**Course:** Networking Specialist

* Course Id :
* Candidate Eligibility: Senior Secondary/Undergraduate/Graduate possessing basic knowledge of Computers and Internet Concepts
* No. Of NOS (If QP) : **NA**
* NSQF Level : **6**
* Cost Category : **1**
* Course Duration 06 Months
	+ Theory duration : **405 hrs**
	+ Practical duration : **375 hrs**
	+ OJT duration : **0**

**Trainer Qualification Work Experience**

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| **Trainer Qualification** |  **Work Experience** |
| **Essential Qualification:** |  Atleast 1 year teaching experience in relevant field.  |
| B.E/B.Tech (CS/IT/EC)/MCA |  |
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**CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE**

**Name and address of submitting body:**

National Institute of Electronics & Information Technology, Patna

Near IIT Patna, Amhara, Bihta, Patna - 801106

**Name and contact details of individual dealing with the submission**

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| **Name** | : | Manoj Kumar |
| **Position in the organization** | : | Joint Director |
| **Tel number(s)** | : | 0612-2219134 |
| **Mobile** | : | 9631862823 |
| **E-mail address**  | : | mkumar@nielit.gov.in |

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| **Qualification Title**  | Networking Specialist |
| **Qualification Code**  |  |
| **Nature and purpose of the qualification**  | **Nature: Certification Course in Advance Networking****Purpose:** Qualified learners will be able to be employed as * Network Administrator
* Network Designer
* Network Support Provider
* Technical Call Executive
 |
| **Body/bodies which will award the qualification** | National Institute of Electronics & Information Technology (NIELIT)Near IIT Patna, Amhara, Bihta, Patna (Bihar)-801106 |
| **Body which will accredit providers to offer courses leading to the qualification** | National Institute of Electronics & Information Technology (NIELIT)Near IIT Patna, Amhara, Bihta, Patna (Bihar)-801106 |
| **Body/bodies which will carry out assessment of learners** | Examination Cell,National Institute of Electronics & Information Technology (NIELIT), Near IIT Patna, Amhara, Bihta, Patna (Bihar)-801106 |
| **Occupation(s) to which the qualification gives access** | Network Administrator, Network Designer, Network Support Provider, Technical Call Executive |
| **Licensing requirements** | **Not Applicable** |
| **Level of the qualification in the NSQF** | **6** |
| **Anticipated volume of training/learning required to complete the qualification** | **120** |
| **Entry requirements and / or recommendations** | Senior Secondary/Undergraduate/Graduate possessing basic knowledge of Computers and Internet Concepts**.****Age 18 years to 35 years** |
| **Progression from the qualification** | 1) In AcademicAfter completion of this course, students can go for further courses that provide them certifications in Networking streams like Cisco Certified Network Associate (CCNA), Red Hat Certified Systems Engineer (RHCSE) or Microsoft certified Solutions Engineer (MCSE). Many companies are providing initial breakthrough to freshers to join as a trainee /intern .The trainee / interns could use experience gained while working in company as a platform to hone their technical skills and achieve better jobsafter doing the requisite certifications as well2) ProfessionalDuring the initial stages of career candidate might work as work as a trainee / intern whose role would be to identify and troubleshoot basic network related problems. After gaining sufficient experience and upgrading his technicalqualifications he could become Network Administrator, Network Designer, Network Support Provider, Technical Call Executive. As a Network Administrator, candidate would be able to Design, Implement and Maintain a corporate Network of Small to Medium Size and as hebecomes experienced he could carry out same steps for Medium to Large Networks and could also setup large Scale Data Centres. The candidate could further pursue higher studies it he field of networking and do various postgraduate programmes available in many foreign universities as well. |
| **Planned arrangements for the Recognition of Prior learning (RPL)** | * Presently only candidates who undergo training shall be assessed.
* It will be incorporated once RPL strategy is finalized
 |
| **International comparability where known** | **N/A****CNC** |
| **Date of planned review of the qualification.** | **N/A** |

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| **Formal structure of the qualification**  |
| **Title of unit or other component** (include any identification code used)  | **Mandatory/ Optional**  | **Estimated size** **(learning hours)**  | **Level**  |
| Acquiring Basic PC Hardware and Maintenance Skills  | Mandatory  | 60  | 6  |
| Acquiring Presentation Layer Skills through Word Processing  | Mandatory  | 60  |   |
| Develop skills to Design ,Configure , Implement, Maintain and Troubleshoot a network  | Mandatory  | 210  |
| Develop skills to implement Client Server Network using Windows Server 2012  | Mandatory  | 210  |
| Develop skills to implement Client Server Network using Linux Operating System  | Mandatory  | 210  |
| Enhancing Communication Skills  | Mandatory  | 30  |   |

**ASSESSMENT**

**Body/Bodies which will carry out assessment:**

 Examination cell - National Institute of Electronics & Information Technology, Patna

**How will RPL assessment be managed and who will carry it out?**

*YES. Learners who have met the requirements of any Unit Standard that forms part of this qualification may apply for recognition of prior learning to the relevant Education body. The applicant must be assessed against the specific outcomes and with the assessment criteria for the relevant Unit Standards.*

**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.**

**1. ASSESSMENT GUIDELINE:**

 The emphasis is on practical demonstration of skills & knowledge based on the performance criteria. Each OUTCOME is assessed and marked separately. Student is required to pass in all OUTCOMEs individually and marks are allotted. Following assessment methodologies are used.

1. Written Assessment (Multiple Choice Questions)
2. Practical Assessment
3. Viva Voce Assessment

The assessment results are backed by following evidences.

