1. Soil and Water Conservation
   1.1. Problem Soils of Nepal and their Management.
   1.2. Land degradation and its consequences on productivity.
   1.3. Erosion susceptibility of different land use and land systems of Nepal.
   1.4. Understanding Geology and Geological processes.
   1.5. Soil organic matter and its importance in productivity.
   1.6. Importance of microbial activities in soil.
   1.7. Engineering Geological hazards like, landslides, floods and their mitigation measures.
   1.8. Nitrogen cycle, nitrification, and ammonification.
   1.9. Conservation farming methods: strip cropping, cover cropping, mulching, zero tillage, crop rotation, green manuring and terracing.

2. Hydrology and Watershed Management
   2.1. Hydrological Cycle in managing the mountain watersheds and techniques to control water induced erosion and floods.
   2.2. Immerging problems of Churia (Siwaliks) watershed and present practice of water harvesting and its scope of replication in conservation and livelihood improvement.
   2.3. Watershed Condition and its relation to ecological and socio-economic aspects.
   2.4. Importance and contribution of watershed management for sustainable wetland ecosystem.
   2.5. Highland and Lowland linkages of watershed management and their benefit of resource sharing and conflict management.
   2.7. Institutional arrangement in watershed management and capacity building.
   2.9. Sustainable criteria of Watershed Management for improved rural livelihood.
   2.10. Indigenous technology and knowledge in soil conservation, nutrient management, land productivity, water harvesting and water use.
   2.11. Participatory Watershed Management Approach in Conservation and Development of Watershed Resources.

3. Land use
   3.1. Different types of land use, and their Conflicts and Resolution in Watershed Management.
   3.2. Land Use and Land Capability Classification (USDA) system and its applicability to mountain landscapes of Nepal.
   3.3. Highland- Lowland Eco-system management.
   3.4. Different agro-forestry practices and their role in soil conservation and watershed management.

4. Soil Conservation Engineering
   4.1. Different types of Soil Conservation Engineering Methods: Gully plugging, check dams, spill ways, chutes, embankment, spurs, etc.
   4.2. Application of Bio-Engineering Techniques in stabilizing mountain watershed and roadside slopes.
4.4. Ways and means to conserve soil and water resources in Churis hills.
4.5. Role of Drainage Density, Infiltration, Percolation, Evapo-transpiration in soil conservation.

5. Environment
5.1. Importance of IEE, EIA and SEA in planning process for sustainable development and environment conservation.
5.2. Eco-tourism development
5.3. Payment for Environmental Services (e.g., carbon trading)
5.4. Management of mountain forestry resources with particular reference to the development of rural economy and protection of the mountain environment and biodiversity.
5.5. Impact of Global Climate Change in the Himalayan region.

6. Planning, Research, Extension and Conservation Education
6.2. Coordination mechanism for integration of agriculture, forestry, livestock and water resource development.
6.3. Decentralization planning process in Nepal.
6.4. Participatory Action Research in watershed management.
6.5. Logical Frame Work approach to project planning.
6.6. Inclusion of women, disadvantaged groups, indigenous and other minority groups in planning, implementation and benefit sharing in watershed management.
6.7. Role of multiple stakeholders in resources Conversation (Water and soil)

7 Different issues and tools regarding natural resources Conversation
7.1 Wild-life conservation issues in Nepal.
7.2 NTFP, Bamboo and Rattans and income Generating Activities.
7.3 Appropriate and Intermediate Technologies for Rural Development in Nepal.
7.4 Sampling Technologies, Rapid Rural appraisal (RRA) and Participatory Rural appraisal. Tools and techniques applied for socio economic studies.
7.5 Medicinal and aromatic plants of Nepal.

----------