

**Nepal Telecom**  
**Nepal Doorsanchar Company Ltd.**  
**Syllabus for Level 11 Telecom (Technical)**  
**(Internal Competition)**

Time: 3 Hours

Full Mark: 100

Pass Mark :40

**Marks Allocation Chart**

**Group A- Technical**

S. No	Types of question	Question No.	Weightage	Total
1.	Long Answer Questions	1	15	15
2.	Short Questions	3	5	15
	Total			30

**Group B – Management**

S.No	Types of question	Question No.	Weightage	Total
1	Problem and Solution: Issue -5 Root cause -5 Alternative Solution - 5 Decision-5	1	20	20
2.	Long Answer Question	2	15	30
3.	Short Answer Question	4	5	20
	Total			70

Grand Total: Group A + Group B = 100 marks

**Group A- Technical**

**30 Marks**

- Telecom Technologies and suppliers**  
Global Trends in telecommunication developments and Technological obsolescence, Convergence of services and technologies, Circuit Switching versus Packet Switching, Comparative Advantages  
Access Technologies: GSM and CDMA, Broadband systems, IMT-2000, UMTS,  
VOIP and call bypass technologies, VOIP Operators, Copper Optics: Satellite communication systems, ICT Case Studies  
Top Ten Ranking of telecom suppliers: by business volume, by technology category in global, and by supply to NT.

- 2      **Telecommunication Networks**  
Types, Switches/routers, Backbone links and Gateways, Broadband access Networks, Intelligent Networks, Access Networks, Number Portability Network Synchronization, Next Generation Networks (NGN), 3G, Cellular Network, PCN  
LAN, WAN, MAN, Intranet and Internet, Corporate Networks, WiFi, WiMax  
Network Topologies and their applications and comparative advantages, Network Synchronization
  
- 3      **Telecom and Information access**  
Modern Trends, Type of services, USO and UAO, Millennium Development Goals in Telecom Sector: Service Penetrations, Universal Access, Digital Divide and its measure: Digital Access Index (DAI) figures for top ten and Asia Pacific Countries, Access Deficits and international practices to address them.  
**Tariff and Billing**, Comparative costs of Telecom Services in Nepal vis a vis countries in Asia Pacific Region  
Service benchmarking of NT in the Asia Pacific region.  
World Summit on Information Society (WSIS), "*Connect the World*" Initiative, Its partners and projects; the World Telecommunication Development Conference (WTDC): Doha Declaration, World Telecommunication Day (WTD) themes.
  
- 4      **Telecom Operation and Management**  
Quality of Services, Customer Care, Consumer Protection, Performance Indicators, Development of Efficiency Indicators for Operators, Divisions/Departments and Section/offices  
Management Information System (MIS): Objectives, Key indicators  
Decision Support Systems (DSS)  
Analysis to improve efficiency and effectiveness of NT services and to enhance its competitive edge,
  
- 5      **Organizations related with Telecom Regulation and/or Development**  
International Agencies: ITU, APT, UNDP, World Bank, , WTO.  
Telecom Regulation: Regulatory objectives, Sector Reform, Initiatives in Nepal Interconnections, Spectrum management and pricing practices, Network Providers, Service Providers, License Classes or types in Nepal  
Nepal Telecom Authority (NTA): Its mandate, organization and functioning; its capabilities in sector development, Consumer Rights Protection Forum.  
Organization relating to Information Technology Development in Nepal.  
Regulatory organizations: TRAI, TRCS, IRG, ESIS, Ofcom, FCC, INFODEV
  
- 6      **Important Telecom Operators**  
National Telecom Operators and their services and Market Shares, Annual Transactions, Comparative Strengths and weaknesses, Major areas of agreements and disputes with NT.  
  
Major International Operators with whom NT has working relationships and success stories of Operators.



## **Group B – Management**

**70 Marks**

### **1. Executive Management :**

Executive roles and responsibilities, Management of executive time, Problem solving and decision making, Leadership, Motivation of staff, Communication skills, Interpersonal relation, Conflict management, Negotiation skill, Management of staff performance, Staff development techniques- Coaching, Counseling, Monitoring, handling complains and grievances, Appraising performance, Disciplining staff, Unionism and labors relation management, Corporate governance, Power and influence in organization.

### **2. Strategic Management :**

Strategic management concept and process, Environment analysis techniques, Generating and evaluating strategic alternatives, Implementation of strategic choices, Monitoring and evaluating of strategies, Telecommunication Policy, International Telecommunications Practices.

### **3. Project Management :**

Concept of Project planning and management and processes, Recent project planning approaches, Project cycle, Linkages between Plans, programmes and projects, Project feasibility study – demand/need forecasting and analysis, technical analysis, economic analysis, social analysis & environmental analysis, Project planning matrix –logical framework, project appraisal and screening, Risk and uncertainty analysis and management, Project negotiation, Project organization, Project implementation plan (PERT , CPM, Network diagram, Gantt Chart), Role and responsibilities of a project monitoring and evaluation techniques and processes. Monitoring indicators, Project operation and maintenance, Project proposal preparation.

### **4. Marketing Management:**

Role of marketing in service industries, marketing strategies- product/service strategies, pricing strategies, placing strategies, promotion strategies. Demand /supply forecasting, market survey, pricing decision, promotion decision, market leader competition, Marketing processes processes and strategies of NT, Marketing management issues and challenges of NT.

### **5. Financial Management:**

#### **1) Budget and capital management:-**

Concept of financial budget, Budgeting procedures, Budgeting control, & Capital layout method

#### **2) Investment Decision:-**

Capital, Investment plan, IRR, NPV, ARR, Payback Period & Incremental analysis of investment

#### **3) Investment Analysis:-**

Working Capital Management, Funds flow analysis & Ratio analysis

**4) Inventory Management:-**

Inventory control system, Inventory purchase method, Valuation of inventory.

**6. Miscellaneous:**

Company act, Rules and regulation of NT, Current Organization and management issues and challenges facing NT, Issues related to Telecommunications Policy, Telecommunication Act and Information Technology Act.

- नोट: १. ग्रुप (ए) र (बी) दुबै बिषयलाई एकै पत्र मानिनेछ ।  
२. परीक्षा एक पत्रको मात्र हुनेछ ।  
३. भाषा: अंग्रेजी / नेपाली  
४. प्रश्नहरूसँग सम्बन्धित निती, ऐन, नियम विनियमावलीहरू परीक्षा मिति भन्दा ३ महिना अघि सम्म संशोधन भई कायम रहेको व्यवस्था लागु हुनेछ ।