

# HEALTH SANITARY INSPECTOR

## COMPETENCY BASED CURRICULUM

(Duration: 1 Yr. and 3 months)

## APPRENTICESHIP TRAINING SCHEME (ATS)

NSQF LEVEL- 4



## SECTOR – HEALTHCARE

कौशल भारत - कुशल भारत



GOVERNMENT OF INDIA  
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP  
DIRECTORATE GENERAL OF TRAINING



Directorate General of Training



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*Health Sanitary Inspector*

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(Revised in 2021)

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**NSQF LEVEL - 4**

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Developed By

Ministry of Skill Development and Entrepreneurship  
Directorate General of Training

**CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE**

EN-81, Sector-V, Salt Lake City,  
Kolkata – 700 091

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**Co-ordinator for the course: Shri L K Mukherjee, Deputy Director, CSTARI, Kolkata**

Sl. No.	Name & Designation Sh./Mr./Ms.	Organization	Expert Group Designation
1.	<b>Dr. Ritesh Garg</b> , M.B.B.S., D.M.R.D	Shivam Diagnostics & Cancer Research Institute, C- 41 Mahendru Enclave Lane, Delhi- 110033	Chairman
2.	<b>C. Shibu</b> , Faculty	-Do-	Member
3.	<b>Dr. Sushil Gupta</b> , M.B.B.S, D.M.R.D.	-Do-	Member
4.	<b>Dr. Anil Grover</b> , M.B.B.S, M.D.	-Do-	Member
5.	<b>Dr. Rajneesh Aggarwal</b> , M.B.B.S., D.M.R.D.	-Do-	Member
6.	<b>Dr. Gaurav Mathur</b> , Consultant	-Do-	Member
7.	<b>Dr. Patwinder Bedi</b> , Consultant	-Do-	Member
8.	<b>Dr. Veerpal Nathoo</b> , Surgeon	Sing's Dental Hospital (On panel C.G.H.S, govt. of India)	Member
9.	<b>Dr. Rachna</b> , BDS, MIDA	-Do-	Member
10.	<b>Dr. Anamika Singh</b> , B.D.S., M.I.D.A.	-Do-	Member
11.	<b>Dr. Ritu</b> , Faculty	-Do-	Member
12.	<b>Dr. Madhavi Raj</b> , Faculty	-Do-	Member
13.	<b>PoojaRana</b> , Faculty	-Do-	Member

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14.	Dr. Priyanka, Faculty	-Do-	Member
15.	Dr. NishaGulia, Faculty	Govt. General Hospital, Bahadurgarh, HR	Member
16.	Dr. Sumit Nigam, BPT, Director	Dynamic Physiotherapy Services, 5495, 2 <sup>nd</sup> Floor Shorakothi Paharganj New Delhi- 110055	Member
17.	Dr. Sonia, BPT	-Do-	Member
18.	Dr. Rohit, MPT	-Do-	Member
19.	Dr. RashmiLohia, BPT	-Do-	Member
20.	Dr. S.K. Yadav, B.P.T., M.P.T. (Ortho), M.I.A.P, D.C.P	-Do-	Member
21.	Dr. Sushanta Kapoor, B.D.S.	Kapoor Dental Care, C-18, Model town-III, Delhi-110009	Member
22.	Kirti Sharma, Faculty	National Industrial Training Centre, Dwarka, New Delhi	Member
23.	Mukta Singh, Faculty	-Do-	Member
24.	Geeta Deswal, Faculty	-Do-	Member
25.	Preeti Singh, Faculty	-Do-	Member
26.	Akash Kumar, Faculty	-Do-	Member
27.	Bhawna, Instructor	-Do-	Member
28.	Dr. Urvashi Jain, M.D.	-Do-	Member
29.	Ramesh Kumar Garg, M.B.B.S, M.D.	-Do-	Member
30.	Dr. P.K. Anand, Faculty	-Do-	Member

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### **1.1 Apprenticeship Training Scheme under Apprentice Act 1961**

The Apprentices Act, 1961 was enacted with the objective of regulating the Programme of training of apprentices in the industry by utilizing the facilities available therein for imparting on-the-job training. The Act makes it obligatory for employers in specified industries to engage apprentices in designated trades to impart Apprenticeship Training on the job in industry to school leavers and person having National Trade Certificate (ITI pass-outs) issued by National Council for Vocational Training (NCVT) to develop skilled manpower for the industry. There are four categories of apprentices namely; **trade apprentice, graduate, technician and technician (vocational) apprentices.**

Qualifications and period of apprenticeship training of **trade apprentices** vary from trade to trade. The apprenticeship training for trade apprentices consists of basic training followed by practical training. At the end of the training, the apprentices are required to appear in a trade test conducted by NCVT and those successful in the trade tests are awarded the National Apprenticeship Certificate.

