

QUALIFICATION FILE

Web Technologies

- ☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship
☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT
☐ For ToA

- ☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ OEM

NCrF/NSQF Level: 4.5

Submitted By: Namrata Kapur

IT-ITes Sector Skills Council NASSCOM (SSC NASSCOM)

Plot No. – 7, 8, 9 & 10

Sector – 126, Noida, Uttar Pradesh - 201303

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Section 1: Basic Details

1.	Qualification Name	Web Technologies													
2.	Sector/s	IT/ITeS													
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of the existing /previous qualification: <i>(change to previous, once approved)</i>	Qualification Name of the existing/previous version: Web Technologies												
4.	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	Web Technologies													
5.	National Qualification Register (NQR) Code &Version <i>(Will be issued after NSQC approval)</i>	QG-4.5-IT-01803-2024-V1-NASSCOM	6. NCrF/NSQF Level: 4.5												
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other) <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate													
8.	Brief Description of the Qualification	Individuals at this job are responsible for Web designing & development and maintaining web-based applications that include static and dynamic content. This includes the design, layout, and coding of a website. They may work independently or along with application/functional developers as part of the overall solution that includes a web-based component.													
9.	Eligibility Criteria for Entry for a Student/Trainee/Learner/Employee	<p>Entry Qualification & Relevant Experience:</p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Completed 1st year of 3-year/ 4-years UG</td> <td></td> </tr> <tr> <td>2</td> <td>Pursuing 1st year of 3-year/ 4-years UG and continuing education</td> <td></td> </tr> <tr> <td>3</td> <td>Previous relevant Qualification of NSQF Level 4</td> <td>1.5 Years of relevant experience</td> </tr> </tbody> </table> <p>Min Age: 19 Years</p>		S.No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed 1st year of 3-year/ 4-years UG		2	Pursuing 1st year of 3-year/ 4-years UG and continuing education		3	Previous relevant Qualification of NSQF Level 4	1.5 Years of relevant experience
S.No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)													
1	Completed 1st year of 3-year/ 4-years UG														
2	Pursuing 1st year of 3-year/ 4-years UG and continuing education														
3	Previous relevant Qualification of NSQF Level 4	1.5 Years of relevant experience													

10.	Credits Assigned to this Qualification, Subject to Assessment (<i>as per National Credit Framework (NCrF)</i>)	17 Credits	11. Common Cost Norm Category (I/II/III) (<i>wherever applicable</i>): II																					
12.	Any Licensing Requirements for Undertaking Training on This Qualification (<i>wherever applicable</i>)	NA																						
13.	Training Duration by Modes of Training Delivery (<i>Specify Total Duration as per selected training delivery modes and as per requirement of the qualification</i>)	<input checked="" type="checkbox"/> Offline Only <input checked="" type="checkbox"/> Online Only <input type="checkbox"/> Blended																						
		<table border="1"> <thead> <tr> <th>Training Delivery Mode</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT (Mandatory) Hours</th><th>OJT (Recommended) Hours</th><th>Total (Hours)</th></tr> </thead> <tbody> <tr> <td>Classroom (offline)</td><td>200</td><td>310</td><td>-</td><td>-</td><td>510</td></tr> <tr> <td>Online</td><td>200</td><td>310</td><td>-</td><td>-</td><td>510</td></tr> </tbody> </table>					Training Delivery Mode	Theory (Hours)	Practical (Hours)	OJT (Mandatory) Hours	OJT (Recommended) Hours	Total (Hours)	Classroom (offline)	200	310	-	-	510	Online	200	310	-	-	510
Training Delivery Mode	Theory (Hours)	Practical (Hours)	OJT (Mandatory) Hours	OJT (Recommended) Hours	Total (Hours)																			
Classroom (offline)	200	310	-	-	510																			
Online	200	310	-	-	510																			
		(Refer Blended Learning Annexure for details)																						
14.	Aligned to NCO/ISCO Code/s (<i>if no code is available mention the same</i>)	NCO-2015/ NIL																						
15.	Progression Path After Attaining the Qualification, wherever applicable (<i>Please show Professional and Academic progression</i>)	<p>This entry should refer to one or more of the following:</p> <p>Professional progression: access to related qualification(s) at the next NSQF level: Senior Web Developer, Web Development- Team Lead</p> <p>Academic progression: access to related qualification(s) at the next NSQF level: Application Developer</p>																						
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																						
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:																						
18.	Is the Job Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes", specify applicable type of Disability: Visual, Hearing or Speech impairment, Locomotor Disability																						
19.	How will participation of women be encouraged?	The Program is gender neutral although to increase women's participation, organizations are keeping aside a few seats to encourage female candidates.																						

