

MAHARSHI DAYANAND SARASWATI UNIVERSITY,
AJMER

पाठ्यक्रम

SYLLABUS

SCHEME OF EXAMINATION AND
COURSES OF STUDY

FACULTY OF SCIENCE

Diploma in Disaster Management
Examination



ALKA PUBLICATIONS

Purani Mandi, Ajmer

NOTICE

1. Change in Statutes/Ordinances/Rules/Regulations Syllabus and Books may, from time to time, be made by amendment or remaking, and a candidate shall, except in so far as the University determines otherwise comply with any change that applies to years he has not completed at the time of change. **The decision taken by the Academic Council shall be final.**

सूचना

1. समय-समय पर संशोधन या पुनः निर्माण कर परिनियमों/अध्यादेशों/नियमों / विनियमों / पाठ्यक्रमों व पुस्तकों में परिवर्तन किया जा सकता है, तथा किसी भी परिवर्तन को छात्र को मानना होगा बशर्ते कि विश्वविद्यालय ने अन्यथा प्रकार से उनको छूट न दी हो और छात्र ने उस परिवर्तन के पूर्व वर्ष पाठ्यक्रम को पूरा न किया हो। विद्या परिषद द्वारा लिये गये निर्णय अन्तिम होंगे।

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Disaster Management [3]

Diploma in Disaster Management

Eligibility : Graduate in any Discipline of science with 50% marks.
Admission will be strictly on merit basis. Preferences will be Given to (1) those candidates who are already employed or (2) those having background of Earth Sciences

Seat : 20 seats

Scheme of Examination : Annual

Papers and Marks

Paper	Nomenclature	Marks
Paper-I	Disaster Vulnerability and Risk Assessment	100
Paper-II	Disaster Preparedness, Response and Mitigation	100
Paper-III	Medical Health, Recovery, Reconstruction and Rehabilitation	100
Paper IV	Project Work/ Field Report	100
	Project work	50
	Laboratory work (Internal Evaluation only)	50
Total		400

For evaluation of Project work, the candidate will give the presentation before the external examiner. Marks for the laboratory work will be awarded by the internal faculty. The students are required to secure minimum 20 marks (Pass Marks) separately in Project work and Laboratory Evaluation for passing.

The students are required to secure the marks as below:

Pass marks	40% in each Paper
II Division	48% and above in Aggregate
I Division	60% and above in Aggregate

Each paper (except Project Work/ Field Report) will contain TEN questions having two questions from each unit. The candidates are required to attempt Five questions in all by selecting at least one question from each unit.

An education tour may be organized to important places of Disaster Institutes of interest within or outside the State under the supervision of faculty member/s of the department. The expenses will be borne by the participating student. However, the university will provide train/bus travel concessions as per necessity and university rules. Traveling expenses of the teacher/s will be borne by the university as per rules of TA and DA.

This being a part time professional programmes, postgraduate students may be allowed to pursue this programme under the dual degree scheme. 75% attendance will be compulsory.

Paper-I: Disasters, Vulnerability and Risk Assessment

There are five units in all. Two questions will be set up from each unit and the candidates are required to attempt Five questions by selecting at least one question from each unit.

Time 3 hours

Maximum Marks 100

Unit-I

Natural and Manmade Disaster, Types of Natural and man made Disaster in India, Disaster Profile of India: Regional and Seasonal, Disaster management, Disaster Management in India, Role of International and National Non-Governmental Organisation(NGO), Community Based Organisation, Media and Communications in Disaster Management.

Unit-II

Flood, Drought, Cyclones, Heat and Cold waves: Introduction, Geographical Distribution, Causes and Impact, Forecasting, Early Warning and Monitoring Case studies based on the above mentioned Natural Disasters.

Unit-III

Earthquakes, Volcanic Eruptions, Landslides, Avalanches, Climatic Changes: Introduction, Geographical Distribution, Causes, Hazard and Impact, Forecasting, Early Warning and Monitoring. Case studies based on the above mentioned Natural Disasters.

Unit-IV

Building Fire, Forest Fire, Oil Fire, Nuclear Disasters, Biological Disasters, and Chemical Disasters, Accidents (Rail, Road, Air and Sea): Introduction, Causes, Hazard and Impact, Preparedness, Response, Some important Examples of Major Man Made Disaster.

Unit-V

Vulnerability: Observation and Perception, Identification, Social factor, Economic factor. Vulnerability and Development: The Role of Developmental Planning, Strategies of Survival, Resource Analysis and Mobilisation. Strategic Development for Vulnerability Reduction. Hazard, Risk: Concept and Elements, Risk Reduction, Risk Analysis Technique, Participatory Risk Assessment.

Paper-II: Disaster Preparedness, Response and Mitigation

There are five units in all. Two questions will be set up from each unit and the candidates are required to attempt Five questions by selecting at least one question from each unit.

Time 3 hours

Maximum Marks 100

Unit-I

Disaster Preparedness: Concept and Nature, Development of Long term and Short term Plan for Preparedness. Community Based Disaster Preparedness Plan, Education, Information, Communication and Training.

Unit-II

Role and Responsibilities of Organisation: Role and Responsibilities of Administration (Central, State, District and Local) in Preparedness, Role and Responsibilities of Defence, National Volunteer Organisation (NSS, NCC & Scouts) in Preparedness, Role and Responsibilities of, Non- Governmental Organisation(NGO), International Agencies, Community and Media in Preparedness.

Unit-III

Disaster Response: Disaster Response Plan, Communication, Participation and Activation of Emergency Plan to Counter the Disaster, Response by Central, State, District and Local Administration, Non- Governmental Organisation(NGO) against Disaster, Psychological Response, Trauma and Stress Management.

