

**Minutes of the seventh meeting of Sub- Committee of National Council for Vocational Training (NCVT) on Training Norms and Courses held on 26<sup>th</sup> May, 2017**

A meeting of Sub-committee of NCVT on Training Norms and Courses was held on 26<sup>th</sup> May, 2017 in Main Committee Room, C-Wing, Shram Shakti Bhawan, New Delhi under the Chairmanship of Shri Asheesh Sharma, Director General/Joint Secretary, Ministry of Skill Development and Entrepreneurship. List of participants is at Annex-I.

Shri R. K. Pathak, Director of Training welcomed the members of the sub-committee & other participants of the meeting and briefly summarized the agenda items to be taken up for discussion in the meeting. Initiating the discussion, DG/ JS informed the members about the objectives of rationalisation of CTS trades. He elaborated that for many CTS trades there is very low/ no demand at National level and also that some trades seem to be expensive and only Government ITIs are running such trades. The members were informed that there are many similar trades and these have the potential of merging. DG/JS also informed members that some ITIs have started training under Dual System of Training (DST) and certain trades which are important for the economy of the country but are costly may be opened in DST. The members were further informed about the objectives of introduction of new trade "Soil Testing and Crop Technician". Thereafter, following point-wise agenda items were taken up for discussion:

**Agenda Item no. 1: Approval of the proposal for Rationalisation of CTS trades**

Director of Training requested Shri Nirmalya Nath, ADT, CSTARI to explain the proposal for rationalisation of CTS trades in detail. Shri Nirmalya Nath elaborated the proposal. The members were informed that the trades have been grouped in following four segments:

- trades with no changes
- trades proposed to be merged
- trades proposed to be deleted from CTS and
- new trades to be introduced

In each segment the trades have been grouped sector-wise and broadly 15 sectors have been considered. Members discussed the proposal and the summary of deliberations is as under:

- a) Shri L. K. Gupta, General Manager, Maruti Suzuki India Ltd. emphasised that the trades 'Mechanic Auto Body Repair' and 'Mechanic Auto Body Painting' have different skill-sets and they may not be merged. Shri Sunil Joshi,

Deputy Director, Rajasthan also supported the proposal to keep these two trades as separate trades.

- b) Shri Niraj Kumar, Addl. Director, Uttar Pradesh suggested to have a complete two years course on welding instead of having two separate courses each of one year. DG/JS suggested that we may have a two years course on welding with an option for the trainee to leave after one year. The trainee who leaves after one year will be awarded National Trade Certificate (NTC) in 'Welder' trade and the trainee who completes the two years course will be awarded NTC in the trade 'Advanced Welder'.
- c) Amrit Pal Singh, DDT suggested that the trades 'Marine Engine Fitter' and 'Marine Fitter' be kept as separate as these trades have different skill-sets. Shri M.K. Parial, JDT elaborated the difference in the skill-sets for these two trades. Smt. Anita Srivastava, DDT also elaborated the rationale for the two trades when they were introduced.
- d) Representatives from the Governments of Rajasthan and U.P. suggested to continue the trade 'Tourist Guide'. U.P. representative also suggested to continue the trades 'Leather Good Maker', 'Footwear Maker' and 'Weaving Technician'.
- e) Representative from U.T. of Chandigarh requested to continue the trades 'Marketing Executive', 'Human Resource Executive', and 'Finance Executive' as these trades are in good demand and lot of students are coming forward to take up these. On this, DG/JS requested the representatives from Chandigarh to provide the details of the companies which are recruiting the trainees passing the above three trades. He further suggested to linkup these trades with Apprenticeship Training.
- f) DDG (T) enquired about the current seating capacity of the chemical sector trades. He was apprised about the same.
- g) About the trade 'Mechanic Refrigeration & Air Conditioning' (MRAC), DDG (T) informed that due to recent challenge of Global Warming, Ministry of Environment Forest & Climate Change (MoEF&CC) suggested next generation of Refrigerant, like HFOs (Hydrofluorolefins), so that the course curriculum becomes more eco-friendly. These suggestions need to be incorporated in the revised CTS syllabi of MRAC. Accordingly the syllabi need to be revised at the earliest.