The period of apprenticeship training for graduate (engineers), technician (diploma holders and technician (vocational) apprentices is one year. Certificates are awarded on completion of training by the Department

### **1.2 Changes in Industrial Scenario**

Recently we have seen huge changes in the Indian industry. The Indian Industry registered an impressive growth during the last decade and half. The number of industries in India have increased manifold in the last fifteen years especially in services and manufacturing sectors. It has been realized that India would become a prosperous and a modern state by raising skill levels, including by engaging a larger proportion of apprentices, will be critical to success; as will stronger collaboration between industry and the trainees to ensure the supply of skilled workforce and drive development through employment. Various initiatives to build up an adequate infrastructure for rapid industrialization and improve the industrial scenario in India have been taken.

### **1.3 Reformation**

The Apprentices Act, 1961 has been amended and brought into effect from 22<sup>nd</sup> December, 2014 to make it more responsive to industry and youth. Key amendments are as given below:

- Prescription of number of apprentices to be engaged at establishment level instead of trade-wise.
- Establishment can also engage apprentices in optional trades which are not designated, with the discretion of entry level qualification and syllabus.
- Scope has been extended also to non-engineering occupations.
- Establishments have been permitted to outsource basic training in an institute of their choice.
- The burden of compliance on industry has been reduced significantly.



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**2.1 GENERAL**

Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers range of vocational training courses catering to the need of different sectors of economy/ Labour market. The vocational training programmes are delivered under aegis of National Council of Vocational Training (NCVT). Craftsman Training Scheme (CTS) and Apprenticeship Training Scheme (ATS) are two pioneer programmes of NCVT for propagating vocational training.

HEALTH SANITARY INSPECTOR trade under ATS is one of the most popular courses delivered nationwide through different industries. The course is of One year (01 Block) duration. It mainly consists of Domain area and Core area. In the Domain area Trade Theory & Practical impart professional - skills and knowledge, while Core area - and Employability Skills imparts requisite core skills & knowledge and life skills. After passing out the training programme, the trainee is being awarded National Apprenticeship Certificate (NAC) by NCVT having worldwide recognition.

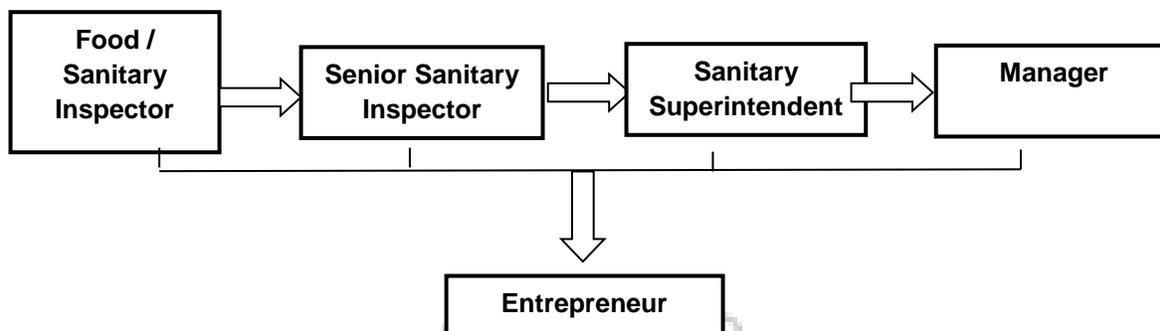
**Broadly candidates need to demonstrate that they are able to:**

- Classify the public health and importance of foodstuffs.
- Assess the daily requirement of nutrition.
- Assess the nutritional Status of family
- Classify the sources of water
- Purify the water in urban and rural area.
- Carry out Sanitary inspection of water supply
- Demonstrate method of waste disposal and operation of compost pits
- Carry out Construction and maintenance of sanitary latrines.
- Operate pesticides spraying equipments and its maintenance.
- Visit to a factory for survey of sanitation problems of the workplace
- Arrange First aid treatment in case of emergency.

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### 2.2 CAREER PROGRESSION PATHWAYS:

- Indicative pathways for vertical mobility.



