CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE
Name and address of submitting body:

Haryana State Electronics Development Corporation Ltd. (HARTRON)
SCO 111-113, Sector – 17/B, Chandigarh-160017

Name and contact details of individual dealing with the submission

Name:	Rajesh Deswal
Position in the organisation:	Project Manager
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List of documents submitted in support of the Qualifications File

1. About HARTRON (Annexure-1)
2. Curriculum (Annexure-2)
3. Industry Validation (Annexure-3)

SUMMARY

1	**Qualification Titles**	Diploma in Computer Software Plus
2	**Qualification Code, if any**	HAR/SD-1/DCSP
3	**NCO code and occupation**	2512.0100 Computer Programmer 2153.0101 Application Developer
4	**Nature and purpose of the qualification (Please specify whether qualification is short term or long term)**	Diploma course that helps the students with expertise in programming and to keep pace with the changing face of technology and the requirements of the growing IT industry. (Long Term Qualification)
5	**Body/bodies which will award the qualification**	Hartron
6	**Body which will accredit providers to offer courses leading to the qualification**	Hartron
7	**Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)**	The courses are being run by Hartron through HARTRON Skill Centres (HSC) located throughout Haryana under the aegis of HARTRON.
8	**Occupation(s) to which the qualification gives access**	Computer Programmer, Application Developer, Web Administrator
9	**Job description of the occupation**	Creates computer programs by converting project requirements into code and confirms program operation by conducting tests, modifying program sequence and/or codes.
10	**Licensing requirements**	N/A
11	**Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)**	N/A
12	**Level of the qualification in the NSQF**	4
13	**Anticipated volume of training/learning required to complete the qualification**	576 hrs. of classroom / lab learning

14	Indicative list of training tools required to deliver this qualification	Mentioned in Curriculum
15	Entry requirements and/or recommendations and minimum age	12th, No age bar
16	Progression from the qualification (Please show Professional and academic progression)	In Academic, student can go for higher degree courses. In Professional Initially candidate can work as a Computer Programmer / Web Administrator or IT Faculty
17	Arrangements for the Recognition of Prior learning (RPL)	N/A
18	International comparability Where known (research evidence to be provided)	N/A

19	Date of planned review of the qualification.	5 years after approval of the qualification	
20	Formal structure of the qualification Mandatory components		
	Title of component and identification Code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
(i)	IT Skills	288	4
	Sub Total(A)	288	4
	Optional Components		
	Title of component and identification code/NOSs/ Learning outcomes	Estimated size (learning hours)	Level
(ii)	a) .Net Technology OR b) Java Technology	288	4
	Sub Total(B)	288	4

Total (A+B)	576	4

SECTION 1
ASSESSMENT

21	**Body/Bodies which will carry out assessment:** Haryana State Electronics Development Corporation Ltd. (HARTRON) SCO 111-113, Sector – 17/B, Chandigarh-160017
22	**How will RPL assessment be managed and who will carry it out?** It will be finalized when the national RPL policy will be finalized
23	**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.** The assessment process under HARTRON aims to test and certify the skills & knowledge based on the performance of the students. Overall Assessment is broadly divided into two stages. 1. **Internal Evaluation: -** This is done through continuous assessment by respective HSC as per the Hartron guidelines. Marks are allotted according to their attendance, class performance and Practical Assignment. 2. **External Evaluation: -** This includes a written exam followed by viva voce at the end of the course. The test is conducted at respective HSC with the overall supervision of officers/officials of examination cell. For this,

minimum two examiners are deputed at HSC to conduct the exam. Each and every student mark their attendance through biometric device as well as on the attendance sheet provided by examiners. Exams are being conducted by examiners under CCTV surveillance students are allowed in the examination hall only after producing Id Proof

The current pattern of the exam comprises objective and subjective type questions, which is prepared by vocation expert in the field.

Viva Voce is taken to make sure that the student has acquired sufficient knowledge of the subject during the course.

The marking pattern and distribution of marks for the qualification are as under:

Sr.No.	Assessment Method	Maximum marks
1	Internal Evaluation	
	• Attendance	15
	• Class performance	15
	• Practical Assignment	30
2	External Evaluation	
	• Written Exam	180
	• Viva	60
Total		**300**

Qualifying Criteria
Candidate shall be considered to have qualified the course if he/she obtains 35% marks in written examination and 50% marks in the aggregate of internal and external evaluation.