After detailed deliberations it was decided to group all the CTS trades into three categories as under:

- i. Category A- the trades which are having high demand
- ii. Category B- the trades which have relatively low demand as compared to category A
- iii. Category C (Dormant Category) – the trades which have very low demand will be kept in dormant category. The trades in this category will be offered under the aegis of NCVT only when these have been run successfully for two years under SCVT.

It was also decided to delete those trades (like 'Goldsmith', 'Refractory Technician' etc.) for which no unit has been affiliated till date.

The list of trades with no changes and the newly proposed trades were approved by the members as suggested.

**Agenda item no. 2: Approval of the revised curricula of 7 trades under CTS aligned to National Skills Qualifications Framework (NSQF)**

The members were informed that five CTS trades (S. No. 1 to 5) as per the table given below have been re-aligned to higher NSQF level and 2 trades (S. No. 6 & 7) have been aligned to NSQF as approved by National Skills Qualification Committee (NSQC):

S. No.	Trade/ Course	Entry Qualification (Existing)	Entry Qualification (New)	Existing Level	New NSQF Level as approved by NSQC
1	Fitter	Passed 10 <sup>th</sup> Class with Science and Mathematics	Passed 10 <sup>th</sup> Class with Science and Mathematics	Level 4	Level 5
2	Electrician	Passed 10 <sup>th</sup> Class with Science and Mathematics	Passed 10 <sup>th</sup> Class with Science and Mathematics	Level 4	Level 5
3	Electronics Mechanic	Passed 10 <sup>th</sup> Class	Passed 10 <sup>th</sup> Class	Level 4	Level 5
4	Turner	Passed 10 <sup>th</sup> Class with Science and Mathematics	Passed 10 <sup>th</sup> Class with Science and Mathematics	Level 4	Level 5
5	Welder	Passed 8th Class Examination	Passed 10 <sup>th</sup> Class	Level 3	Level 4
6	Computer Operator and Programming Assistant (COPA)	Passed 10 <sup>th</sup> Class	Passed 10 <sup>th</sup> Class	-	Level 4
7	Draughtsman (Civil)	Passed 10 <sup>th</sup> Class with Science and Mathematics	Passed 10 <sup>th</sup> Class with Science and Mathematics	-	Level 5

The members were further informed that the curricula for the above seven have been re-written and the duration (in hours) for each practical has been mentioned in the curricula. Also new topics relevant to the current market demand have been added (e.g. topics on hydraulics and pneumatics have been added to 'Fitter' trade and also the practical content on CNC turning has been increased in 'Turner' trade).

Sub Committee approved the implementation of revised curricula of above 7 trades w.e.f. session starting from August, 2017.

**Agenda item no. 3: Ex-post facto approval of "Annual Pattern of Examination for trades under Dual System of Training"**

Members were informed about the Dual System of Training (DST) which has been implemented with effect from the session started in August, 2016. At present, DST is available for 16 trades. DST enables industries to partner with (Government & Private) Industrial Training Institutes (ITIs) for conducting training programmes under high employability courses to fulfil the needs of industries. The theory portion and basics about safety and tools, equipment along with foundation practical is conducted in the ITI. For providing the industrial training relevant to practical/ lab training portion of the curriculum, the trainee is trained in the industry.

Members were further informed that as the delivery structure for DST is different from the regular CTS trades being run in ITIs, hence the pattern of the examination for DST has been modified and "Annual Pattern of Examination" has been proposed for trades under DST.

Sub-Committee approved the implementation of "Annual Pattern of Examination for trades under Dual System of Training" (details as per Annex-II).

**Agenda item no. 4: Reducing the entry qualification for CTS trades "Surface Ornamentation Techniques (Embroidery)" and "Sewing Technology" from 10<sup>th</sup> class pass to 8<sup>th</sup> class pass**

Members were informed that the two CTS trades namely "Embroidery and Needle Work" and "Cutting and Sewing" each of one year duration and entry qualification as 8th class pass or its equivalent, were running in ITIs successfully and were very popular amongst women candidates. However, the syllabi of these two trades were revised by mentor council in year 2014 and renamed as "Surface Ornamentation Techniques (Embroidery)" and "Sewing Technology" with entry qualification as 10th pass. These trades have been mapped at NSQF level-4.

DG/JS desired to analyze the current seat utilization for the two trades mentioned above. As per the data available on the portal, current seat utilization for the trades "Surface Ornamentation Techniques (Embroidery)" and "Sewing Technology" is 73% and 76% respectively.