### 2.3 COURSE STRUCTURE:

Table below depicts the distribution of training hours across various course elements during a period one year (*Basic Training and On-Job Training*): -

**Total training duration details: -**

Time (in months)	1-3	4-15
Basic Training	Block- I	----
Practical Training (On - job training)	----	Block - I

#### A. Basic Training

For 02 yrs. Course (Non-Engg.):- **Total 03 months:** 03 months in 1<sup>st</sup>yr. only

For 01 yr. Course (Non-Engg.):- **Total 03 months:** 03 months in 1<sup>st</sup> yr.

Sl. No.	Course Element	Total Notional Training Hours
		For 01 yr. course
1	Professional Skill (Trade Practical)	270
2	Professional Knowledge (Trade Theory)	120
3	Employability Skills	110

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	<b>Total (including Internal Assessment)</b>	<b>500</b>
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### B. On-Job Training:-

For 01 yr. Course (Non-Engg.) :- ( **Total 12 months**)

Notional Training Hours for On-Job Training: 2080 Hrs.

### C. Total training hours:-

<b>Duration</b>	<b>Basic Training</b>	<b>On-Job Training</b>	<b>Total</b>
<b>For 02 yrs. Course (Non-Engg.)</b>	500 hrs.	3640 hrs.	4140 hrs.
<b>For 01 yr. Course (Non-Engg.)</b>	500 hrs.	2080 hrs.	2580 hrs.

## 2.4 ASSESSMENT & CERTIFICATION:

The trainee will be tested for his skill, knowledge and attitude during the period of course and at the end of the training programme as notified by Govt of India from time to time. The Employability skills will be tested in first two semesters only.

a) The **Internal assessment** during the period of training will be done by **Formative assessment method** by testing for assessment criteria listed against learning outcomes. The training institute have to maintain individual *trainee portfolio* as detailed in assessment guideline (section-2.4.2). The marks of internal assessment will be as per the template (Annexure – II).

b) The final assessment will be in the form of summative assessment method. The All India Trade Test for awarding NAC will be conducted by NCVT on completion of course as per guideline of Govt of India. The pattern and marking structure is being notified by govt of India from time to time. **The learning outcome and assessment criteria will be basis for setting question papers for final assessment. The examiner during final examination will also check individual trainee's profile as detailed in assessment guideline (section-2.4.2) before giving marks for practical examination.**

### 2.4.1 PASS REGULATION

The minimum pass percent for Practical is 60% & minimum pass percent for Theory subjects 40%. The candidate pass in each subject conducted under all India trade test.

## **2.4.2 ASSESSMENT GUIDELINE**

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment. Due consideration should be given while assessing for team work, avoidance/reduction of scrap/wastage and disposal of scarp/wastage as per procedure, behavioral attitude, sensitivity to environment and regularity in training. The sensitivity towards OSHE and self-learning attitude are to be considered while assessing competency.

Assessment will be evidence based comprising the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work



Evidences of internal assessments are to be preserved until forthcoming semester examination for audit and verification by examination body. The following marking pattern to be adopted while assessing:

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Performance Level	Evidence
<b>(a) Weightage in the range of 60 -75% to be allotted during assessment</b>	
<p>For performance in this grade, the candidate with occasional guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.</p>	<ul style="list-style-type: none"> <li>• Demonstration of good skill in the use of hand tools, machine tools and workshop equipment</li> <li>• Below 70% tolerance dimension/accuracy achieved while undertaking different work with those demanded by the component/job/set standards.</li> <li>• A fairly good level of neatness and consistency in the finish</li> <li>• Occasional support in completing the project/job.</li> </ul>
<b>(b)Weightage in the range of above75% - 90% to be allotted during assessment</b>	
<p>For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.</p>	<ul style="list-style-type: none"> <li>• Good skill levels in the use of hand tools, machine tools and workshop equipment</li> <li>• 70-80% tolerance dimension/accuracy achieved while undertaking different work with those demanded by the component/job/set standards.</li> <li>• A good level of neatness and consistency in the finish</li> <li>• Little support in completing the project/job</li> </ul>
<b>(c) Weightage in the range of above 90% to be allotted during assessment</b>	
<p>For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.</p>	<ul style="list-style-type: none"> <li>• High skill levels in the use of hand tools, machine tools and workshop equipment</li> <li>• Above 80% tolerance dimension/accuracy achieved while undertaking different work with those demanded by the component/job/set standards.</li> <li>• A high level of neatness and consistency in the finish.</li> <li>• Minimal or no support in completing the project.</li> </ul>

