



## Qualification Pack

# FULL-STACK DEVELOPER

QP Code: MSME/SSC/Q3901

Version: 1.0

NSQF Level: 4.5

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## Qualification Pack

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## Qualification Pack

# MSME/SSC/Q3901: FULL-STACK DEVELOPER

### Brief Job Description

This qualification helps learner in the following Qualified learners should be able to create backend & front end programs to develop the website.

### Personal Attributes

This qualification helps learner in the following Qualified learners should be able to create backend & front end programs to develop the website.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. [MSME/SSC/N3903: Gaining knowledge in Oracle and MySQL Database Management System](#)
2. [MSME/SSC/N3912: Deploying & Hosting Application with Docker & Kubernetes](#)
3. [MSME/SSC/N3911: Deploying & Hosting Application with Docker & Kubernetes](#)
4. [MSME/SSC/N3910: Mastering UI design with Angular](#)
5. [MSME/SSC/N3909: Mastering UI design with Angular](#)
6. [MSME/SSC/N3908: Working Back-End design with Spring Boot & Hibernate Framework](#)
7. [MSME/SSC/N3907: Working Back-End design with Spring Boot & Hibernate Framework](#)
8. [MSME/SSC/N3906: Gaining knowledge in Oracle and MySQL Database Management System](#)
9. [MSME/SSC/N3905: Understanding the Concepts of C and Python Programming](#)
10. [MSME/SSC/N3904: Understanding the Concepts of C and Python Programming](#)
11. [MSME/SSC/N3913: Employability Skill 07](#)
12. [MSME/SSC/N4404: OJT-FULL STACK DEVELOPER](#)

### Qualification Pack (QP) Parameters

<b>Sector</b>	IT-ITeS
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## Qualification Pack

<b>Sub-Sector</b>	Developer
<b>Occupation</b>	Software Developer
<b>Country</b>	India
<b>NSQF Level</b>	4.5
<b>Credits</b>	20
<b>Aligned to NCO/ISCO/ISIC Code</b>	Web Developer
<b>Minimum Educational Qualification &amp; Experience</b>	Pursuing 1st year of UG with NA of experience OR Completed 3 year diploma after 10th with NA of experience OR Pursuing 3rd year of 3-year diploma after 10th with NA of experience OR Previous relevant Qualification of NSQF Level (Previous relevant Qualification of NSQF Level 4) with 1.5 years of experience
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	30/04/2027
<b>NSQC Approval Date</b>	30/04/2024
<b>Version</b>	1.0
<b>Reference code on NQR</b>	QG-4.5-IT-02395-2024-V1-MSME
<b>NQR Version</b>	1.0



## Qualification Pack

# MSME/SSC/N3903: Gaining knowledge in Oracle and MySQL Database Management System

## Description

After completion of course Student should be able to Understand about the concept of DBMS.

## Scope

The scope covers the following :

- After completion of course Student should be able to Understand about the concept of DBMS.

## Elements and Performance Criteria

### *MSME/FSD/02 & version 1.0 Gaining knowledge in Oracle and MySQL database management*

To be competent, the user/individual on the job must be able to:

- PC1.**
  - Explain the Difference between DBMS and File Base System, DBMS
  - Architecture.
- PC2.** Explain the concept of Data Definition Language (DDL).
- PC3.**
  - Explain the concept of Data Manipulation Language (DML) to
  - manipulate over Data.
- PC4.** Explain the Concept of Different types of constraints.
- PC5.**
  - Demonstrate how two or more table can be join using different types
  - of join operation.
- PC6.** Explain the concept of stored procedure and function.
- PC7.** Install Data Base software's like MYSQL, SQL Server, Oracle and DB2.
- PC8.**
  - Execute SQL Query using Create, alter, drop table Using Data
  - Definition Language (DDL).
- PC9.**
  - Execute select, insert, update and delete statement using SQL Data
  - Manipulation Language.
- PC10.**
  - Able to modify the table structure by adding different constraints to
  - the existing table.
- PC11.**
  - Explain a table and then join those table by using different types of
  - joining operation.
- PC12.**
  - Able to create a store procedure by using both IN and OUT parameter
  - and then execute them.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/02 &amp; version 1.0 Gaining knowledge in Oracle and MySQL database management</i>	<b>100</b>	-	-	-
<b>PC1.</b> <ul style="list-style-type: none"><li>• Explain the Difference between DBMS and File Base System, DBMS</li><li>• Architecture.</li></ul>	-	-	-	-
<b>PC2.</b> Explain the concept of Data Definition Language (DDL).	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>• Explain the concept of Data Manipulation Language (DML) to</li><li>• manipulate over Data.</li></ul>	-	-	-	-
<b>PC4.</b> Explain the Concept of Different types of constraints.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Demonstrate how two or more table can be join using different types</li><li>• of join operation.</li></ul>	-	-	-	-
<b>PC6.</b> Explain the concept of stored procedure and function.	-	-	-	-
<b>PC7.</b> Install Data Base software's like MYSQL, SQL Server, Oracle and DB2.	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>• Execute SQL Query using Create, alter, drop table Using Data</li><li>• Definition Language (DDL).</li></ul>	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>• Execute select, insert, update and delete statement using SQL Data</li><li>• Manipulation Language.</li></ul>	-	-	-	-
<b>PC10.</b> <ul style="list-style-type: none"><li>• Able to modify the table structure by adding different constraints to</li><li>• the existing table.</li></ul>	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> <ul style="list-style-type: none"><li>• Explain a table and then join those table by using different types of</li><li>• joining operation.</li></ul>	-	-	-	-
<b>PC12.</b> <ul style="list-style-type: none"><li>• Able to create a store procedure by using both IN and OUT parameter</li><li>• and then execute them.</li></ul>	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3903
<b>NOS Name</b>	Gaining knowledge in Oracle and MySQL Database Management System
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3912: Deploying & Hosting Application with Docker & Kubernetes