Reducing the entry qualification for CTS trade 'Plumber' was also discussed in the meeting. As per the data available on the portal, current seat utilization for the trade 'Plumber' is 73%.

The matter needs further analysis and hence was kept in abeyance.

#### **Agenda item no. 5: Entry qualification for Craft Instructor Training Scheme (CITS)**

Members were informed that currently the entry qualification for admission to CITS is NTC/NAC (or higher relevant technical qualification i.e three years Diploma or BE/ B.Tech./ BSc.(Engg). This leads to a scenario wherein a trainee who joins a one year course in CTS at 14 years of age can complete CITS by 16 years of age. As a result, following two issues crop up:

- a. A CITS trained candidate at 16 years of age is too young to become a trainer. Also he/she does not attain the minimum working age of 18 years.
- b. Without any field experience, he/she lacks the practical aspects of work environment.

The matter needs further analysis and hence was kept in abeyance.

#### **Agenda item No. 6: Approval of introduction new trade "Soil Testing and Crop Technician"**

Members were informed that though diploma/ bachelors/master degree programmes are being run in the in the field of 'Soil Testing & Crop Cultivation' by institutes/ universities all over the country. It is felt that with provision of competency based training at technician level in the field of Soil testing, seed/fertilizer/pesticides management, water harvesting and crop cultivation, huge rural man power will be benefited. Also the rationale for the introduction of the new trade "Soil Testing and Crop Technician" was discussed in the meeting.

Members appreciated the proposal of introduction of new trade "Soil Testing and Crop Technician".

DG/JS informed the members that option for providing soft loans for the trainees and subsidy is also under consideration for the proposed new trade and financing can also be done through National Bank for Agricultural and Rural Development (NABARD).

Sub Committee approved the proposal of introduction of new trade "Soil Testing and Crop Technician".

#### **Agenda item No. 7: Approval of introduction of Diploma Courses under the aegis of NCVT**

Members were informed about the need for advance level/ specialised courses in the vocational training landscape in the country. It was further informed that DGT proposes to start Diploma Courses from August '2017 to make it more responsive to the industry and provide vertical academic pathways for trainees passing out from the ITIs and also that NCVT during its 40<sup>th</sup> meeting held on 16<sup>th</sup> December, 2011 has already approved the introduction of Diploma level courses under the aegis of NCVT.

The training in these diploma courses would provide an opportunity to trainees to sharpen their "hands-on skills" in specialized areas. Such training would be different from that provided in polytechnics, engineering colleges and higher training institutions, as it will involve a significantly higher proportion of practical hands-on inputs and specialization. Over and above this, one fourth of the training period is dedicated for on-the-job training in the form of an industrial attachment.

The courses proposed to be introduced are:

- a. Diploma in Welding Technology
- b. Diploma in Industrial Electronics and Instrumentation
- c. Diploma in Automotive Technology
- d. Diploma in Manufacturing Technology
- e. Diploma in IT, Networking and Cloud

### **Course Structure and duration**

The proposed courses will be structured in the manner shown below.

- a. Five core courses of each 320 hours duration (Practical-960 hours & Theory 640 hours)
- b. In-plant Training (OJT) of 800 hours duration in respective field
- c. Number of elective courses in advanced module will consist of following:
  - i. Elective 1 – 320 hours ( subject group)
  - ii. Elective 2 – 320 hours (subject group)
  - iii. Elective 3 – 160 hours (employability)

The entry qualification for these diploma courses will be 10<sup>th</sup> class + NTC/ NAC in the relevant trade as mentioned in curricula of each diploma course.

Detail of the five courses is at **Annex-III**.

Members appreciated the introduction of the diploma courses.

Sub-committee approved the proposal of introduction of the five diploma courses in Welding Technology, Industrial Electronics & Automation, Manufacturing Technology, Automotive Technology and IT, Networking and Cloud Computing under the aegis of NCVT.

### **Agenda item No. 8: Approval of guidelines regarding fulfilling of minimum attendance criteria under Craftsmen Training Scheme (CTS) in semester pattern of examination`**

Members were informed that relaxation of attendance parameter is being misused and in some cases trainees do not turn up to attend the classes for training and try to appear in all semester examination at the same time. The NCVT-MIS portal does not allow any trainee to be promoted to next semester till the attendance in

previous semester is 80% or it is made forced eligible by the competent authority i.e. Principal of the Institute.