**Brief description of Job roles:**

Sanitary Inspector; Health Assistant takes measures to maintain and improve standard of public health in specified area. Inspects houses, shops, factories, entertainment places, markets, drains, night soil depots, rubbish depots, latrines, burial and cremation ground, etc., and undertakes public health activities such as disinfections, anti-malarial and anti epidemic measures. Inspects hotels, restaurants, etc. to ensure that food and edibles sold are fit for public consumption. Attends to complaints regarding sanitation. Reports outbreak of infectious diseases to authorities and takes preventive measures. Attends courts for prosecution of persons violating sanitation and public health regulations and performs inoculation work Controls. May maintain accounts and correspondence compile figures of births and deaths in his jurisdiction and may investigate causes of death. May be designated as Disinfecting Inspector, Food Inspector etc. according to nature of work performed.

**Reference NCO CODE 2015: 3257.0100**

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## **4. NSQF LEVEL COMPLIANCE**

NSQF level for HEALTH SANITARY INSPECTOR trade under ATS: **Level 4**

As per notification issued by Govt. of India dated- 27.12.2013 on National Skill Qualification Framework total 10 (Ten) Levels are defined.

Each level of the NSQF is associated with a set of descriptors made up of five outcome statements, which describe in general terms, the minimum knowledge, skills and attributes that a learner needs to acquire in order to be certified for that level.

Each level of the NSQF is described by a statement of learning outcomes in five domains, known as level descriptors. These five domains are:

- a. Process
- b. Professional Knowledge,
- c. Professional Skill,
- d. Core Skill and
- e. Responsibility.

The Broad Learning outcome of HEALTH SANITARY INSPECTOR trade under ATS mostly matches with the Level descriptor at Level- 4.

The NSQF level-4 descriptor is given below:

<b>Level</b>	<b>Process Required</b>	<b>Professional Knowledge</b>	<b>Professional Skill</b>	<b>Core Skill</b>	<b>Responsibility</b>
Level 4	Work in familiar, predictable, routine, situation of clear choice.	Factual knowledge of field of knowledge or study	Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts	Language to Communicate written or oral, with required clarity, skill to basic Arithmetic and algebraic principles, basic understanding of social political and natural environment.	Responsibility for own work and learning.

## 5. GENERAL INFORMATION

<b>Name of the Trade</b>	HEALTH SANITARY INSPECTOR
<b>NCO-2015</b>	<b>3257.0100</b>
<b>NSQF Level</b>	Level – 4
<b>Duration of Apprenticeship Training</b> (Basic Training + On-Job Training)	03 months+ One year (01 Block of 15 month duration).
<b>Duration of Basic Training</b>	a) Block – I : 3 months <b>Total duration of Basic Training : 3 months</b>
<b>Duration of On-Job Training</b>	a) Block–I : 12 months <b>Total duration of Practical Training : 12 months</b>
<b>Entry Qualification</b>	Passed 10th Class examination or its equivalent
<b>Selection of Apprentices</b>	The apprentices will be selected as per Apprenticeship Act amended time to time.
<b>Instructors Qualification for Basic Training</b>	As per ITI instructors qualifications as amended time to time for the specific trade.
<b>Infrastructure for the basic training</b>	As per related trades of ITI
<b>Examination</b>	The internal examination/ assessment will be held on completion of each block. Final examination for all subjects will be held at the end of course and same will be conducted by NCVT.
<b>Rebate to Ex-ITI Trainees</b>	03 months
<b>CTS trades eligible for HEALTH SANITARY INSPECTOR Apprenticeship</b>	Health Sanitary Inspector

**Note:**

- *Industry may impart training as per above time schedule for different block, however this is not fixed. The industry may adjust the duration of training considering the fact that all the components under the syllabus must be covered. However the flexibility should be given keeping in view that no safety aspects is compromised.*
- *For imparting Basic Training the industry to tie-up with ITIs having such specific trade and affiliated to NCVT.*

**6.1 GENERIC LEARNING OUTCOME**

The following are minimum broad Common Occupational Skills/ Generic Learning Outcome after completion of the HEALTH SANITARY INSPECTOR course of One year and three months duration under ATS.

**Block I & II:-**

1. Recognize & comply safe working practices, environment regulation and housekeeping.
2. Select and ascertain measuring instrument and measure dimension of components and record data.
3. Explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality.
4. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources.
5. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth.
6. Plan and organize the work related to the occupation.