20.	Are Greening/Environment Sustainability Aspects covered (<i>Specify the NOS/Module which Covers it</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
21.	Is Qualification suitable to be offered in Schools/Colleges	Schools: <input type="checkbox"/> Yes <input type="checkbox"/> No	Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
22.	Name and Contact Details Submitting / Awarding Body SPOC (<i>In case of CS or MS, provide details of both Lead AB & Supporting ABs</i>)	Name: Namrata Kapur Email: Namrata@nasscom.in Contact No.: 0120-4990111 Website: https://nasscom.in	
23.	Final Approval Date by NSQC: 06th February 2024	24. Validity Duration: 3 Years	25. Next Review Date: 06th February 2026

Section 2: Module Summary

NOS/s of Qualifications

(In Exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/Module level. For Further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job training **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**- Project

S.No.	NOS Module Name	NOS/Module Code & Version (If Applicable)	Core/Non-Core	NCrF/NSQF Level	Credits as per NcrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Work Organization and management for web technologies	SSC/N8440 V1.0	Non- Core	4.5	1	10:00	20:00	00:00	00:00	30:00	30	70	-	-	100	5
2.	Communication and interpersonal skills for web technologies	SSC/N8441 V1.0	Non- Core	4.5	1	10:00	20:00	00:00	00:00	30:00	30	70	-	-	100	5
3.	Design Implementation	SSC/N8442 V1.0	Core	4.5	5	60:00	90:00	00:00	00:00	150:00	30	70	-	-	100	25
4.	Front End Development	SSC/N8443 V1.0	Core	4.5	5	60:00	90:00	00:00	00:00	150:00	30	70	-	-	100	25
5.	Back End Development	SSC/N8444 Level 1	Core	4.5	5	60:00	90:00	00:00	00:00	150:00	30	70	-	-	100	40
Duration (in Hours)/Total Marks					17	200:00	310:00	00:00	00:00	510:00	150	350	-	-	500	100%

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70% (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: ____% (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 5 years of relevant experience and 2 years of full-time training experience in programing languages such as HTML, CSS, JavaScript etc.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 5 years of relevant experience and 2 years of full-time training experience in relevant field programing languages such as HTML, CSS, JavaScript etc.
3.	Tools and Equipment Required for the Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 5 years of relevant experience and 2 years of full-time training experience in programing languages such as HTML, CSS, JavaScript etc.
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines), (wherever applicable)	Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with Minimum 5 years of relevant experience and 2 years of full-time training experience in relevant field programing languages such as HTML, CSS, JavaScript etc.

3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	Graduate in Engineering/Technology/ Statistics/ Mathematics/Computer Science/Physical Sciences with a Minimum 5 years of relevant experience and 2 years of full-time training experience in programming languages such as HTML, CSS, JavaScript etc.
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Can be either in the classroom or online
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 5: Evidence of the Need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government/Industry initiatives/requirement (Yes/No): NA
4.	Number of industry validations provided: NA
5.	Estimated number of people to be trained and employed: NA
6.	Evidence of Concurrence/Consultation with Line/State Departments: NA If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf/NSQF descriptors <i>(Mandatory)</i>	Evidence of Level
2.	Annexure: List of tools and equipment relevant for NOS <i>(Mandatory, except in case of online course)</i>	Tools and Equipment (lab set-up)

3.	Annexure: Detailed Assessment criteria (<i>Mandatory</i>)	Performance Criteria Details
4.	Annexure: Assessment Strategy (<i>Mandatory</i>)	Assessment Strategy
5.	Annexure: Blended Learning (<i>Mandatory, in case selected Mode of delivery is Blended Learning</i>)	NA
6.	Annexure: Multiple Entry Exit Details (<i>Mandatory, in case qualification has multiple entry-exit</i>)	NA
7.	Annexure: Acronym and Glossary (<i>Optional</i>)	NA
8.	Supporting Document: Model Curriculum (<i>Mandatory-Public View</i>)	MC_Web Technologies V1.0
9.	Supporting Document: Career Progression (<i>Mandatory-Public View</i>)	NA
10.	Supporting Document: Occupational Map (<i>Mandatory</i>)	NA
11.	Supporting Document: Assessment SOP (<i>Mandatory</i>)	Assessment Strategy
12.	Any Other document you wish to submit:	NA

