

Syllabus for Integrated M. Phil/Ph. D Programme in Disaster Management - 2019 onwards

Paper-I: Recent Advances in the Subject

Time: 3 Hours

Max.Marks: 100

Unit I Current Issues

- 1.1 Natural Hazards and Disasters
- 1.2 Framework & Policies-International/National/Regional
- 1.3 Millennium Development Goals
- 1.4 Disaster Management Legislation
- 1.5 Emerging Scenario in Risk and Emergency Management

Unit II Advances in Disaster Management

- 2.1 Hazard Mitigation and Preparedness: Building Codes, Core Group Functions
- 2.2 Principle of Build Back Better
- 2.3 Approaches of Assessing Vulnerabilities
- 4.4 Concept of Capacity Building in Disaster Management
- 2.5 Role of Early Warning System (EWS) in Disaster Management

Unit III Advances in Spatial Techniques

- 3.1 Introduction to Spatial Informatics, Spatial Database and Spatial Data Models
- 3.2 Remote Sensing, GIS & GPS interface
- 3.3 Spatial Web Services
- 3.4 Application of Geospatial Sciences in: Earthquakes, Floods and Landslides
- 3.5 Disaster Risk Index & Disaster Environmental Matrix

Unit IV Applications of Models in Disaster Management

- 4.1 Vulnerability Models: Social Vulnerability and Risk-Hazard (RH)
- 4.2 Community Based Disaster Management Plan
- 4.3 Multi-hazard Disaster Management Plans-(i) Floods, (ii) Fires, (iii) Landslides, (iv) Earthquakes
- 4.4 Development of Disaster Risk Assessment, Management & Response Plans at: Village, Ward, Gram Panchayat, Block and Urban local body levels

References:

- Andrew Skidmore, 2008, Environmental Modelling with GIS and Remote Sensing, Taylor & Francis.
- Bryant Edwards 2005. Natural Hazard , Cambridge university press UK.
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- Betty Bowers Marriott, 1997, Environmental Impact Assessment: A Practical Guide, McGraw Hill.
- Donald Hyndman and David Hyndman. 2009. Natural hazards and disasters. Brooks/cole. 555 p.
- Edward A. Keller and Robert .H. Blodgett. 2008. Natural hazards. Pearson Prentice hall. 488 p.
- Goel. S.L. Encyclopaedia of Disaster Management. 2006. Deep & Deep publication pvt. Ltd.
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- Mary. C. Comerio, 1998, Disaster Hits Home: New policy for Urban housing recovery, University of California Press; 326p.
- Open Geospatial Consortium (OGC): <http://www.opengeospatial.org/>.
- Robert A. Stallines, 2001, Methods of Disaster research, Xlibris Corporation, 528p.
- Michael f. Goodchild, 2005, Geographical Information Systems, principles, techniques, management and applications, John Wiley & Sons Inc., 404 p.
- Paul A. Longley, 2010, Geographic Information Systems and Sciences, John Wiley and Sons Ltd, 536 p.
- Schowengerdt, R.A., 2007, Remote Sensing: Models and Methods for Image Processing, Academic Press.
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- Srivastava, H.N and Gupta, G.D.2006. Management of Natural Disasters in Developing Countries. Daya publication. 201 p.