## Description

After completion of course Student should be able to Explain the concepts of cloud computing.

## Scope

The scope covers the following :

- After completion of course Student should be able to Explain the concepts of cloud computing.

## Elements and Performance Criteria

### *MSME/FSD/05 & version 1.0 Deploying & Hosting Application with Docker & Kubernetes*

To be competent, the user/individual on the job must be able to:

- PC1.** Explain the concepts of cloud computing.
- PC2.**
  - Understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing
- PC3.** Analyze the performance of Cloud Computing.
- PC4.** Understand the concept of Cloud Security.
- PC5.** Learn the Concept of Cloud Infrastructure Model.
- PC6.** Understand about the concept of AWS
- PC7.** Able to create AWS Account.
- PC8.** Demonstrate the concept of IAM & AWS CLI.
- PC9.** Able to create an EC2 Instance.
- PC10.** Understand the concept of Amazon RDS.
- PC11.**
  - Able to deploy Spring Boot application on AWS using Elastic Beanstalk.
- PC12.** Able to explain the concepts of Docker & Kubernetes.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/05 &amp; version 1.0 Deploying &amp; Hosting Application with Docker &amp; Kubernetes</i>	-	<b>100</b>	-	-
<b>PC1.</b> Explain the concepts of cloud computing.	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing</li></ul>	-	-	-	-
<b>PC3.</b> Analyze the performance of Cloud Computing.	-	-	-	-
<b>PC4.</b> Understand the concept of Cloud Security.	-	-	-	-
<b>PC5.</b> Learn the Concept of Cloud Infrastructure Model.	-	-	-	-
<b>PC6.</b> Understand about the concept of AWS	-	-	-	-
<b>PC7.</b> Able to create AWS Account.	-	-	-	-
<b>PC8.</b> Demonstrate the concept of IAM & AWS CLI.	-	-	-	-
<b>PC9.</b> Able to create an EC2 Instance.	-	-	-	-
<b>PC10.</b> Understand the concept of Amazon RDS.	-	-	-	-
<b>PC11.</b> <ul style="list-style-type: none"><li>• Able to deploy Spring Boot application on AWS using Elastic Beanstalk.</li></ul>	-	-	-	-
<b>PC12.</b> Able to explain the concepts of Docker & Kubernetes.	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3912
<b>NOS Name</b>	Deploying & Hosting Application with Docker & Kubernetes
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3911: Deploying & Hosting Application with Docker & Kubernetes

## Description

After completion of course Student should be able to Explain the concepts of cloud computing.

## Scope

The scope covers the following :

- After completion of course Student should be able to Explain the concepts of cloud computing.

## Elements and Performance Criteria

### *MSME/FSD/05 & version 1.0 Deploying & Hosting Application with Docker & Kubernetes*

To be competent, the user/individual on the job must be able to:

- PC1.** Explain the concepts of cloud computing.
- PC2.**
  - Understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing
- PC3.** Analyze the performance of Cloud Computing.
- PC4.** Understand the concept of Cloud Security.
- PC5.** Learn the Concept of Cloud Infrastructure Model.
- PC6.** Understand about the concept of AWS
- PC7.** Able to create AWS Account.
- PC8.** Demonstrate the concept of IAM & AWS CLI.
- PC9.** Able to create an EC2 Instance.
- PC10.** Understand the concept of Amazon RDS.
- PC11.**
  - Able to deploy Spring Boot application on AWS using Elastic Beanstalk.
- PC12.** Able to explain the concepts of Docker & Kubernetes.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/05 &amp; version 1.0 Deploying &amp; Hosting Application with Docker &amp; Kubernetes</i>	<b>100</b>	-	-	-
<b>PC1.</b> Explain the concepts of cloud computing.	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Understand the importance of virtualization in distributed</li><li>• computing and how this has enabled the development of Cloud</li><li>• Computing</li></ul>	-	-	-	-
<b>PC3.</b> Analyze the performance of Cloud Computing.	-	-	-	-
<b>PC4.</b> Understand the concept of Cloud Security.	-	-	-	-
<b>PC5.</b> Learn the Concept of Cloud Infrastructure Model.	-	-	-	-
<b>PC6.</b> Understand about the concept of AWS	-	-	-	-
<b>PC7.</b> Able to create AWS Account.	-	-	-	-
<b>PC8.</b> Demonstrate the concept of IAM & AWS CLI.	-	-	-	-
<b>PC9.</b> Able to create an EC2 Instance.	-	-	-	-
<b>PC10.</b> Understand the concept of Amazon RDS.	-	-	-	-
<b>PC11.</b> <ul style="list-style-type: none"><li>• Able to deploy Spring Boot application on AWS using Elastic</li><li>• Beanstalk.</li></ul>	-	-	-	-
<b>PC12.</b> Able to explain the concepts of Docker & Kubernetes.	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3911
<b>NOS Name</b>	Deploying & Hosting Application with Docker & Kubernetes
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/SSC/N3910: Mastering UI design with Angular