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process knowledge	<ul style="list-style-type: none"> Contribute to the design of web pages and applications. Develop media content and graphic designs for web pages and applications. Manage your work to meet requirements. Work effectively with colleagues Maintain a healthy, safe, and secure working environment. Provide data/information in standard formats. 	Individuals at this job require essential skills to be able to understand the Business Requirements Specification (BRS)/User Requirements Specification (URS), Software Requirements Specification (SRS) and High-Level Design (HLD) to contribute to the design of web pages and applications.	4.5

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
	<ul style="list-style-type: none"> Maintain an inclusive, environmentally sustainable workplace. 	<p>He/she needs to have a clear understanding & choice of procedures to analyze inputs from appropriate people to identify, resolve and record design defects and inform future designs.</p> <p>He/she also needs to review the designs & document them using standard templates and tools and ensure that they comply with the organization's policies, procedures and guidelines when contributing to the design of web pages and applications</p>	
Professional and Technical Skills/ Expertise/ Professional Knowledge	<ul style="list-style-type: none"> The approval process for designs of web pages and applications. How to design basic program structures, web pages and software applications. Different sources of information to help design web pages and specifications. Common design defects and how to resolve them. Current practice in the infrastructure design of web pages and applications. The range of activities involved in designing different web pages and applications. How to test new products and applications to fit for purpose. Implications new products and applications may have on business processes and infrastructure. The scope of work to be executed and the importance of keeping within the level of one's competency and authority. How to analyze and use feedback to improve media content and graphic designs Who may need to be involved to provide feedback on the media content and graphic designs? 	<p>This job requires factual knowledge of field of work or study to contribute to the design of web pages and applications and develop media content and graphic designs for web pages and applications.</p> <p>He/she should have knowledge relating to the field of work or study, including:</p> <ul style="list-style-type: none"> How to interpret and follow different design specifications, including Business Requirements Specification (BRS), User Requirements Specification (URS), Software Requirements, Specification (SRS), High Level Design (HLD) how to design basic program structures how to design web pages how to design software applications 	4.5

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
	<ul style="list-style-type: none"> • Organization's approval process for media content and graphic designs • The process for converting design specifications into media content and graphic designs. • Current practice in developing media content and graphic designs • How recording corrective actions for problems and defects can improve future designs • How to create, review and execute media content and graphic designs • How to determine whether components are suitable for re-use • Different types of problems and defects that may occur during media content development and designing and how these may be resolved. • How to test media content and graphic designs to fit for purpose. • Different sources of information help to develop media content and graphic designs 		
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	<ul style="list-style-type: none"> • Produce work output in the prescribed format with accurate details. • Get familiarized with current changes in procedures and practices in the role. • Draw a conclusive plan to complete the tasks within given deadlines. • Apply problem-solving approaches in different situations. • Configure data and disseminate relevant information and constructive opinions, applying balanced judgments to different situations. • Practice utilizing information technology efficiently to insert or extract data accurately. • Complete work output writing the details accurately. 	<p>Individuals at this Job need to have the practical skills required to design and maintain web-based applications that include static and dynamic content.</p> <p>He/she needs to use basic information, methods & tools to check that the work meets customer requirements & hence meets and exceed customer expectations.</p> <p>Also, based on the relevant information collected, he/she should have the ability to make decisions and act independently.</p>	4.5

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
	<ul style="list-style-type: none"> Follow the process of rule-based decision-making. Check if decisions need to be referred to, or ratified by, line managers. Allocate tasks wisely to meet targets and deadlines. Work efficiently with colleagues in a customer-centric environment to cater to customer requirements. Analyse data and refer anomalies to provide accurate reports to the supervisor. Apply competency skills to solve problems in different situations. Pass relevant information and constructive opinions to colleague's post data configuration, applying balanced judgments to various situations 		
Broad Learning Outcomes/Core Skill	<ul style="list-style-type: none"> Listen actively and communicate with others orally and in writing. Seek input and suggestions from line managers. Work in a customer-facing environment with peers to build and maintain positive and effective relationships with customers to meet their requirements. Follow instructions, guidelines, procedures, rules, and service level agreements. Practice active listening and verbally communicating information. Follow quality assurance standards and produce error-free works. Work independently and collaboratively Use information technology to browse the internet 	<p>Individuals at this job need to have arithmetic and algebraic skills to comply with Business Requirements Specification (BRS)/User Requirements Specification (URS), Software Requirements Specification (SRS) and High-Level Design (HLD) to contribute to the design of web pages and applications.</p> <p>The individual should be result oriented. The individual should also be able to demonstrate skills for communication, creative and logical thinking.</p>	4.5
Responsibility	<ul style="list-style-type: none"> Functional and non-functional software requirements Selection of technical solution of software related issues and backing rationales through proper usage of High-Level Design (HLD) Seek guidance and advice from peers or supervisors. 	Individuals at this job are responsible for designing and maintaining web-based applications that include static and dynamic content. This includes the design, layout, and coding of a website.	4.5