Unit-IV

Disaster Mitigation: Aims and Importance of Mitigation, Approach to Mitigation of Disaster, Strategic Technique for Combating Specific Disaster: Floods, Earthquakes, Drought, Cyclones. Case Studies of Mitigation. The Rapid Environmental Impact Assessment in Disasters (REA), Overview of REA, Process Organisation level Assessment, Consolidation and Analysis, Green Review of Relief Procurement.

Unit-V

Relief Measures: Importance and Significance, Essential Requirements for Search and Rescue (SAR), Evacuation, Technique and methods used in Evacuation. Disaster Resistant Construction of Building. Shelters: Concept and Significance Shelters for Victims and Livestock, Livestock problems in Disaster Situation, Preparedness, Relief, Rehabilitation and Reconstruction measures in Livestock Management.

[6] Disaster Management

Paper-III: Medical Health, Recovery, Reconstruction and Rehabilitation

There are five units in all. Two questions will be set up from each unit and the candidates are required to attempt Five questions by selecting at least one question from each unit.

Time 3 hours

Maximum Marks 100

Unit-I

Medical Health: Prevention, Preparedness, Response, Recovery. Epidemiology: Introduction, Methods and Procedures, Prevention of Medical Risk. Medical Preparedness in Disaster, Medical Preparedness Plan.

Unit-II

Education and Training in Health Management of Disaster. Hospital Casualty Management: Alerting, Response, Hospital Triage and Care. Community Health Management: Communicable Diseases and its Control, Hygiene and Sanitation, Safe Drinking Water.

Unit-III

Health and Medicinal Response in different types of Disaster. Communicational Technology and Role of Information Technology in Health Care. Post Medical Care: Impact of Disaster on Mental Health, Post Traumatic Stress Disorder (PTSD): Phases and Therapies. Health Management of Volunteers of Rescue and Response operation.

Unit-IV

Recovery Measures followed by various Organisation, Development of agriculture and Irrigation to combat the loss caused Natural Disaster, Development of Housing and Infrastructure resistant to Natural Disaster. Education and Awareness to combat Future Mishap. Evaluation and Monitoring of Rehabilitation. Framing of Long term Development Plan for Preparation against Disaster.

Unit-V

Reconstruction and Rehabilitation: Assessment of Damage, Role of agencies in Reconstruction and Development, Economic Infrastructure and Physical Development, Creation of Livelihood Options and Job opportunities. Funding arrangements for reconstruction.

Paper-IV**Project work / Field Report.**

Maximum Marks 100(50+50)

Project work: Max 50 Marks

The students are required to submit a project work related to disaster, field sites, relevant issues on disaster, reviews etc. The students shall work under the guidance of some faculty members including the guest faculty. For evaluation of the project work, the students are required to present their work before the external examiner. Out of maximum 50 marks, the awards will be given by the external faculty who will send to the Controller of Examinations in a sealed cover.

Laboratory Work: Max. 50 Marks

The students are expected to learn about the Environmental Analysis of soil, water, air etc. and also learn about laboratory instruments available. It is expected by a student that he/she should also learn about use of computers for presentation of data and report writing. Out of maximum 50 marks, the awards will be given by the internal faculty who will send to the Controller of Examinations in a sealed cover.

The students are required to secure minimum 20 marks (Pass Marks) separately in Project work and Laboratory Evaluation for passing.

Suggested Reading:

1. Climate Change and India, P.R. Shukla, S.K. Sharma and P. Venkataramana (Eds), 2002, Tata Mc Graw Hill Pub. Co. New Delhi.
2. Disaster Management: A Disaster Manager's Hand Book, Nick W. Carter, 1992, Asian Development Bank, Manila.
3. Disaster management Approaches and Strategies, Tej Singh, 2006, Akansha Publishing House, New Delhi.
4. Disaster Management, V.K. Sharma (Ed.), 1995, IIPA, New Delhi.
5. Disaster Response: A Handbook for Emergencies, Babu Thomas, 1993, CASA, New Delhi
6. Disaster Risk Reduction in South Asia, Pradeep Sahani & Madhavi Malagoda (Eds.), 2003, Prentice-Hall of India, New Delhi.
7. Drought Disaster and Agricultural Development in India, Tapeshwar Singh, 1995, People's Publishing House, New Delhi.
8. Drought Prone India: Problems and Perspective, K.S. Bagchi, 1991, Vol. I & II, Agricole Publishing Academy, New Delhi.
9. Earthquake: A Natural Disaster, Ashutosh Gautam, 1994, Ashok Publishing House, New Delhi.
10. Earthquakes, B.A. Bolt, 1988, W. H. Freeman and Company, New York.
11. Encyclopedia of World Climatology, John E. Oliver (Ed), 2005, Springer Netherlands.

12. Environmental Health, Assessing Risk and Reduction Disaster, 3rd Edition, K. Smith, 2001, Routledge, London.
13. Epidemiology- Principles and Methods, 2nd Edition, B. Mac Mohan. & D. Trichopoulos, 1996, WHO, Health Library for Disaster, Little Brown and Company.
14. Floods- A Geographical Perspective, R. Ward, 1978, Macmillan Press Ltd. New Delhi.
15. Natural Disaster Reduction, G.S. Mandal, 1993, Reliance Publishing House, New Delhi.
16. Preventive and Social Medicine, Fifteenth Edition, K. Park, 1997, M/S Banarsidas Bhanot Publishers, Jabalpur.
17. Towards Basics of Natural Disaster Reduction, D.K.Sinha., 2006, Research Book Centre, New Delhi.