#### Description

After completion of course Student should be able to Demonstrate the Structure of an html Page

#### Scope

The scope covers the following :

- After completion of course Student should be able to Demonstrate the Structure of an html Page

#### Elements and Performance Criteria

##### *MSME/FSD/04 & version Mastering UI design with Angular 1.0*

To be competent, the user/individual on the job must be able to:

- PC1.** Demonstrate the Structure of an html Page.
- PC2.** Demonstrate different types of basic html tag.
- PC3.** Demonstrate the use of list and table tag.
- PC4.**
  - Demonstrate the different types of form tag and their uses for User interfaces.
- PC5.**
  - Demonstrate External Style Sheets, Internal Style Sheets, and Inline Style, The class selector, div & span tag.
- PC6.**
  - Run a HTML Program using manual process and Adobe Dream weaver IDE.
- PC7.**
  - Design and develop a web page using heading, font, image, marquee tag.
- PC8.**
  - Develop a web page using order list, unordered list and definition list
- PC9.**
  - Design a Student registration form that will take all student Data including their photo and CV.
- PC10.**
  - Design a web page using html and CSS with better look and fill and then understand the concept of class and id in CSS.
- PC11.** Design web page using Angular JS.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/04 &amp; version Mastering UI design with Angular 1.0</i>	-	<b>100</b>	-	-
<b>PC1.</b> Demonstrate the Structure of an html Page.	-	-	-	-
<b>PC2.</b> Demonstrate different types of basic html tag.	-	-	-	-
<b>PC3.</b> Demonstrate the use of list and table tag.	-	-	-	-
<b>PC4.</b> <ul style="list-style-type: none"><li>• Demonstrate the different types of form tag and their uses for User</li><li>• interfaces.</li></ul>	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Demonstrate External Style Sheets, Internal Style Sheets, and Inline</li><li>• Style, The class selector, div &amp; span tag.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>• Run a HTML Program using manual process and Adobe Dream</li><li>• weaver IDE.</li></ul>	-	-	-	-
<b>PC7.</b> <ul style="list-style-type: none"><li>• Design and develop a web page using heading, font, image,</li><li>• marquee tag.</li></ul>	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>• Develop a web page using order list, unordered list and definition</li><li>• list</li></ul>	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>• Design a Student registration form that will take all student Data</li><li>• including their photo and CV.</li></ul>	-	-	-	-
<b>PC10.</b> <ul style="list-style-type: none"><li>• Design a web page using html and CSS with better look and fill and</li><li>• then understand the concept of class and id in CSS.</li></ul>	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. Design web page using Angular JS.	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3910
<b>NOS Name</b>	Mastering UI design with Angular
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/SSC/N3909: Mastering UI design with Angular

#### Description

After completion of course Student should be able to Demonstrate the Structure of an html Page

#### Scope

The scope covers the following :

- After completion of course Student should be able to Demonstrate the Structure of an html Page

#### Elements and Performance Criteria

##### *MSME/FSD/04 & version Mastering UI design with Angular 1.0*

To be competent, the user/individual on the job must be able to:

