CHAPTER 20

GEOLOGY

Doctoral Theses

208. DATTATRAYAM (R. S.)
Analysis of Broadband Seismological Data : Application to a Few Significant Indian Earthquakes.
Supervisors : Prof. C. S. Dubey, Dr. S. K. Srivastav and Prof G. S. Roonwal
Th 18892

Abstract

Demonstrates the application of latest tools of seismic data analysis and interpretation methods towards better understanding of earthquake source characteristics, Crust and upper Mantle structure, attenuation characteristics of media and development of models for the estimation of ground motions expected during future scenario earthquakes in India. the high-resolution digital broadband and strong motion recordings generated by the recent significant earthquakes in the two distinct tectonic domains viz, the inter-plate Himalayan collision zone and the intra-plate Peninsular Sheild region have been used in the analysis.

Contents

1. Introduction. 2. Seismic instrumentation, data analysis and interpretation methods. 3. Crust and uppar mantle structure of the Indian peninsular shield . 4. Source characteristics of Jabalpur (1997) earthquake. 5. Source characteristics of Bhuj (2001) earthquaks. 6. Estimation of attenuation (Q) and prediction of ground motions. 7. Site response and seismic hazard studies of Delhi region 8. Summary, references and Appendices.

209. KASHYAP (Mamta R.)
Geochemical Flow Stratigraphy, Age & Petrogenesis of Basalts from Mandla Lobe of the Eastern Deccan Volcanic Province, India.
Supervisor : Prof. J. P. Shrivastava
Th 18891

Abstract

Traces, rare earth elements and isotopic study on the basaltic lava flows of the Mandla lobe of the EDVP and to group them into different chemical types and sub-types using trace elemental and isotopic data-sets, derivation of chemical closeness amongst the eastern and western Deccan basalt formations and also study of nature and type of contaminants accountable for the heterogeneity in the EDVP magma types and the assessment of the volcanic history and magmatic processes that have been associated with the petrogenetic evolution of the province.

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210. LONGJAM KABITA CHANU
Geochemistry and Petrogenesis of Precambrian Khairagarh Mafic Magmatic Suite of Rocks: Constraints on Precambrian Crustal Evolution in Central India.
Supervisor : Prof. Talat Ahmed
Th 18890

Abstract

This work characterizes the volcanic sand to put constraints on their genesis, source characteristics and tectonic environment. Based on the Nd model ages of these rocks also explore the possibility of sequences and the Precambrian Supercontinents--Ur and Columbia, as the evolution of the Khairagarh rocks are contemporaneous with these supercontinents.

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211. RAJU KUMAR
Petrochemistry and Petrogenesis of Mafic Dykes from Eastern Part of the Deccan Volcanic Province between Narmada-Son and Tapti Lineaments.
Supervisor : Prof. J. P. Shrivastava
Th 18893

Abstract

This work has undertaken to find out any genetic link between Betul-Pachmarhi-Jabalpur dykes and the sub-surface mafic igneous bodies, the genetic link between dyke/dyke swarms and the surrounding lava flows and derivation of chemical closeness amongst eastern, central and western Deccan flood basalts.

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