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
	<ul style="list-style-type: none"> Basic requirements to prepare High Level Design (HLD) Checklists for coding standards of programming structure Communicate with peers and supervisor to complete project 	<p>They may work standalone or along with application/functional developers as part of the overall solution that includes a web-based component.</p> <p>This job may require the personnel to work as an individual contributor or manage a team of junior contributors.</p> <p>He/she is only responsible for his/her own work and may need to be responsible for the work of a team of developers, testers, etc. but also report to a senior team lead/tower lead. Therefore, this QF is justified to be pegged at Level 6</p>	

Annexure: Tools and Equipment (lab set-up)

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	PC/Laptop with internet	With Wifi (2MBPS Dedicated)	1 Unit per Trainee
2	Relevant Software: CRM Tool for demonstration	HTML5, JavaScript, CSS, SQL, Web Builder, Word Press, Joomla, and modelling tools such as Visio, UML.	1 Unit per Trainee
3	Microphone/Voice System	For lecture & class activities	1 Unit for Trainer
4	White Board		1 Unit for Trainer
5	White Board Maker		1 Unit for Trainer
6	Projector		1 Unit

Annexure: Industry Validations Summary

Provide summary information of all the industry validation in table.

S. No	Organisation Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1							
2							
3							

Annexure: Training & Employment Details

Training & Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employed Opportunities	Estimated Training #	Estimated Employed Opportunities	Estimated Training #	Estimated Employed Opportunities
2023-24	~1000	-	-	-	-	-
2024-25	~1300	-	-	-	-	-
2025-26	~2000	-	-	-	-	-

#The Estimated Data is an average for each state.

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates			Women			People with disability		
		Trained	Assessed	Certified	Trained	Assessed	Certified	Trained	Assessed	Certified
	2022-23	-	-	-	-	-	-	-	-	-

Content availability for the previous version of qualifications:

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Language in which content is available:

Annexure: Detailed Assessment Criteria

Detailed Assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
SSC/N8440: Work organization and Management for web technologies	PC1 Troubleshoot common web design and development problems	4	8	-	-
	PC2 Work within specified time limitations and deadlines	4	8	-	-
	PC3 Use a computer with a range of software packages	4	9	-	-
	PC4 Apply research techniques and skills to keep up to date with industry best practices	4	9	-	-
	PC5 Apply deployment optimization, such as page loading, with industry best practices	4	9	-	-
	PC6 Ensure the work is completed according to a given schedule	4	9	-	-
	PC7 Include linked images, fonts, native files, and production file format when archiving	4	9	-	-
	PC8 Use software version control systems such as git	4	9		
	Total Marks	30	70	-	-
SSC/N8441: Communication and interpersonal skills for web technologies	PC1 Read and understand specifications documents	4	10	-	-
	PC2 Read and use provided source code of front-end and back-end technologies.	4	10	-	-
	PC3 Deliver products that respond to client requirements and specification.	4	10	-	-
	PC4 Gather, analyse, and evaluate information	4	10	-	-
	PC5 Interpret standards and requirements	4	10	-	-
	PC6 Match Client requirement	5	10	-	-
	PC7 Present concepts to meet business requirements	5	10	-	-
	Total Marks	30	70	-	-
SSC/N8442: Design Implementation	PC1 Create, analyse, and develop visual response to communication problems including understanding hierarchy, typography, aesthetics, and composition	2	4	-	-
	PC2 Create, manipulate, and optimize images for the internet	2	4	-	-
	PC3 Identify target markets and create concept for designs	2	5	-	-
	PC4 Implement responsive designs that function correctly on multiple screen resolutions and/or devices.	2	5	-	-
	PC5 Critique draft concepts, colour, and typography choices	2	5	-	-
	PC6 Create wireframes, interactive prototypes, and design of user interfaces that consider user experience	2	5	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC7 Create code that conforms to and validates with the W3C standards including the accessibility guidelines	3	7	-	-
	PC8 Create accessible and usable web interfaces for a variety of devices and screen resolutions	3	7	-	-
	PC9 Use CSS or other external files to modify the appearance of web interfaces	3	7	-	-
	PC10 Use CSS pre/post-processors	3	7	-	-
	PC11 Create and update web interfaces for proper user experience and to assist with search engine performance	3	7	-	-
	PC12 Use CSS to develop animations and interactive user interfaces	3	7		
	Total Marks	30	70	-	-
SSC/N8443: Front-end Web development	PC1 Create website animations and functionalities to assist in context explanations and add visual appeal	2	5	-	-
	PC2 Create and update JavaScript code to enhance websites' functionality, usability, and aesthetics.	2	5	-	-
	PC3 Manipulate data and custom media with JavaScript	2	5	-	-
	PC4 Create modular and reusable JavaScript code	3	6	-	-
	PC5 Write documentation including comments in code	3	7	-	-
	PC6 Use open-source JavaScript libraries	3	7	-	-
	PC7 Manipulate graphical elements and content elements using JavaScript	3	7	-	-
	PC8 Write test cases and execute automated testing for JavaScript implementation	3	7	-	-
	PC9 Handle errors in code, debug code and fix bugs	3	7	-	-
	PC10 Use the Linux CLI to interact with the remote server to deploy an application on the remote server	3	7	-	-
	PC11 Document deployment steps for applications as required	3	7	-	-
	Total Marks	30	70	-	-
SSC/N8444: Back End Development	PC1 Manipulate data, making use of programming skills	2	5	-	-
	PC2 Protect against security exploits	2	5	-	-
	PC3 Integrate with existing code using APIs (Application Programming Interfaces), libraries & frameworks	2	5	-	-
	PC4 Create or maintain database tables to support system requirements considering data normalization, key constraints and correct data types	3	6	-	-
	PC5 Create code that are modular and reusable	3	7	-	-
	PC6 Write documentation and comments in code	3	7	-	-
	PC7 Write test cases and execute automated testing for back-end implementation	3	7	-	-
	PC8 Handle errors in code, debug code and fix bugs	3	7	-	-
	PC9 Use the Linux CLI to interact with the remote server to deploy an application on the remote server	3	7	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
	PC10 Document deployment steps for applications as required	3	7	-	-
	PC11 Configure the webserver for given applications	3	7	-	-
	Total Marks	30	70	-	-
Grand Total Marks		150	350		