- PC1.** Demonstrate the Structure of an html Page.
- PC2.** Demonstrate different types of basic html tag.
- PC3.** Demonstrate the use of list and table tag.
- PC4.**
  - Demonstrate the different types of form tag and their uses for User interfaces.
- PC5.**
  - Demonstrate External Style Sheets, Internal Style Sheets, and Inline Style, The class selector, div & span tag.
- PC6.**
  - Run a HTML Program using manual process and Adobe Dreamweaver IDE.
- PC7.**
  - Design and develop a web page using heading, font, image, marquee tag.
- PC8.**
  - Develop a web page using order list, unordered list and definition list
- PC9.**
  - Design a Student registration form that will take all student Data including their photo and CV.
- PC10.**
  - Design a web page using html and CSS with better look and fill and then understand the concept of class and id in CSS.
- PC11.** Design web page using Angular JS.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/04 &amp; version Mastering UI design with Angular 1.0</i>	<b>100</b>	-	-	-
<b>PC1.</b> Demonstrate the Structure of an html Page.	-	-	-	-
<b>PC2.</b> Demonstrate different types of basic html tag.	-	-	-	-
<b>PC3.</b> Demonstrate the use of list and table tag.	-	-	-	-
<b>PC4.</b> <ul style="list-style-type: none"><li>• Demonstrate the different types of form tag and their uses for User</li><li>• interfaces.</li></ul>	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Demonstrate External Style Sheets, Internal Style Sheets, and Inline</li><li>• Style, The class selector, div &amp; span tag.</li></ul>	-	-	-	-
<b>PC6.</b> <ul style="list-style-type: none"><li>• Run a HTML Program using manual process and Adobe Dream</li><li>• weaver IDE.</li></ul>	-	-	-	-
<b>PC7.</b> <ul style="list-style-type: none"><li>• Design and develop a web page using heading, font, image,</li><li>• marquee tag.</li></ul>	-	-	-	-
<b>PC8.</b> <ul style="list-style-type: none"><li>• Develop a web page using order list, unordered list and definition</li><li>• list</li></ul>	-	-	-	-
<b>PC9.</b> <ul style="list-style-type: none"><li>• Design a Student registration form that will take all student Data</li><li>• including their photo and CV.</li></ul>	-	-	-	-
<b>PC10.</b> <ul style="list-style-type: none"><li>• Design a web page using html and CSS with better look and fill and</li><li>• then understand the concept of class and id in CSS.</li></ul>	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC11. Design web page using Angular JS.	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3909
<b>NOS Name</b>	Mastering UI design with Angular
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3908: Working Back-End design with Spring Boot & Hibernate Framework

## Description

After completion of course Student should be able to Explain the structure of a java program.

## Scope

The scope covers the following :

- After completion of course Student should be able to Explain the structure of a java program.

## Elements and Performance Criteria

### *MSME/FSD/03 & version 1.0 Attaining skills in Java and JEE development*

To be competent, the user/individual on the job must be able to:

- PC1.** Explain the concept of control statement and looping
- PC2.**
  - Explain the concept of class and object and using object access the member of a class
- PC3.**
  - Explain Different ways of representing a method passing primitive data types to method, method overloading, Types of method: instance, static, recursive, factory method. Passing object to method, passing array to method.
- PC4.** Explain the use of inheritance in programming Language.
- PC5.**
  - Create a Thread by using Thread class and Runnable interface,
  - Lifecycle of Thread, Thread class constructor and methods, Thread priorities, thread group, multithreading and synchronization
- PC6.** Explain the Concept of file
- PC7.**
  - Explain the concept of TCP/IP protocol, sockets, Knowing IP Address, URL and URL Connection class
- PC8.** Develop GUI application using swing through Net Beans IDE.
- PC9.** Explain the Architecture of JDBC and Types of JDBC Driver.
- PC10.** Explain the Concept of Statement, Prepared Statement
- PC11.**
  - Execute stored procedure and function using Callable Statement Interface.
- PC12.** Explain the concept of Spring & Spring Boot.
- PC13.** Develop CRUD application using Hibernate with Data JPA.
- PC14.** Explain the concept of Restful web services.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/03 &amp; version 1.0 Attaining skills in Java and JEE development</i>	-	<b>100</b>	-	-
<b>PC1.</b> Explain the concept of control statement and looping	-	-	-	-
<b>PC2.</b> • Explain the concept of class and object and using object access the • member of a class	-	-	-	-
<b>PC3.</b> • Explain Different ways of representing a method passing primitive • data types to method, method overloading, Types of method: instance, • static, recursive, factory method. Passing object to method, passing • array to method.	-	-	-	-
<b>PC4.</b> Explain the use of inheritance in programming Language.	-	-	-	-
<b>PC5.</b> • Create a Thread by using Thread class and Runnable interface, • Lifecycle of Thread, Thread class constructor and methods, Thread • priorities, thread group, multithreading and synchronization	-	-	-	-
<b>PC6.</b> Explain the Concept of file	-	-	-	-
<b>PC7.</b> • Explain the concept of TCP/IP protocol, sockets, Knowing IP • Address, URL and URL Connection class	-	-	-	-
<b>PC8.</b> Develop GUI application using swing through Net Beans IDE.	-	-	-	-
<b>PC9.</b> Explain the Architecture of JDBC and Types of JDBC Driver.	-	-	-	-
<b>PC10.</b> Explain the Concept of Statement, Prepared Statement	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> <ul style="list-style-type: none"><li>Execute stored procedure and function using Callable Statement</li><li>Interface.</li></ul>	-	-	-	-
<b>PC12.</b> Explain the concept of Spring & Spring Boot.	-	-	-	-
<b>PC13.</b> Develop CRUD application using Hibernate with Data JPA.	-	-	-	-
<b>PC14.</b> Explain the concept of Restful web services.	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3908
<b>NOS Name</b>	Working Back-End design with Spring Boot & Hibernate Framework
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	6
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQC Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3907: Working Back-End design with Spring Boot & Hibernate Framework

## Description

After completion of course Student should be able to Explain the structure of a java program.