It was also informed that as per existing NCVT norms implemented vide letter no. DGET-19/03(13)2015-CD dated 07th January, 2016 the attendance to be eligible for appearing in semester exam of AITT is minimum 80% as per following details:

- i. With less than 80% but upto 70% attendance in 1st Semester, the candidate can go to next semester but at the end of 2nd semester he has to secure 80% cumulative attendance.
- ii. At the end of the course has to have 80% attendance to appear in the final examination.
- iii. For emergency cases, concerned ITI Principal may be empowered to relax maximum 5%.
- iv. If attendance is below the prescribed limit, in a particular semester even after exercising all the options at (ii) above, then the candidate would be allowed to continue in the next semester but will appear in the examination of the previous semester subject to completion of 80% attendance in the earlier semester(s) taken together.

After deliberations, it was recommended that the trainees will be promoted in next semester only and only if the attendance in previous semester is minimum 80% and hall ticket is generated by the portal, only when 80% attendance is there. 10% relaxation in case of medical emergency only will be permitted for each semester separately.

Meeting ended with vote of thanks to the Chair.

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## Annex-I

**List of participants who attended the seventh meeting of sub-committee of NCVT on 'Norms & Courses' held on 26.05.2017, in Main Committee Room, C-Wing, Shram Shakti Bhawan, New Delhi**

S. No.	Name Shri/ Ms.	Designation	Organization
1.	Asheesh Sharma	DG/JS	DGT, MSDE
2.	Deepankar Mallick	DDG (T)	DGT, MSDE
3.	S.D. Lahiri	Dir (AT)	DGT, MSDE
4.	R.K. Pathak	Dir. (T)	DGT, MSDE
5.	R.P. Dhingra	Dir (P)	DGT, MSDE
6.	Upma Bhatia	Director (WT)	DGT, MSDE
7.	Sunil Kr. Gupta	Director TT Cell	DGT, MSDE
8.	M.K. Parial	JDT	DGT, MSDE
9.	M.C. Kardam	JDT	DGT, MSDE
10.	Anita Srivastava	DDT	DGT, MSDE
11.	Amrit Pal Singh	DDT	DGT, MSDE
12.	K. Singh	Dy. Director, TT Cell	DGT, MSDE
13.	P. Mouli	ADT	DGT, MSDE
14.	Pankaj	Director	Govt. of Haryana
15.	Rakesh K.	Director – Cum- JSTE	U.T. Chandigarh
16.	Sathyashankar	Director	AHI, Bangalore
17.	Surjit Singh	Sr. Faculty	Chandigarh
18.	Rajan Dogra	Principal	GITI (W) Chandigarh
19.	Kumar Digvijay	Joint Labour Commissioner	Govt. of Bihar
20.	Sanjay Kumar	Joint Director	CSTARI, Kolkata
21.	N. Thamizharasan	Jt. Director/ HOD	ATI, Kolkata
22.	C.S. Murthy	JDT	ATI-EPI Hyderabad
23.	Er. Sunil Joshi	Dy. Director (Trg.)	Govt. of Rajasthan
24.	C. Yuvaraj	DDT	ATI, Chennai
25.	K. Naga Srinivas	Dy. Director	ATI, Hyderabad
26.	Shilpi Chauhan	Asst. Director	Ministry of Textiles
27.	Anil Kumar Jeph	Asst. Director (Trg.)	Govt. of Rajasthan
28.	Nirmalya Nath	Asstt. Director	CSTARI, Kolkata
29.	L.K. Gupta	Gen. Manager	Maruti Suzuki India Ltd., Gurgaon
30.	Niraj Kumar	Addl. Director	U.P. Lucknow
31.	S. Dey	Dy. RESI. Comm.	Tripura
32.	Sandeep Kosaraju	YP	MSDE
33.	Jyoti	Consultant	DGT, MSDE