1. The assessor collects a copy of the attendance for the training done under the scheme. The attendance sheets are signed and stamped by the in charge / Head of the Training Centre.
2. The assessor verifies the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central Government. The same is mentioned in the attendance sheet.
3. The assessor assigns roll number.

The assessor takes photograph of all the students along with the assessor standing in the middle and with the centre name/banner at the back as evidence.

**2. ASSESSORS:**

NIELIT Patna faculty teaching the course, also assesses the students as per guidelines set by Examination cell of NIELIT Patna.

**3. ELIGIBILITY TO APPEAR IN THE EXAM:**

Minimum 75% attendance is compulsory for the students to appear for the assessments.

**4. MARKING SCHEME:**

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| --- | --- | --- | --- | --- | --- |
| **Assessable Outcomes**  | **Assessment criteria for the outcome**  | **Total Marks**  | **Written** | **Practical**  | **Vivo-voce**  |
| 1. Explain Computer Fundamental & Word Processing.  | Follow the platform for Computer Awareness  | **100** | 10 | 5 | 5 |
| Obtaining Skills for Operating System  | 10 | 5 | 5 |
| Learn Document Preparation skill  | 20 | 30 | 10 |
|   | **Total** | **40** | **40** | **20** |
| 2. Demonstrate Advanced Electronic Circuits  | Earning fundamentals of Electronics components of Computer  | **50** | 5 | 5 | 2.5 |
| Getting Information about Circuits  | 8 | 5 | 2.5 |
| Obtaining knowledge about memory and tools used for maintenance  | 7 | 5 | 5 |
|   | **Total** | **20** | **20** | **10** |
| **3.** Design and Development of Computer Architecture & Microprocessor  | Learn hardware components of Computer  | **50**  | 5  | 5  | 3  |
| Obtaining Basic Information Regarding Monitor  | 5  | 5  | 3  |
|  | Gaining Skills about PC drivers  |  | 5  | 5  | 3  |
|  | Learn how to operate and execute Microprocessors & Pentium Processor  |  | 5  | 5  | 3  |
|  |  | **Total**  | **20**  | **20**  | **10**  |

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| --- | --- | --- | --- | --- | --- |
| **3** Design, Install, Configure, manage troubleshooting a Computer Network  | Learn how Ethernet and Internet work  | **250**  | 5  | 5  | 5  |
| Follow IP Addressing Skill set  | 10  | 10  | 10  |
| Basic Configuration of routers and Switches  | 5  | 5  | 5  |
| Obtaining Advance Router Configuration Skills  | 10  | 10  | 5  |
| Learning Routing Fundamental  | 5  | 5  | 5  |
| Apply Advance Concepts of Routing  | 10  | 10  | 7.5  |
| Skill for Advanced Network Concepts  | 10  | 10  | 7.5  |
| Learn and apply Layer 2 Switching  | 5  | 5  | 2.5  |

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| --- | --- | --- | --- | --- | --- |
|   | Follow Advanced Switching concepts  |   | 10  | 10  | 7.5  |
| Learning Network Address Translation (NAT) and Security  | 10  | 10  | 7.5  |
| Learn how Wide Area Networks work  | 10  | 10  | 7.5  |
|   | **Total**  | **90**  | **90**  | **70**  |
| **4** Implement Client Server Network using Windows Server 2012 Operating System.  | Learn Basic Window Client Skills  | **250**  | 7.5  | 7.5  | 5  |
| Deploy and Manage Windows Server 2012 Roles and features  | 7.5  | 7.5  | 5  |
| Implement Domain Controllers and Active Directory Services.  | 15  | 15  | 10  |
| Implement Group Policy, Account policy and Security  | 15  | 15  | 10  |
| Manage and Monitor Windows Server 2012  | 7.5  | 7.5  | 10  |
| Learn File and disk Encryption and Audit policies  | 15  | 15  | 10  |
| Gathering detailed about various types of Server Configurations and VPNs in Windows 2012 Server  | 15  | 15  | 10  |
| Follow Virtualization in Windows 2012 Server  | 7.5  | 7.5  | 10  |
|   | **Total**  | **90**  | **90**  | **70**  |
| **5.** Develop skills to implement Client Server Network using Linux Operating System  | Learn Basic Linux Skills  | **250**  | 7.5  | 7.5  | 10  |
| Gathering Skills on User and Group Management  | 7.5  | 7.5  | 10  |
| Follow File System Concepts and Management  | 15  | 15  | 10  |
| Apply Software, Processes and Scheduling Management  | 15  | 15  | 10  |
| Apply Networking and Security in Linux  | 15  | 15  | 10  |
| Installation, Run Levels and other Advance Concepts in Linux  | 15  | 15  | 10  |
| Detailed knowledge about various Server Configurations  | 15  | 15  | 10  |
|   | **Total**  | **90**  | **90**  | **70**  |
| **6** Enhancing Communication Skill  | Develop Communication Skills  | **50**  | **0**  | **0**  | 10  |
| Managing career, staff and professional relationships  | **0**  | **0**  | 20  |
| Preparing for interview  | **0**  | **0**  | 20  |
|   | **Total**  | **0**  | **0**  | **50**  |
|   | Grand Total  | **1000**  | **350**  | **350**  | **300**  |

**5. PASSING MARKS:**

Passing criteria is based on marks obtain in attendance record, term works , assignments, practical’s performance, viva or oral exam, module test, class test, practical exam and final exam

Minimum Marks to pass practical exam – 50%

Minimum Marks to pass theory exam – 35%

Grade Equivalents:-

>85% S

>75% & <85% A

>65% & <75% B

>50% & <65% C

>35% & <50% D

**6. RESULTS AND CERTIFICATION:**

The assessment results are backed by evidences collected by assessors. Successful trainees are awarded the certificates by NIELIT, Patna.