## Scope

The scope covers the following :

- After completion of course Student should be able to Explain the structure of a java program.

## Elements and Performance Criteria

### *MSME/FSD/03 & version 1.0 Attaining skills in Java and JEE development*

To be competent, the user/individual on the job must be able to:

- PC1.** Explain the concept of control statement and looping
- PC2.**
  - Explain the concept of class and object and using object access the member of a class
- PC3.**
  - Explain Different ways of representing a method passing primitive data types to method, method overloading, Types of method: instance, static, recursive, factory method. Passing object to method, passing array to method.
- PC4.** Explain the use of inheritance in programming Language.
- PC5.**
  - Create a Thread by using Thread class and Runnable interface,
  - Lifecycle of Thread, Thread class constructor and methods, Thread priorities, thread group, multithreading and synchronization
- PC6.** Explain the Concept of file
- PC7.**
  - Explain the concept of TCP/IP protocol, sockets, Knowing IP Address, URL and URL Connection class
- PC8.** Develop GUI application using swing through Net Beans IDE.
- PC9.** Explain the Architecture of JDBC and Types of JDBC Driver.
- PC10.** Explain the Concept of Statement, Prepared Statement
- PC11.**
  - Execute stored procedure and function using Callable Statement Interface.
- PC12.** Explain the concept of Spring & Spring Boot.
- PC13.** Develop CRUD application using Hibernate with Data JPA.
- PC14.** Explain the concept of Restful web services.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/03 &amp; version 1.0 Attaining skills in Java and JEE development</i>	100	-	-	-
<b>PC1.</b> Explain the concept of control statement and looping	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Explain the concept of class and object and using object access the</li><li>• member of a class</li></ul>	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>• Explain Different ways of representing a method passing primitive</li><li>• data types to method, method overloading, Types of method: instance,</li><li>• static, recursive, factory method. Passing object to method, passing</li><li>• array to method.</li></ul>	-	-	-	-
<b>PC4.</b> Explain the use of inheritance in programming Language.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Create a Thread by using Thread class and Runnable interface,</li><li>• Lifecycle of Thread, Thread class constructor and methods, Thread</li><li>• priorities, thread group, multithreading and synchronization</li></ul>	-	-	-	-
<b>PC6.</b> Explain the Concept of file	-	-	-	-
<b>PC7.</b> <ul style="list-style-type: none"><li>• Explain the concept of TCP/IP protocol, sockets, Knowing IP</li><li>• Address, URL and URL Connection class</li></ul>	-	-	-	-
<b>PC8.</b> Develop GUI application using swing through Net Beans IDE.	-	-	-	-
<b>PC9.</b> Explain the Architecture of JDBC and Types of JDBC Driver.	-	-	-	-
<b>PC10.</b> Explain the Concept of Statement, Prepared Statement	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> <ul style="list-style-type: none"><li>Execute stored procedure and function using Callable Statement</li><li>Interface.</li></ul>	-	-	-	-
<b>PC12.</b> Explain the concept of Spring & Spring Boot.	-	-	-	-
<b>PC13.</b> Develop CRUD application using Hibernate with Data JPA.	-	-	-	-
<b>PC14.</b> Explain the concept of Restful web services.	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3907
<b>NOS Name</b>	Working Back-End design with Spring Boot & Hibernate Framework
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3906: Gaining knowledge in Oracle and MySQL Database Management System

## Description

After completion of course Student should be able to Understand about the concept of DBMS.

## Scope

The scope covers the following :

- After completion of course Student should be able to Understand about the concept of DBMS.

## Elements and Performance Criteria

### *MSME/FSD/02 & version 1.0 Gaining knowledge in Oracle and MySQL database management*

To be competent, the user/individual on the job must be able to:

- PC1.**
  - Explain the Difference between DBMS and File Base System, DBMS
  - Architecture.
- PC2.** Explain the concept of Data Definition Language (DDL).
- PC3.**
  - Explain the concept of Data Manipulation Language (DML) to
  - manipulate over Data.
- PC4.** Explain the Concept of Different types of constraints.
- PC5.**
  - Demonstrate how two or more table can be join using different types
  - of join operation.
- PC6.** Explain the concept of stored procedure and function.
- PC7.** Install Data Base software's like MYSQL, SQL Server, Oracle and DB2.
- PC8.**
  - Execute SQL Query using Create, alter, drop table Using Data
  - Definition Language (DDL).
- PC9.**
  - Execute select, insert, update and delete statement using SQL Data
  - Manipulation Language.
- PC10.**
  - Able to modify the table structure by adding different constraints to
  - the existing table.
- PC11.**
  - Explain a table and then join those table by using different types of
  - joining operation.
- PC12.**
  - Able to create a store procedure by using both IN and OUT parameter
  - and then execute them.