**6.2 SPECIFIC LEARNING OUTCOME**

**Block – I**

1. Instruction and safety precaution as applicable to the trade
2. Explain Food Hygiene and Cleanliness of Kitchen equipment and cooking utensils
3. Demonstrate sanitary inspection and purification of water.
4. Explain Process of air purification and disinfection.
5. Method of waste disposal, Night disposal, sewage disposal,.
8. Various policies and law regarding industry, hygiene, environment, Biomedical.
9. Suggest the measures to minimise the noise pollution.
10. Participation in various programmers, Arranging First aid treatment in case of emergency.

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11. Collection and dispatch of food samples for analysis and preparation of Paper for legal Proceeding.
12. Visit to different types of health organization and acquaintance with their system.
13. Concept of behaviour change communication, various mode of communication, Impact of communication.
14. Dressing of wounds, Bandaging, management of bone injuries with splints, slings.
15. Transportation of injured and unconscious case and their managements.
16. Assessment of desirable and organize health education program to bring about Desirable change.
17. Control of Biological Environment.
18. Prepare a report on general survey of health, Basic epidemiology.
19. Mode of disease transmission, Natural history of disease, immunity and Immunization, Treatment and prevention.
20. Epidemics and control of Epidemics and knowledge about WHO.
21. Health information and basic statistics, Demography-Family planning. Related Statistics.
22. Practice Bio Medical and E- waste management system
23. Preparation of simple house hold test to identify adulteration in milk, ghee, Oil, sugar, tea etc.
24. Study and maintenance of record and reports to public health organization.
25. Diagnosis and treatment of minor alignment.

**NOTE:** Learning outcomes are reflection of total competencies of a trainee and assessment will be carried out as per assessment criteria.

## 7. LEARNING OUTCOME WITH ASSESSMENT CRITERIA

GENERIC LEARNING OUTCOME	
LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Recognize & comply safe working practices, environment regulation and housekeeping.	1. 1. Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements.
	1. 2. Recognize and report all unsafe situations according to site policy.
	1. 3. Identify and take necessary precautions on fire and safety hazards and report according to site policy and procedures.
	1. 4. Identify, handle and store / dispose off dangerous/unsalvageable goods and substances according to site policy and procedures following safety regulations and requirements.
	1. 5. Identify and observe site policies and procedures in regard to illness or accident.
	1. 6. Identify safety alarms accurately.
	1. 7. Report supervisor/ Competent of authority in the event of accident or sickness of any staff and record accident details correctly according to site accident/injury procedures.
	1. 8. Identify and observe site evacuation procedures according to site policy.
	1. 9. Identify Personal Protective Equipment (PPE) and use the same as per related working environment.
	1. 10. Identify basic first aid and use them under different circumstances.
	1. 11. Identify different fire extinguisher and use the same as per requirement.
	1. 12. Identify environmental pollution & contribute to avoidance of same.
	1. 13. Take opportunities to use energy and materials in an environmentally friendly manner
	1. 14. Avoid waste and dispose waste as per procedure
	1. 15. Recognize different components of 5S and apply the same in the working environment.
Select and ascertain measuring instrument and	1.1 Select appropriate measuring instruments such as micrometers, vernier calipers, dial gauge, bevel protector and height gauge (as per tool list).

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measure dimension of components and record data.	1.2 Ascertain the functionality & correctness of the instrument.
	2.3 Measure dimension of the components & record data to analyse the with given drawing/measurement.
3. Explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality.	3.1 Explain the concept of productivity and quality tools and apply during execution of job.
	3.2 Understand the basic concept of labour welfare legislation and adhere to responsibilities and remain sensitive towards such laws.
	3.2 Knows benefits guaranteed under various acts.
4. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources.	4.1 Explain the concept of energy conservation, global warming, pollution and utilize the available recourses optimally & remain sensitive to avoid environment pollution.
	4.2 Dispose waste following standard procedure.
5. Explain personnel finance, entrepreneurship and manage/organize related task in day to day work for personal & societal growth.	5.1 Explain personnel finance and entrepreneurship.
	5.2 Explain role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programmes & procedure & the available scheme.
	5.3 Prepare Project report to become an entrepreneur for submission to financial institutions.
6. Plan and organize the work related to the occupation.	6.1 Use documents, drawings and recognize hazards in the work site.
	6.2 Plan workplace/ assembly location with due consideration to operational stipulation
	6.3 Communicate effectively with others and plan project tasks
	6.4 Assign roles and responsibilities of the co-trainees for execution of the task effectively and monitor the same.
<b>SPECIFIC OUTCOME</b>	
<b><u>Block-I (Section:10)</u></b>	

