

Nepal Water Supply Corporation

इन्जिनियरिंग सेवा, कम्प्युटर इन्जिनियरिंग तह सात पदको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

पाठ्यक्रमको रूपरेखा :- यस पाठ्यक्रमको आधारमा निम्नानुसार तीन चरणमा परीक्षा लिइने छ :
 प्रथम चरण :- लिखित परीक्षा पूर्णाङ्क :- २००
 द्वितीय चरण :- अन्तर्वार्ता पूर्णाङ्क :- ३०
 प्रथम चरण - लिखित परीक्षा योजना (Examination Scheme)

पत्र	विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या X अङ्कभार	समय
प्रथम	कम्प्युटर इन्जिनियरिङ्ग सम्बन्धी विषय	१००	४०	वस्तुगत बहुउत्तर (Multiple Choice)	१००X१ = १००	१ घण्टा ३० मिनेट
द्वितीय		१००	४०	विषयगत (Subjective)	५X१० = ५० १X२० = २०	३ घण्टा

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली
व्यक्तिगत अन्तर्वार्ता	३०	मौखिक

१. लिखित परीक्षाको माध्यम भाषा अंग्रेजी वा नेपाली अथवा अंग्रेजी र नेपाली दुवै हुन सक्नेछ।
२. माथि उल्लिखित पदको पाठ्यक्रमको प्रथम र द्वितीय पत्रको विषयवस्तु एउटै हुनेछ।
३. प्रथम र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ।
४. प्रथम तथा द्वितीय पत्रका एकाईहरूको प्रश्नसंख्या निम्नानुसार हुनेछ :

प्रथम पत्रका एकाई	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16.1	16.2
प्रश्न संख्या	6	6	3	6	6	5	7	6	6	4	5	3	7	5	5	10	10
द्वितीय पत्रका एकाई	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Technical Writing	Case Study
प्रतिशत	5	5	3	5	5	4	6	5	5	4	5	3	5	5	5	10	20

- ४.१ माथि तालिकामा उल्लेख भए अनुसार द्वितीय पत्रका १ देखि १५ सम्मका एकाईहरूबाट ७ (सात) प्रश्नहरू, Technical Writing को १ (एक) प्रश्न र Case Study को २० अङ्कको १ (एक) प्रश्न गरी जम्मा ९ (नौ) प्रश्नहरू सोधिने छन्।
५. द्वितीय पत्रको विषयगत प्रश्नहरूको स्वरूप निम्नानुसार हुन सक्नेछ :
 - ५.१ लामो उत्तर दिने १०/१० अङ्कका ८ प्रश्न र २० अङ्कको १ प्रश्न सोधिनेछ।
 - ५.२ एउटै प्रश्नलाई दुई वा दुई भन्दा बढी भागमा (Two or more parts of a single question) विभाजन गरी सोध्न सकिनेछ।
 - ५.३ एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ।
६. प्रथम पत्रमा वस्तुगत बहुउत्तर (Multiple Choice) प्रश्नहरूको उत्तर सही दिएमा प्रत्येक सही उत्तर बापत १ (एक) अङ्क प्रदान गरिनेछ भने गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अर्थात् ०.२ अङ्क कट्टा गरिनेछ। तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन।
७. यस पाठ्यक्रममा जेसुकै लेखिएको भएता पनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मिति भन्दा ३ (तीन) महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा रहेको सम्झनु पर्दछ।
८. प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ।
९. यस भन्दा अगाडि लागू भएका माथि उल्लिखित पदको पाठ्यक्रम खारेज गरिएको छ।
१०. पाठ्यक्रम लागू मिति :- २०६६/८/२३ देखि

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लिखित परीक्षाको पाठ्यक्रम

प्रथम र द्वितीय पत्र : कम्प्युटर इञ्जिनियरिंग सम्बन्धी विषय

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- 1.1 Protocol stack, switching
- 1.2 Link Layer: services, error detection and correction, multiple access protocols, LAN addressing and ARP (Address Resolution Protocol), Ethernet, CSMA/CD multiple access protocol, Hubs, Bridges, and Switches, Wireless LANs, PPP (Point to Point Protocol), Wide area protocols
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- 1.6 Distributed system, Clusters

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3. Artificial Intelligence

- 3.1 Search
- 3.2 Natural Language Processing
- 3.3 Game Playing
- 3.4 Learning
- 3.5 Automated reasoning
- 3.6 Planning
- 3.7 Vision and Robotics

4. Data structures

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- 4.6 Graphs and digraphs
- 4.7 Sorting

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- 5.5 Input Output Organization : I/O programming , memory mapped I/O, basic interrupt system, DMA
- 5.6 Arithmetic
- 5.7 Memory Systems
- 5.8 808X and Intel microprocessors: programming and interfacing

6. Digital Design

- 6.1 Digital and Analog Systems. Number Systems.
- 6.2 Logic Elements
- 6.3 Combinational Logic Circuits
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7. Software Engineering principles (System analysis and design)

- 7.1 Software process: The software lifecycle models, risk-driven approaches
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- 9.5 Distributed Systems: Distributed Message passing, RPC, Client/Server Computing, Clusters.
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10. Theory of Computation

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- 15.2 Parallel and distributed computing
- 15.3 High speed networks
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- 15.5 Adaptive web technology
- 15.6 Software Architecture
- 15.7 Distributed Object technology (ORB, DCOM)
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- 15.12 Embedded systems
- 15.13 Image processing
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- 15.15 Expert system
- 15.16 GIS/ Remote sensing/ GPS

16. Reasoning

16.1 Analytical and logical reasoning - 10

16.2 Quantitative Test - 20

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