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/02 &amp; version 1.0 Gaining knowledge in Oracle and MySQL database management</i>	-	<b>100</b>	-	-
<b>PC1.</b> • Explain the Difference between DBMS and File Base System, DBMS • Architecture.	-	-	-	-
<b>PC2.</b> Explain the concept of Data Definition Language (DDL).	-	-	-	-
<b>PC3.</b> • Explain the concept of Data Manipulation Language (DML) to • manipulate over Data.	-	-	-	-
<b>PC4.</b> Explain the Concept of Different types of constraints.	-	-	-	-
<b>PC5.</b> • Demonstrate how two or more table can be join using different types • of join operation.	-	-	-	-
<b>PC6.</b> Explain the concept of stored procedure and function.	-	-	-	-
<b>PC7.</b> Install Data Base software's like MYSQL, SQL Server, Oracle and DB2.	-	-	-	-
<b>PC8.</b> • Execute SQL Query using Create, alter, drop table Using Data • Definition Language (DDL).	-	-	-	-
<b>PC9.</b> • Execute select, insert, update and delete statement using SQL Data • Manipulation Language.	-	-	-	-
<b>PC10.</b> • Able to modify the table structure by adding different constraints to • the existing table.	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC11.</b> <ul style="list-style-type: none"><li>• Explain a table and then join those table by using different types of</li><li>• joining operation.</li></ul>	-	-	-	-
<b>PC12.</b> <ul style="list-style-type: none"><li>• Able to create a store procedure by using both IN and OUT parameter</li><li>• and then execute them.</li></ul>	-	-	-	-
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3906
<b>NOS Name</b>	Gaining knowledge in Oracle and MySQL Database Management System
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3905: Understanding the Concepts of C and Python Programming

## Description

After completion of course Student should be able to Understand about the concept of C Programming.

## Scope

The scope covers the following :

- After completion of course Student should be able to Understand about the concept of C Programming.

## Elements and Performance Criteria

### *MSME/FSD/01 & version 1.0 Understanding concepts of Python and C programming*

To be competent, the user/individual on the job must be able to:

- PC1.** Demonstrate the structure of C program
- PC2.**
  - Demonstrate different data types, variable and keywords and
  - identifier, operator and its uses.
- PC3.**
  - Explain different control statement, types of loop and go to,
  - continue keyword
- PC4.** Explain the way to declare, define and call a function.
- PC5.**
  - Explain pointers- concepts, initialize pointer variables, Character
  - pointers and functions, pointers to pointers
- PC6.** Explain types of array, store, sort and search data within it.
- PC7.** Explain string and its pre-defined function.
- PC8.** Explain structure and union.
- PC9.** Explain file handling for Permanent data store process
- PC10.** Demonstrate the Python program
- PC11.** Demonstrate the use of print statements
- PC12.**
  - Demonstrate the knowledge of operator, control system and
  - looping
- PC13.** Demonstrate the knowledge of functions in python



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/01 &amp; version 1.0 Understanding concepts of Python and C programming</i>	<b>100</b>	-	-	-
<b>PC1.</b> Demonstrate the structure of C program	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"> <li>• Demonstrate different data types, variable and keywords and</li> <li>• identifier, operator and its uses.</li> </ul>	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"> <li>• Explain different control statement, types of loop and go to,</li> <li>• continue keyword</li> </ul>	-	-	-	-
<b>PC4.</b> Explain the way to declare, define and call a function.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"> <li>• Explain pointers- concepts, initialize pointer variables, Character</li> <li>• pointers and functions, pointers to pointers</li> </ul>	-	-	-	-
<b>PC6.</b> Explain types of array, store, sort and search data within it.	-	-	-	-
<b>PC7.</b> Explain string and its pre-defined function.	-	-	-	-
<b>PC8.</b> Explain structure and union.	-	-	-	-
<b>PC9.</b> Explain file handling for Permanente data store process	-	-	-	-
<b>PC10.</b> Demonstrate the Python program	-	-	-	-
<b>PC11.</b> Demonstrate the use of print statements	-	-	-	-
<b>PC12.</b> <ul style="list-style-type: none"> <li>• Demonstrate the knowledge of operator, control system and</li> <li>• looping</li> </ul>	-	-	-	-
<b>PC13.</b> Demonstrate the knowledge of functions in python	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS Total	100	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3905
<b>NOS Name</b>	Understanding the Concepts of C and Python Programming
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

# MSME/SSC/N3904: Understanding the Concepts of C and Python Programming

## Description

After completion of course Student should be able to Understand about the concept of C Programming.

## Scope

The scope covers the following :

- After completion of course Student should be able to Understand about the concept of C Programming.

