Nepal Telecom
Nepal Doorschehak Company Ltd.
Syllabus

Paper First: General Module

(Common subject for Electronics & Communications, Computer, Electrical, Mechanical and Civil Engineer Level 7 Tech. Open Competition)

Time: 2 hours

Full Marks: 100
Pass Marks: 40

All the Questions are Compulsory

<table>
<thead>
<tr>
<th>Types of question</th>
<th>Section A</th>
<th>Section B</th>
<th>Number of questions</th>
<th>Marks</th>
<th>Total Marks</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective Questions</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>1</td>
<td>30</td>
<td>1/4 marks will be deducted for each incorrect answer</td>
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<tr>
<td>Short Questions</td>
<td>6</td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>40</td>
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<tr>
<td>Long Questions</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>30</td>
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<td>Total</td>
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<td>100</td>
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Use of non-programmable calculator is permitted in the examination hall.

Section "A" (Technical)

1 Mathematics and Statistics: (Weightage 5% -15%)
Function and Limit, Maxima and Minima, Differentiation and Integration and their interpretation, Equations of straight lines, circle, parabola, hyperbola, spheres, cylinders and cones, Linear differential equations (up to second order), Fourier series, Fourier Transforms, Fourier integral, inverse Fourier integral formula, odd and even function, Laplace transforms, Line, surface and volume integral, Taylor series, Zeros and Poles, Z-transforms
Introduction of statistics and descriptive statistics, Mean, Mode, Variance, Dispersion, Probability, Discrete random variables and probability distribution, continuous random variables and probability distributions, Samples, Sampling theorems, Linear regression, Population mean & sample mean and accuracy, pi & bar diagrams, error functions.
2  **Applied Mechanics and Thermodynamics  (Weightage 15%-25%)**


3  **Basic Electricity and Electronics  (Weightage 15%-25%)**


4  **Information and Communications Technology Basics(Weightage 10%-20%)**

Computer architecture, Microprocessor fundamentals, Microcomputer systems: Bus structure, Memory systems (main, auxiliary, virtual, cache, I/O devices, parallel and serial interfaces, RS-232 standards, Flow charts, algorithms, variables, constants, data types, arithmetic expression, arrays, Concept of ROM, RAM., MS-DOS, windows, MS-office packages, basic concept on internet and e-mail.

Communication systems: Amplitude Modulation, Frequency Modulation, Phase Shift Keying, Frequency Shift Keying, Data transmission over radio.

(End of Section "A")
Section "B" (Management, Finance & Rules Regulation)

1. Project Management (Weightage 5%-15%)
Definitions, the project life cycle, Setting project objectives & goals, Network model: CPM & PERT, Gantt chart, Project scheduling, Resource leveling, Systems of Project control, Cost control, Preparation of operational budget, Introduction to budgetary control, Planning the quality, time & cost dimensions, Negotiating for Materials, Supplies & Services, Bringing the project to a Successful conclusion.

2. Economics and General Accounting Principles (Weightage 5%-15%)
Essential business & accounting terminology, Cost classification & analysis, Interest & time value of money, Basic methodology of engineering economic studies, cost and benefit analysis, risk analysis, investment decisions, demand analysis and sales forecasting, Basic knowledge of trial balance & Balance sheet, income statements, revenue and capital expenditure, budgeting and capitalization, depreciation and subsidy, Procurement procedures (FOB, CIF, Liquidated Damage, Letter of Credit, Insurance, Invoice, Bid security, performance bond), Competitive bidding.

3. Management Concepts (Weightage 3%-7%)
Vision, Mission, Goal, Objectives, Targets, Strategies, Organization structure, Authority and Power delegation, Leadership, Motivation, Group dynamics, Time management, Conflict Management, MIS, Customer care, Decision support system, Out sourcing, Inventory control, Job description, training, service port folio and tariff structure of Nepal Telecom.

4. ऐन, विनियमावलि, नीति नियम (Weightage 5%-15%)
- नेपाल २०५१ दूरसंचार कम्पनी लिमिटेडको कार्यालय विनियमावलि २०७९ जो परिच्छेद-६ विशेष, परिच्छेद-५ आचरण तथा अनुशासन, परिच्छेद-१० सजाय र पुनरावेदन सम्बन्धी व्यवस्था ।
- नेपाल २०५१ दूरसंचार कम्पनी लिमिटेडको आर्थिक विनियमावलि २०७९ जो भाग २ जो खरिद सम्बन्धी कार्यविधि, भाग ३ जो परिच्छेद-१ योजना तर्जुमा वार्षिक कार्यक्रम र बजेट, परिच्छेद-२ कम्पनिको सम्पत्तिको जिम्मा, त्यसको लगत, संरक्षण र वर्तमानकार्य सम्बन्धी व्यवस्था ।
- कम्पनी ऐन २०५३ जो परिच्छेद-२ कम्पनिको स्थापना, परिच्छेद-६ संचालक समिति ।
२०५३ को परिच्छेद-७ दूरसंचार लाइनको जडान र रेखेख, परिच्छेद-८ सेवा शुल्क निर्धारण तथा असूली, परिच्छेद-९१ विविध, दफा ४९ रेडियो फ्रिक्वेन्सी नीति निर्धारण सम्बन्धि व्यवस्था।

२०५३ को परिच्छेद-८ दूरसंचार लाइनको जडान र रेखेख, परिच्छेद-९१ विविध, दफा ४९ रेडियो फ्रिक्वेन्सी नीति निर्धारण सम्बन्धि व्यवस्था।

४. प्रश्नहरु सम्बन्धि एन, नीति, नियम तथा प्रचलित नेपाल कानूनहरु (नेपाल दूरसंचार कम्पनी लिमिटेडको सम्बन्धि समेत) मा परिच्छेद नीति भन्दा तीन महिना अधिकारमा संशोधन भई कायम रहेका व्यवस्था लागू हुनेछ।

५. यथासम्भव सबै शिर्षकहरुलाई समेट्ने गरी प्रश्नहरु सोधिने भएको भने भन्ने हो।

[End of Section "B"]