## Modified Annual pattern of examination for All India Trade Test (for Dual System trades)

<u>For first year of Two Year Trades</u>		
For Engineering Group Trades	For Draughtsman Group Trades	For Non Engineering Group Trades
<p><b>PAPER-1 (Total marks: 500) - Objective</b> Theory of first year (100 Questions of 5 marks each) Sessional work for Trade Theory - <b>Total-60 Marks</b></p> <p><b>PAPER-2(Total marks: 100) - Objective</b> Employability Skills (50 Questions of 2 marks)</p> <p><b>PAPER-3 (Total marks: 240) - Objective</b> Workshop Calculation and Science of first year (80 Questions of 3 marks each) Sessional work for W/shop Calc. &amp; Sci. - <b>Total-30 Marks</b></p> <p><b>PAPER-4(Total marks: 240) – Subjective</b> Engineering Drawing of first year Sessional work for Engg. Drg. -<b>Total-60 Marks</b></p> <p><b>Trade Practical-I* (Total Marks: 150)</b> Sessional marks for Trade Practical I – <b>Total 20 marks</b></p> <p><b>Total marks of first year - 1400</b></p>	<p><b>PAPER-1(Total marks: 500)</b> Theory of first year (100 Questions of 5 marks each) Sessional work for Trade Theory - <b>Total-60 Marks</b></p> <p><b>PAPER-2(Total marks: 100)</b> Employability Skills (50 Questions of 2 marks)</p> <p><b>PAPER-3(Total marks: 240)</b> Workshop Calculation and Science of first year (80 Questions of 3 marks each) Sessional work for W/shop Calc. &amp; Sci. - <b>Total-30 Marks</b></p> <p><b>Trade Practical-I* (Total Marks: 150)</b> Sessional marks for Trade Practical I – <b>Total 20 marks</b></p> <p><b>Total marks of first year -1100</b></p>	<p><b>PAPER-1(Total marks: 90)</b> Theory of first year (90 Questions of 1 mark each)</p> <p><b>PAPER-2(Total marks: 100)</b> Employability Skills (50 Questions of 2 marks)</p> <p><b>Trade Practical-I* (Total Marks: 130)</b> Sessional marks for Trade Practical I – <b>Total 30 marks</b></p> <p><b>Total marks of first year - 350</b></p>

\* represents practical examination conducted at ITI

\*\* represents practical examination conducted at Industry

**For second year of Two Year Trades**

<p><b>PAPER- 5 (Total marks: 100) - Objective</b> Theory of second year (50 Questions of 2 marks each) Sessional work for Trade Theory- <b>Total 20 Marks</b></p>	<p><b>PAPER- 4 (Total marks: 100)</b> Theory of second year (50 Questions of 2 marks each) Sessional work for Trade Theory- <b>Total 20 Marks</b></p>	<p><b>PAPER- 3 (Total marks: 30)</b> Theory of second year (30 Questions of 1 mark each)</p>
<p><b>PAPER- 6 (Total marks: 60) - Objective</b> Workshop Calculation and Science of second year (20 Questions of 3 marks) Sessional work for W/shop Calc. &amp; Sci. - <b>Total-10 Marks</b></p>	<p><b>PAPER- 5(Total marks: 60)</b> Workshop Calculation and Science of second year(20 Questions of 3 marks) Sessional work for W/shop Calc. &amp; Sci. - <b>Total-10 Marks</b></p>	
<p><b>PAPER- 7 (Total marks: 60) – Subjective</b> Engineering Drawing of first year Sessional work for Engg. Drg. - <b>Total-20 Marks</b></p>		
<p><b>Trade Practical-I*</b> (Total Marks:90) Sessional marks for Trade Practical I – <b>Total 10 marks</b></p>	<p><b>Trade Practical-I*</b> (Total Marks:90) Sessional marks for Trade Practical I – <b>Total 10 marks</b></p>	<p><b>Trade Practical-I*</b> (Total Marks: 50) Sessional marks for Trade Practical I – <b>Total 10 marks</b></p>
<p><b>Trade Practical-II**</b> (Total Marks - 700) + Project Work - <b>Total Marks:150</b></p>	<p><b>Trade Practical-II**</b> (Total Marks - 700) + Project Work - <b>Total Marks:150</b></p>	<p><b>Trade Practical-II**</b> (Total Marks - 200) + Project Work - <b>Total Marks:40</b></p>
<p>Sessional marks for Trade Practical II – <b>Total 80 marks</b></p>	<p>Sessional marks for Trade Practical II – <b>Total 80 marks</b></p>	<p>Sessional marks for Trade Practical II – <b>Total 20 marks</b></p>
<p><b>Total marks of second year – 1300</b></p>	<p><b>Total marks of second year - 1220</b></p>	<p><b>Total marks of second year – 350</b></p>
<p><b>Grand Total of first year and second year – 2700 marks</b></p>	<p><b>Grand Total of first year and second year – 2320 marks</b></p>	<p><b>Grand Total of first year and second year – 700 marks</b></p>