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*Assessment Criteria i.e. the standard of performance, for each specific learning outcome mentioned under **Block – I**(section: 10) must ensure that the trainee works in familiar, predictable, routine, situation of clear choice. Assessment criteria should broadly cover the aspect of **Planning** (Identify, ascertain, etc.); **Execution** apply factual knowledge of field of knowledge, recall and demonstrate practical skill during performing the work in routine and repetitive in narrow range of application, using appropriate rule and tool, complying with basic arithmetic and algebraic principles and language to communicate in written or oral with required clarity; **Checking/ Testing** to ensure functionality during the assessment of each outcome. The assessments parameters must also ascertain that the candidate is responsible for his/her own work and learning.*



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**BASIC TRAINING (Block – I)**  
**Duration: (03) Three Months**

Week No.	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
1	<p><b>Knowledge of General Safety, Occupational health and hygiene</b></p> <p><b>FOOD &amp; NUTRITION</b></p> <ol style="list-style-type: none"> <li>1. Assessment of daily requirement of nutrition.</li> <li>2. Assessment of nutritional Status of family.</li> </ol> <p><b>Food Hygiene and Cleanliness of Kitchen equipment and cooking utensils</b></p> <ol style="list-style-type: none"> <li>1. Food Service procedures</li> <li>2. operation procedures of various Kitchen Equipment</li> <li>3. Operation and Usage procedures of various Types of Storage Equipment</li> <li>4. Cleaning Methods of different storage Equipment</li> <li>5. Practice Handling, preparation, Processing Non Vegetarian Products</li> </ol>	<p>Nutrition Education:-  Malnutrition  Low birth Weight (LBW)  Causes of LBW  Prevention of LBW</p> <p><b>Food Hygiene and Cleanliness of Kitchen equipment and cooking utensils</b></p> <ol style="list-style-type: none"> <li>(a) Concepts of Food Hygiene and Cleanliness of Kitchen equipment and cooking utensils and their effects on various health issues</li> <li>(b) Food Service and Exposure to various Kitchen Equipment, operation procedures, service areas, etc</li> <li>(c) Related Storage Equipment, Types, Operation and Usage procedures</li> <li>(d) Cleaning Methods of storage Equipment like Refrigerators, etc.</li> </ol> <p><b>Non-Vegetarian Products Preparation Handling Methods</b></p> <ol style="list-style-type: none"> <li>(a) FASSI Regulations</li> </ol>

