

(MN-IA) Minor Disaster Management

Credit 3

Teaching Hours 45

Full Mark 75

Passing Mark 30

Learning Outcome:

After the completion of course, the students will have ability to:

1. Gain a perspective of disasters and various dimensions of disaster management
2. Have comprehensive knowledge of various natural and manmade disasters in India and Jharkhand
3. Examine the response and mitigation measures of disasters

Course Content: Theory		45 Hrs
1. Disasters	Definition of Hazard, Disaster, Vulnerabilities and Risk and Classification of Disasters	10
2. Disasters in India:	Distribution, Mapping, Causes and Impact of Flood, Drought, Landslide, Earthquake, Tsunami and Cyclone.	15
3. Manmade Disasters:	Distribution, Mapping, Causes and Impact.	10
4. Response and Mitigation to Disasters:	Mitigation and Preparedness, NDMA and NIDM, Indigenous Knowledge and Community-Based Disaster Management,	10

Note for Assessment:-Internal Examination for 15 Marks and Final examination for 60 Marks

PRACTICAL: Disaster Management

Credit 1

Teaching Hours 30

Full Marks 25

Passing Marks 10

Course Content: Practical		30Hrs
1.Disaster Awareness & Preparedness	Dos and Do not's at individual or household levels (Pre, during and Post a disaster), Lightning and Thunderstorm, Cyclone, Heat Wave,	15
2.Disaster Risk Assessment Techniques	Risk identification, Application of Remote Sensing (RS), Geographic Information System (GIS), and Global Positioning System (GPS) in Risk Assessment: Case Studies of above-mentioned disasters	15

Note for Assessment:- Final Examination 15 Marks+5 Marks Viva-Voce+5 Marks Practical Note Book=25 Marks

References:

1. Government of India, (2008): *Vulnerability Atlas of India*. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Govt. of India, (2011): *Disaster Management in India*, Ministry of Home Affairs, New Delhi.
3. Kapur, Anu., (2010): *Vulnerable India: A Geographical Study of Disasters*, Sage Publication, New Delhi.
4. Modh, S., (2010): *Managing Natural Disaster: Hydrological, Marine and Geological Disasters*, Macmillan, Delhi.
5. Singh, Jagbir., (2007): *Disaster Management Future Challenges and Opportunities*.

Semester I
UG Major Geography
MJ-1 Major paper: -Geomorphology (Theory Paper) Credit 2+1
Teaching Hours 45
Full Mark 75 Passing Mark 30

Learning Outcomes:

After the completion, of course, the students will have the ability to:

1. Understand the functioning of Earth systems in real-time and analyze how the natural and anthropogenic operating factors affect the development of landforms
2. Distinguish between the mechanisms that control these processes
3. Assess the roles of structure, stage and time in shaping the landforms, interpret geomorphological maps and apply the knowledge in geographical research.

Course Content: Theory Paper		45 Hrs
1.Introduction to Geomorphology: -	Meaning, Nature and Scope of Geomorphology. Origin of Earth, Principles and Basis of Geological Time Scale	10
2.Earth Interior Structure :	Earth Movements, Endogenetic and Exogenetic Movements, Plate Tectonics, Types of Folds and Faults,	10
3.Earth Dynamics:	Theories of Isostasy: Airy and Pratt, Earthquakes and Volcanoes, Rocks: Characteristics, types, importance, and rock cycle	10
4.Geomorphic Processes and Evolution of Landforms:	Weathering, Mass Wasting, Cycle of Erosion: Davis and Penck. (Erosional and Depositional): Fluvial, Karst, Aeolian, Glacial, and Coastal, Applied Geomorphology: Dam Construction and Mining	15

MJ 1 (P) Practical Geomorphology
Credit 1 Teaching Hours 30

Full Mark 25

Passing Mark 10

Course Content: Practical		30Hrs
1. Rocks and Minerals:	Identification of Rocks and Minerals. Mineral samples: Iron ore, Bauxite ore and Manganese. Rock Samples: Granite, Basalt, Lime Stones, Sandstone, Quartzite, and Marble.	15
2. Topographical Map –	Elements of Map Reading and Interpretation of Topo Sheets, Cross- and Longitudinal Profiles, Serial Profile, Slope Analysis: – Wentworth's method, Field Visit Nearby Mining Areas/ local land formation and degradation	15

Note for Assessment: -Final Examination 15 Marks+5 Marks Viva-Voce+5 Marks Practical Note Book=25 Marks

References:

1. Ahmed Enayat (2004): Geomorphology, Kalyani Publishers
2. Bloom A. L., (2003): Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi.
3. Bridges E. M., (1990): World Geomorphology, Cambridge University Press, Cambridge.
4. Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company
5. Kale V. S. and Gupta A., (2001): Introduction to Geomorphology, Orient Longman, Hyderabad.
6. Knighton A. D., (1984): Fluvial Forms and Processes, Edward Arnold Publishers, London.
7. Richards K. S., (1982): Rivers: Form and Processes in Alluvial Channels, Methuen, London.
8. Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP
9. Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to Physical Geology, 4th Edition, John Wiley and Sons
10. Thornbury W. D., (1968): Principles of Geomorphology, Wiley.
11. Gautam, A (2010): Bhautik Bhugol, Rastogi Publications, Meerut
12. Tikkaa, R N (1989): Bhautik Bhugol ka Swarup, Kedarnath Ram Nath, Meerut
13. Ram Kumar Tiwari, (2019): Bhautik Bhugol, Rajasthan Hindi Granth Academy, Jaipur
14. Singh, S (2009): Bhautik Bhugol ka Swarup, Prayag Pustak, Allahaba
15. Anson R. and Ormelling F. J., (1994): International Cartographic Association: Basic Cartographic Vol. Pregmen Press.
16. Gupta K.K. and Tyagi, V. C., (1992): Working with Map, Survey of India, DST, New Delhi.
17. Mishra R.P. and Ramesh, A., (1989): Fundamentals of Cartography, Concept, New Delhi.
18. Monkhouse F. J. and Wilkinson H. R., (1973): Maps and Diagrams, Methuen, London.

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20. Robinson A. H., (2009): Elements of Cartography, John Wiley and Sons, New York.
21. Singh R. L. and Singh R. P. B., (1999): Elements of Practical Geography, Kalyani Publishers.
22. Sarkar, A.K. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
23. Singh R L & Rana P B Singh (1991) Prayogtmak Bhugol Ke Mool Tatva, Kalyani Publishers, New Delhi
24. Sharma, J P (2010) Prayogtmak Bhugol ki Rooprekha, Rastogi Publications, Meerut
25. Singh, R L & Dutta, P K (2012) PrayogtmakBhugol, Central Book Depot, Allaha

Reference Website

- 1. <https://www.isro.gov.in/>**
- 2. <https://www.usgs.gov/>**