The marks will be translated into grades as below:-

Marks Scored	Grade to be awarded
80% or above	A +
70% to less than 80%	A
60% to less than 70%	B
50% to less than 60%	C

	Less than 50%	Fail	

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in "Formal structure of the qualification" in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment evidences
Title of Component:

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome

1) IT SKILLS	
Computer Fundamentals	Learn to operate a computer by knowing of all the parts and main function of computer.
Operating System	Understand the different types of operating systems and working and settings of window operating system.
Word Processing	Learn to create and manipulate a document using various tools and features of word processing software.
Spread Sheet	Learn to use table styles, shapes, charts, data tools, functions and formulas using spreadsheet.
Digital Presentation	Learn to present information visually & effectively using digital presentation.
Internet and E- mail	Learn to develop the skills to use the internet and e-mail as an effective communication tool.
Introduction to e- Governance and Digital Financial Services	Understand the application of ICT for delivering government services and various digital financial options.
HTML, CSS, Java Script & Overview of XML	Learn to create a basic structure of a web page using HTML and to enhance the appearance and interactivity using CSS and JavaScript respectively, Understand the XML to structure data.
Programming with C	Learn to use C language semantics and syntax to build basic programming skills.
Database concepts with SQL Server	Understand the concepts of Database and learn to write SQL commands to create and manipulate
Communication & Employability Skills	Know the importance of effective communication to enhance competencies.
Elective: (One Module out of the following two modules to be chosen)	
2.1) .NET TECHNOLOGY	Learn to develop dynamic web applications that interact with database and also to create and consume web services.
2.2) JAVA TECHNOLOGY	Learn advance concepts of java programming with database connectivity and to develop java applications with graphical user interface (GUI).
Means of assessment 1 Assessment will be evidence based comprising the following : • Attendance and punctuality	

- Class performance and Tests
- Practical Assignments

Means of assessment 2

Assessment will be evidence based comprising the following :

- Answer sheets of the written assessment
- Viva voce

Pass/Fail

The minimum pass percentage is 35 % for written examination and 50% marks in the aggregate of internal and external evaluation.

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SECTION 2

25. EVIDENCE OF LEVEL

OPTION A

Title/ Name of qualification/ Component: Diploma in Computer Software Plus		Level: 4
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
Process	Candidate is able to design, test, and develop application using appropriate programming language to meet the required need of the job. The work will however be done within a familiar, predictable and routine range of situations of clear choice.	Work in familiar, predictable, routine, situation of clear choice.	4
Professional knowledge	After acquiring professional knowledge from the course, the candidate will have a factual knowledge in the field of computer hardware and software, application of information technology, programming languages and the key processes used for developing application software.	Factual knowledge of field of knowledge or study.	4
Professional skill	Candidate needs to recall and demonstrate practical skill related to computer operating skills. He/she needs to develop, test, write, modify and debug software based applications in routine and repeat them until required outcomes are met. The outcomes of these test	Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts.	4

	cases are recorded using appropriate rules, tools & using quality concepts through appropriate templates.		
Core skill	The candidate should possess good communication skills both verbal and written, with the required clarity in order to understand the work. He/she needs to have skill to basic arithmetic and algebraic principles, to demonstrate knowledge of the foundational mathematical concepts in computing. He/ she will be able to create and maintain effective working relationships and team environment through collaboration.	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment.	**4**
Responsibility	Candidate is independently responsible to perform all the tasks as per requirements of the job, hence is responsible for own work and learning.	Responsibility for own work and learning.	**4**

SECTION 3
EVIDENCE OF NEED

26	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?	
	Basis	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)
	Need of the qualification	The course is running successfully from number of years and is also considered for the recruitment in public and private sectors (copy of advertisement for recruitment is attached as supporting document)
	Industry Relevance	Hartron having special emphasis on HRD up-gradation started imparting computer education from 1994 with one of the main objective to provide professional, continuous and upgraded training in IT as per market requirement. It has been found that there is a good demand of this segment of IT candidates in various establishment/industries etc. (Industrial validation from various industries is attached as supporting document). Moreover, the job roles defined for the qualification is also as per the national qualification occupation 2015 developed by Employment Directorate under the ministry of Labour and Employment. Thus is in line with the qualification relevance for industry
	Usage of the qualification	With this qualification, it has been seen that students acquire sufficient knowledge to handle computer work required in day to day activity along with the programming skills. The course is very popular among candidates and nearly 3000 students get enrolled in this course per year.
	Estimated uptake	Based on the response of student towards Hartron courses, it is expected that number of enrolment will definitely increase.

27	Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences

	N/A
28	**What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification** The qualification is originally designed by academic professionals in HARTRON and is approved by state government. A desk search was conducted and the qualification packs were also referred for the mapping curriculum. As per the search it is found that no such identical qualification is available in public domain.
29	**What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here** Feedback would be taken from students and teachers regarding the course content, structure and timeline of the programme. Feedback will also be taken from the HSC conducting the course. Demand for courses based on enquiries handled at the HSC were also considered. In certain interval of time market survey is also done by the HARTRON Officials to know the current trend of courses in demand. Changes suggested will be assessed by the State Government before incorporating them in the curriculum.

Please attach most relevant and recent documents giving further information about any of the topics above.
Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

SECTION 4
EVIDENCE OF PROGRESSION

| 30 | **What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?**
Show the career map here to reflect the clear progression

The course is designed in such a way that it will provide core concepts of It Skills and leading programming technologies. The candidate can choose a field of his interest and proceed further to pursue advance courses in the related sector and may have the following career options:

    ➤ IT Faculty
    ➤ Web Developer
    ➤ Java Developer
    ➤ .Net Developer
    ➤ Software Engineer
    ➤ Cloud Engineer
    ➤ System Analyst |

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.