## Elements and Performance Criteria

### *MSME/FSD/01 & version 1.0 Understanding concepts of Python and C programming*

To be competent, the user/individual on the job must be able to:

- PC1.** Demonstrate the structure of C program
- PC2.**
  - Demonstrate different data types, variable and keywords and
  - identifier, operator and its uses.
- PC3.**
  - Explain different control statement, types of loop and go to,
  - continue keyword
- PC4.** Explain the way to declare, define and call a function.
- PC5.**
  - Explain pointers- concepts, initialize pointer variables, Character
  - pointers and functions, pointers to pointers
- PC6.** Explain types of array, store, sort and search data within it.
- PC7.** Explain string and its pre-defined function.
- PC8.** Explain structure and union.
- PC9.** Explain file handling for Permanente data store process
- PC10.** Demonstrate the Python program
- PC11.** Demonstrate the use of print statements
- PC12.**
  - Demonstrate the knowledge of operator, control system and
  - looping
- PC13.** Demonstrate the knowledge of functions in python



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/FSD/01 &amp; version 1.0 Understanding concepts of Python and C programming</i>	-	<b>100</b>	-	-
<b>PC1.</b> Demonstrate the structure of C program	-	-	-	-
<b>PC2.</b> <ul style="list-style-type: none"><li>• Demonstrate different data types, variable and keywords and</li><li>• identifier, operator and its uses.</li></ul>	-	-	-	-
<b>PC3.</b> <ul style="list-style-type: none"><li>• Explain different control statement, types of loop and go to,</li><li>• continue keyword</li></ul>	-	-	-	-
<b>PC4.</b> Explain the way to declare, define and call a function.	-	-	-	-
<b>PC5.</b> <ul style="list-style-type: none"><li>• Explain pointers- concepts, initialize pointer variables, Character</li><li>• pointers and functions, pointers to pointers</li></ul>	-	-	-	-
<b>PC6.</b> Explain types of array, store, sort and search data within it.	-	-	-	-
<b>PC7.</b> Explain string and its pre-defined function.	-	-	-	-
<b>PC8.</b> Explain structure and union.	-	-	-	-
<b>PC9.</b> Explain file handling for Permanent data store process	-	-	-	-
<b>PC10.</b> Demonstrate the Python program	-	-	-	-
<b>PC11.</b> Demonstrate the use of print statements	-	-	-	-
<b>PC12.</b> <ul style="list-style-type: none"><li>• Demonstrate the knowledge of operator, control system and</li><li>• looping</li></ul>	-	-	-	-
<b>PC13.</b> Demonstrate the knowledge of functions in python	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>NOS Total</b>	-	<b>100</b>	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3904
<b>NOS Name</b>	Understanding the Concepts of C and Python Programming
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQF Clearance Date</b>	30/04/2024



## Qualification Pack

### MSME/SSC/N3913: Employability Skill 07

#### Description

This NOS unit is about carrying out operations about learners applying basic and advanced Employability Skills concepts in real life situations to become a successful 21st century professional

#### Scope

The scope covers the following :

- The scope covers the following:
- plan and prepare advance employability skills activities carry out the work to plan and prepare the learners to build key knowledge and skills for career
- development in the 21st century using advanced employability skills documenting the record

#### Elements and Performance Criteria

##### *MSME/ES/01 Employability Skill*

To be competent, the user/individual on the job must be able to:

- PC1.** Explain the major applications of MS Office
- PC2.** Explain the different types of e-commerce
- PC3.** List the benefits of e-commerce for retailers and customers
- PC4.**
  - Discuss how the Digital India campaign will help boost e-commerce
  - in India
- PC5.** Write applications pertaining to various matters.
- PC6.** Explain power of positive attitude and Importance of commitment
- PC7.**
  - Explain motivation and the Ways to motivate oneself and Personal
  - goal setting
- PC8.** Explain the Effective & Level of Communication
- PC9.**
  - Explain communication and Significance of technical
  - communication?
- PC10.** Explain the methods of listening Skills.
- PC11.** Explain the differences between bio-data, CV and Resume.
- PC12.** Explain verbal and non-verbal Communication
- PC13.** Explain how to face an interview.
- PC14.** Explain team work, group work, team formation process
- PC15.** How to Minimize the team conflicts
- PC16.** Explain Ethics & values
- PC17.**
  - Explain the concept of entrepreneurship, and entrepreneurship v/s
  - Management
- PC18.**
  - Explain the process of project report preparation for setting up a
  - new business



## Qualification Pack

- PC19.** Explain the role of various schemes and institute for selfemployment i.e. MSME, DIC, NSIC, SIDBI etc.,
- PC20.** Role of financial institution to support startup
- PC21.** Discuss the importance of saving money
- PC22.** Discuss the main types of bank accounts
- PC23.** Differentiate between fixed and variable costs
- PC24.** Describe the different types of insurance products
- PC25.** Discuss the main types of electronic funds transfers