\* represents practical examination conducted at ITI

\*\* represents practical examination conducted at Industry

## Annual pattern of examination for All India Trade Test (for Dual System trades)

### For One Year Trades

For Engineering Group Trades	For Draughtsman Group Trades	For Non Engineering Group Trades
<p><b>PAPER-1 (Total marks: 300) - Objective Trade Theory</b> (100 Questions of 3 marks each) Sessional work for Trade Theory - <b>Total-40 Marks</b></p> <p><b>PAPER-2(Total marks: 100) - Objective</b> Employability Skills (50 Questions of 2 marks)</p> <p><b>PAPER-3 (Total marks: 150) - Objective</b> Workshop Calculation and Science (50 Questions of 3 marks each) Sessional marks for W/shop Calc. &amp; Sci. - <b>Total-20 Marks</b></p> <p><b>PAPER-4 (Total marks: 150) – Subjective</b> Engineering Drawing Sessional marks for Engineering Drawing - <b>Total-40 Marks</b></p> <p><b>Trade Practical-I* (Total Marks: 140)</b> Sessional marks for Trade Practical I – <b>Total 10 marks</b></p> <p><b>Trade Practical-II** (Total Marks: 350) + Project Work- Total Marks: 60</b> Sessional marks for Trade Practical II – <b>Total 40 marks</b></p> <p><b>Grand total - 1400</b></p>	<p><b>NOT APPLICABLE</b></p>	<p><b>PAPER-1(Total marks: 60) - Objective Trade Theory</b> (60 Questions of 1 mark each)</p> <p><b>PAPER-2(Total marks: 100) - Objective</b> Employability Skills (50 Questions of 2 marks)</p> <p><b>Trade Practical-I* (Total Marks: 60)</b> Sessional marks for Trade Practical I – <b>Total 20 marks</b></p> <p><b>Trade Practical-II** (Total marks – 100) + Project Work (Total Marks: 40)</b> Sessional marks for Trade Practical II – <b>Total 20 marks</b></p> <p><b>Grand total - 400</b></p>

\* represents practical examination conducted at ITI

\*\* represents practical examination conducted at Industry

**Details of the proposed five diploma courses****i. Diploma in Welding Technology**

## Core Modules

1. Welding Processes, and Power Sources
2. Advanced Welding & Cutting Processes
3. Welding Mechanisation, Automation & standards
4. Workshop Technology
5. Welding inspection and NDT

## Electives

1. Heat treatment & Material Testing
2. Repair & Maintenance Welding
3. High Pressure Pipe Welding

**ii. Diploma in Industrial Electronics and Instrumentation**

## Core Modules

1. Applied Electronics and Applications
2. Power Electronics and Drives
3. Embedded Controllers and Applications
4. Field Instruments and Controls
5. Programmable Logic Controllers and Applications

## Electives

1. Automation using PLC, SCADA & DCS
2. Mechatronics
3. Robotics

**iii. Diploma in Automotive Technology**

## Core Modules

1. Automotive Engineering Basics
2. Automotive Electrical and Electronic Systems – Diagnosis and Repair
3. Automotive Engine -Diagnosis & Repair
4. Automotive transmission Diagnosis & Repair
5. Automotive Controls - Brake, Suspension and Steering - Diagnosis & Repair

## Electives

1. Automotive Air Conditioning and Climate Control System -Diagnosis and Repair
2. Automotive Body repair & Refinishing
3. Automotive Two & Three Wheeler – Diagnosis and repair
4. Heavy Equipment Diagnosis and Repair

**iv. Diploma in Manufacturing Technology**

## Core Modules

1. Workshop Technology
2. CNC technology
3. CAD/CAM
4. Metrology & Quality Engineering
5. Advanced Manufacturing Processes

## Electives

1. Control systems and Automation
2. Welding Technology
3. Heat Treatment & Material Testing

**v. Diploma in IT, Networking and Cloud**

#### Core Modules

1. Computer Hardware Maintenance
2. Computer Networking
3. Web Designing
4. Web Development
5. Business Data Analytics

#### Electives

1. Cloud Application Developer
2. Cloud Enterprise Developer
3. Web Development using Java