2	<p><b>WATER SANITATION:</b></p> <ol style="list-style-type: none"><li>1. Classification of sources of water.</li><li>2. Sanitary inspection of water supply.</li><li>3. Collection and dispatch of water sample for chemical, biological, arsenic and bacteriological examination.</li><li>4. Purification of water in urban area.</li><li>5. Purification of water in rural area.</li></ol> <p><b>AIR SANITATION:</b></p> <ol style="list-style-type: none"><li>1. Demonstration of an air-conditioning plant for thermal comfort.</li></ol>	<p><b>1.WATER :</b></p> <p>WHO's definition of environmental Sanitation? Safe and whole some water, Sources of water, Various uses of water and its need. Water borne diseases, Conservation source of water, quality of water, public health aspect of very hard water, Steps of disinfection of well. Water supply and storage system at the community and domestic level.</p> <p><b>2. AIR</b></p> <p>Concepts and importance of adequate ventilation.</p> <p>Types of ventilation. Natural ventilation. Mechanical ventilation. Indicators of air pollution.</p> <p>Process of air purification and disinfection. Greenhouse effect, types of ventilation, thermal comfort, air temperature humidity, radiation, evaporation and their measurements.</p>
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<p>3-6</p>	<p><b>REFUSE DISPOSAL :</b></p> <ol style="list-style-type: none"> <li>1. Method of waste disposal.</li> <li>2. Demonstration and operation of compost pits, sanitary land filling and insanitation process.</li> </ol> <p><b>NIGHT SOIL DISPOSAL :</b></p> <p>Construction and maintenance of sanitary latrines.</p> <ul style="list-style-type: none"> <li>- Soakage pit.</li> <li>- Sanitary latrine.</li> <li>- RCA latrine</li> <li>- Septic tank latrine</li> <li>- Sewage treatment plant.</li> <li>- Sulabh Sauchalaya</li> </ul> <p><b>SEWAGE DISPOSAL :</b></p> <ol style="list-style-type: none"> <li>1. Demonstration of sewage treatment plant.</li> <li>2. Inspection of flushing tank, soil plant, traps, man holes, inspection chambers and maintenance of gully trap.</li> <li>3. Collection of sewage sample for chemical and bacteriological analysis and interpretation of reports.</li> <li>4. Comparisons of monthly reports.</li> <li>5. Organization of cleaning, minor engineering and oil operation of the sewage system.</li> <li>6. Testing water samples after complete treatment of waste water.</li> </ol>	<p><b>1. SOLID WASTE DISPOSAL</b></p> <p>Source of generation, storage and collection. Sanitary method of disposal of solid waste. Classification of solid waste in the community.</p> <p><b>2. LIQUID WASTE DISPOSAL</b></p> <p>Hygienic method of disposal of liquid waste. Health hazard related to accumulation of liquid waste or insanitary drainage system. Construction and maintenance of sanitary sewerage system. Use of different types of traps, pollution of water sources from sewerage and its disinfection.</p> <p><b>3. NIGHT SOIL DISPOSAL</b></p> <p>Sewage is liquid waste containing human excreta.</p> <p>Fly nuisance Soil pollution. Water pollution Food contamination, Faucal - borne disease due to unsanitary disposal.</p> <p>What is sewage? Why sewage purification is required. Sewer appurtenances, house drain. Street sewers or municipal sewers. Sewage forming land treatment</p>
<p>7</p>	<p><b>CONTROL OF BIOLOGICAL ENVIRONMENT :-</b></p> <ol style="list-style-type: none"> <li>1. Identification and use of insecticides, pesticides and disinfection.</li> <li>2. Application of Techniques of sterilization and disinfection of various articles.</li> <li>3. Identification of different parts of spraying equipment.</li> <li>4. Operation and maintenance of spraying equipment.</li> </ol>	<p>Study of insecticides, pesticides and disinfections.</p> <p>Sterilization &amp; disinfections of different articles.</p> <p>Various spraying equipment.</p> <p><b>DISINFECTION &amp; STERILISATION</b> - Effective disinfection by liquid Chemical agents like Halogen, Potassium per magnate solution etc. Solid chemical agent-Bleaching -</p>

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	5. Identification of sterilizers.	Bleaching powder, Lime etc.
8	<p><b>OCCUPATIONAL HEALTH</b></p> <ol style="list-style-type: none"> <li>1. Inspection of trade premises.</li> <li>2. Visit to a factory for survey of sanitation problems of the workplace.</li> <li>3. Identification of danger zones and adequacy of safety arrangements.</li> <li>4. Using Personal Protective Equipment.</li> <li>5. First Aid Procedures with Disaster Management</li> <li>6. Practice Measurement of noise</li> <li>7. Process to control noise pollution</li> </ol>	<p><b>Public Health and Emergency Management</b></p> <p>(a) Basic Introduction to Incident Control Systems in public health emergency situations</p> <p>(b) First Aid Procedures with Disaster Management</p> <p>(c) Noise Pollution occurrence, prevention Methods , Measurements of Noise pollution with Equipment, etc.</p> <p><b>OCCUPATIONAL HEALTH</b></p> <p>Industrial hygiene- workers health protection- occupational risk factors and safety measures- control of dust and other hazardous substance- safety measure for occupational risk factor-legislative provisions- benefits to employees</p> <p><b><i>Incorporation of Municipal Rules and Regulation in Sanitation</i></b></p>
9	<ol style="list-style-type: none"> <li>1. Prepare a report on general survey of health care in different area.</li> <li>2. Preparing immunization schedule.</li> <li>3. Prepare Immunization Conduction, feedback data.</li> <li>4. Participation in various programme.</li> <li>5. Conducting programmes on personal hygiene in different area.</li> <li>6. Arranging First aid treatment in case of emergency.</li> </ol>	<p><b>1. Menstrual Hygiene Management and Waste Management</b></p> <p>(a) Basic Introduction</p> <p>(b) Health Impact on vulnerability with reference to Reproductive Tract Infections, complications, Transmission to others, etc.</p> <p>(c) Related Waste Management, Environmental issues and Related Methods for prevention of Diseases, etc.</p> <p><b>2. COMMUNICABLE DISEASES:</b></p> <p>Introduction, Disease transmitted through air-Diseases transmitted by air- Diseases transmitted by contact- Diseases transmitted by insects and other diseases. General measures for prevention &amp; control of communicable diseases.</p> <p><b>3. IMMUNITY &amp; IMMUNISATION:</b></p> <p>Purpose, types &amp; effects. National immunization schedule for prevention of major communicable diseases - BCG, DTP, polio. Measles &amp; Typhoid Vaccines.</p> <p><b>4. NON-COMMUNICABLE DISEASES:</b></p> <p>Introduction- Incidence and prevalence: Diagnosis &amp; prevention.</p>

