.H. Smith's Method; (vii) C.K. Wentworth's Method.

(14 exercises)

**Section-II**

**Qualitative and Quantitative Distribution Maps**

**A. Qualitative Distribution Maps (Theoretical Aspects only):**

- i) Chorochromatic Maps;
- ii) Choroschematic Maps;

**\*B. Quantitative Distribution Maps:**

- i) Isoleths : Isobars, Isotherms, Isohyets.
- ii) Rainfall Dispersion Diagram of Haryana.
- iii) Representation of Population Data: Dot, Bar, Circle and Choropleth.
- iv) Drawing of Histogram, Bar-diagram, Line-graph and Pie-Diagram through computer software.

(12 exercises)

**Section-III**

**Interpretation of topographical Maps and Field work :**

(A) Physical and Cultural Interpretation of Topographical Sheet of Plain and Mountainous Areas.

(B) Preparation of Socio-Economic Schedule. (5 exercises)

**Distribution of Marks**

- i) Lab work test                      30 marks
- ii) Record on Lab work              15 marks (5 marks for stencil work)
- iii) A report on field work          20 marks
- iv) Viva-voce on lab work          10 marks  
and field work report

*Note : (i) The paper shall consist of six questions including two questions from each section. Candidate(s) are required to attempt three questions in all selecting at least one question from each section. All questions carry equal marks.*

*(ii) Candidates shall produce their field reports before the external examiners for evaluation at the time of their viva-voce examination.*

**Books Recommended**

1. Keates J.S. (1996) Understanding Maps, Essex: Longman.
2. Monkhouse, F.J. and H.R., Wilkinson (1980) Maps and Diagrams Bombay: B.I. Publications.
3. Robinson, A.H. and et. al. (1995) Elements of Cartography, New York : John Wiley & Sons.
4. Sharma, J.P. (1995) Practical Geography, Meerut : Rastogi.
5. Singh, Gopal, (1996) Map Work and Practical Geography New Delhi: Vikas.
6. Singh, R.L. (1979) Elements of Practical Geography, New Delhi : Kalyani Publishers.