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>MSME/ES/01 Employability Skill</i>	<b>100</b>	-	-	-
<b>PC1.</b> Explain the major applications of MS Office	-	-	-	-
<b>PC2.</b> Explain the different types of e-commerce	-	-	-	-
<b>PC3.</b> List the benefits of e-commerce for retailers and customers	-	-	-	-
<b>PC4.</b> • Discuss how the Digital India campaign will help boost e-commerce • in India	-	-	-	-
<b>PC5.</b> Write applications pertaining to various matters.	-	-	-	-
<b>PC6.</b> Explain power of positive attitude and Importance of commitment	-	-	-	-
<b>PC7.</b> • Explain motivation and the Ways to motivate oneself and Personal • goal setting	-	-	-	-
<b>PC8.</b> Explain the Effective & Level of Communication	-	-	-	-
<b>PC9.</b> • Explain communication and Significance of technical • communication?	-	-	-	-
<b>PC10.</b> Explain the methods of listening Skills.	-	-	-	-
<b>PC11.</b> Explain the differences between bio-data, CV and Resume.	-	-	-	-
<b>PC12.</b> Explain verbal and non-verbal Communication	-	-	-	-
<b>PC13.</b> Explain how to face an interview.	-	-	-	-
<b>PC14.</b> Explain team work, group work, team formation process	-	-	-	-



## Qualification Pack

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC15.</b> How to Minimize the team conflicts	-	-	-	-
<b>PC16.</b> Explain Ethics & values	-	-	-	-
<b>PC17.</b> <ul style="list-style-type: none"><li>• Explain the concept of entrepreneurship, and entrepreneurship v/s</li><li>• Management</li></ul>	-	-	-	-
<b>PC18.</b> <ul style="list-style-type: none"><li>• Explain the process of project report preparation for setting up a</li><li>• new business</li></ul>	-	-	-	-
<b>PC19.</b> Explain the role of various schemes and institute for selfemployment i.e. MSME, DIC, NSIC, SIDBI etc.,	-	-	-	-
<b>PC20.</b> Role of financial institution to support startup	-	-	-	-
<b>PC21.</b> Discuss the importance of saving money	-	-	-	-
<b>PC22.</b> Discuss the main types of bank accounts	-	-	-	-
<b>PC23.</b> Differentiate between fixed and variable costs	-	-	-	-
<b>PC24.</b> Describe the different types of insurance products	-	-	-	-
<b>PC25.</b> Discuss the main types of electronic funds transfers	-	-	-	-
<b>NOS Total</b>	<b>100</b>	-	-	-



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N3913
<b>NOS Name</b>	Employability Skill 07
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Software Developer
<b>NSQF Level</b>	4.5
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	29/07/2023
<b>Next Review Date</b>	29/07/2028
<b>NSQC Clearance Date</b>	29/07/2023



## Qualification Pack

# MSME/SSC/N4404: OJT-FULL STACK DEVELOPER

## Description

ON JOB TRAINING

## Scope

The scope covers the following :

- ON JOB TRAINING

## Elements and Performance Criteria

### *OJT*

To be competent, the user/individual on the job must be able to:

**PC1.** Viva voce-of OJT



## Qualification Pack

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>OJT</i>	-	-	-	<b>100</b>
<b>PC1. Viva voce-of OJT</b>	-	-	-	100
<b>NOS Total</b>	-	-	-	<b>100</b>



## Qualification Pack

### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	MSME/SSC/N4404
<b>NOS Name</b>	OJT-FULL STACK DEVELOPER
<b>Sector</b>	IT-ITeS
<b>Sub-Sector</b>	
<b>Occupation</b>	Designing
<b>NSQF Level</b>	4.5
<b>Credits</b>	2
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	30/04/2024
<b>Next Review Date</b>	30/04/2027
<b>NSQC Clearance Date</b>	30/04/2024

### Assessment Guidelines and Assessment Weightage

#### Assessment Guidelines

As per QP

**Minimum Aggregate Passing % at QP Level : 40**

**(Please note:** Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

#### Assessment Weightage

Compulsory NOS



## Qualification Pack

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
MSME/SSC/N3903.Gaining knowledge in Oracle and MySQL Database Management System	100	0	0	0	100	5
MSME/SSC/N3912.Deploying & Hosting Application with Docker & Kubernetes	0	100	0	0	100	10
MSME/SSC/N3911.Deploying & Hosting Application with Docker & Kubernetes	100	0	0	0	100	10
MSME/SSC/N3910.Mastering UI design with Angular	0	100	0	0	100	10
MSME/SSC/N3909.Mastering UI design with Angular	100	0	0	0	100	10
MSME/SSC/N3908.Working Back-End design with Spring Boot & Hibernate Framework	0	100	0	0	100	10
MSME/SSC/N3907.Working Back-End design with Spring Boot & Hibernate Framework	100	0	0	0	100	10
MSME/SSC/N3906.Gaining knowledge in Oracle and MySQL Database Management System	0	100	0	0	100	10
MSME/SSC/N3905.Understanding the Concepts of C and Python Programming	100	0	0	0	100	10
MSME/SSC/N3904.Understanding the Concepts of C and Python Programming	0	100	0	0	100	5
MSME/SSC/N3913.Employability Skill 07	100	0	0	0	100	5
MSME/SSC/N4404.OJT-FULL STACK DEVELOPER	-	-	-	100	100	5
<b>Total</b>	<b>600</b>	<b>500</b>	<b>-</b>	<b>100</b>	<b>1200</b>	<b>100</b>



## Qualification Pack

### Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training



## Qualification Pack

### Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.



## Qualification Pack

<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
<b>Organisational Context</b>	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.