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Assessment System Overview

A uniform assessment of job candidates per industry standards facilitates the industry's progress by filtering employable individuals while simultaneously providing candidates with an analysis of personal strengths and weaknesses.

Assessment Criteria

The Sector Skill Council will create criteria for assessment for each Qualification Pack. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down the proportion of marks for Theory and Skills Practical for each PC. The assessment for the theory part will be based on a knowledge bank of questions created by the SSC. Assessment will be conducted for all compulsory NOS and where applicable, on the selected elective/option NOS/set of NOS.

Guidelines for Assessment			
Testing Environment	Tasks and Functions	Productivity	Teamwork
<ul style="list-style-type: none"> Carry out assessments under realistic work pressures found in the normal industry workplace (or simulated workplace). Ensure that the range of materials, equipment, and tools that learners use are current and of the type routinely found in the normal industry workplace (or simulated workplace) environments. 	<ul style="list-style-type: none"> Assess that all tasks and functions are completed in a way, and to a timescale that is acceptable in the normal industry workplace. Assign workplace (or simulated workplace) responsibilities that enable learners to meet the requirements of the NOS. 	<ul style="list-style-type: none"> Productivity levels must be checked to ensure that it reflects those that are found in the work situation being replicated. 	<ul style="list-style-type: none"> Provide situations that allow learners to interact with the range of personnel and contractors found in the normal industry workplace (or simulated workplace).

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process is obtained when a competent body determines that an individual has achieved learning outcomes to given standards.
Qualification File	A Qualification File is a template designed to capture necessary information about a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities based on their main economic function, product, service, or technology.

Annexure: Market Research & Gap Analysis

While collecting data from the companies for the occupational map, we also took feedback from industry training institutions, which was collected concerning roles for which qualification file development, was to be prioritized. This was primarily based on the volume of people required, a quantitative and qualitative shortfall that the industry feels they face. The Governing Council of IT - ITeS and Occupational Standards Committee, which comprises experts & senior leaders, gave final approval and endorsement.

The talent pool employed in web development in India, as of October 2023, is estimated to be 1.3 lakh (as per Draup's database). This talent is employed across various industry verticals such as enterprise software, IT services, e-commerce, BFSI, etc.

The global web development market was valued at 56,000 million USD in 2021 and is expected to expand at a Compound Annual Growth Rate (CAGR) of 8.03% during the forecast period, reaching 89,013 million USD by 2027, based on a report by CXO today.

Of late, India is seeing the rise of many e-commerce and online businesses such as Nykaa, Urban Company, Big basket, etc. This is expected to continue and bolster the demand for web developers in India.

Read more at: <https://cxotoday.com/story/career-as-a-web-developer-job-and-career-opportunities/>