<p>10</p>	<p><b>PUBLIC HEALTH ACTS</b>                  Collection and dispatch of food samples for analysis and preparation of papers for legal proceeding. Performance of simple household tests to identify adulteration in Milk, ghee, oil, sugar, tea, etc. Acquaintance with the registration, reporting and documentation process for implementation of different acts.</p>	<p><b>DEMOGRAPHY AND HEALTH SURVEY</b>                  a) Registration of birth, death and mortality                  b) Immunization process  <b>PUBLIC HEALTH ACTS :-</b>                  Indian Epidemic Diseases Act.                  Purification of Air And Water Pollution Acts.                  Prevention of Food adulteration Act.                  Birth and Death Registration Act.                  N.T.P ACT.                  Suppression of immoral Traffic Act (SITA).                  Municipal and local body Acts related to housing, sanitation etc.                  Factory Act and Employer's State Insurance Act.  <b>National Programmes Acts and Legislations</b>                  (a) Food Safety                  (b) National Health Programme Acts                  (c) Waste Management Rules etc</p>
<p>11-12</p>	<p><b>Bio Medical and E- Waste Management</b>                   1. Techniques of segregation, packaging, storage, transport of infectious waste.                  2. Techniques of Biomedical waste management.                  3. Treatment method- Autoclave, Hydroclave, Microwave, Chemical Disinfection, Solidification and stabilization, Bioremediation,                  4. Accumulation and storage of hazardous waste,                  5. Land disposal of hazardous waste,</p>	<p><b>Bio Medical and E- Waste Management</b>                   (a) Introduction: various aspects of hazardous waste, biomedical waste and E-waste e.g. collection, segregation, recovery, labeling requirements, storage areas, treatment and disposal facilities.                  (b) Sources, Composition and characteristic of hazardous waste, Hazardous Waste (Management and Handling) Rules, 1989 and amendments, Federal Hazardous Waste Regulations under RCRA, Superfund, CERCLA and SARA. Toxicology, public health impact, Protocols, issues and challenges in transportation of hazardous waste.                  (c) Characterization of medical waste- Bio-medical wastes (Management and Handling) Rules, 1998, Amendments and guidelines, segregation, packaging, storage, transport of</p>

		<p>infectious waste. Techniques of Biomedical waste management. Health and safety rules. Protocols, issues and challenges in transportation of Biomedical waste.</p> <p>(d) Treatment method- Autoclave, Hydroclave, Microwave, Chemical Disinfection, Solidification and stabilization, Bioremediation, Thermal Conversion Technologies, accumulation and storage of hazardous waste, land disposal of hazardous waste, other treatment and disposal method. Common Hazardous Waste Treatment facilities (TSDF)</p> <p>(e) E-waste: Introduction, toxicity due to hazardous substances in e-waste and their impacts, domestic e-waste disposal, e-waste management, technologies for recovery of resource from electronic waste, guidelines for environmentally sound management of e-waste, occupational and environmental health perspectives of recycling e-waste in India. (20 hrs.)</p>
13	<b>Revision &amp; Examination</b>	

**NOTE:** - More emphasis to be given on video/real-life pictures during theoretical classes. Some real-life pictures/videos of related industry operations may be shown to the trainees to give a feel of Industry and their future assignment.

9.2 EMPLOYABILITY SKILLS

(DURATION: - 110 HRS.)

<b>Block – I</b> (Duration – 55 hrs.)	
<b>1. English Literacy</b> Duration: 20 Hrs. <span style="float: right;">Marks : 09</span>	
<b>Pronunciation</b>	Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)
<b>Functional Grammar</b>	Transformation of sentences, Voice change, Change of tense, Spellings.
<b>Reading</b>	Reading and understanding simple sentences about self, work and environment
<b>Writing</b>	Construction of simple sentences Writing simple English
<b>Speaking / Spoken English</b>	Speaking with preparation on self, on family, on friends/ classmates, on know, picture reading gain confidence through role-playing and discussions on current happening job description, asking about someone's job habitual actions. Cardinal (fundamental) numbers ordinal numbers. Taking messages, passing messages on and filling in message forms Greeting and introductions office hospitality, Resumes or curriculum vita essential parts, letters of application reference to previous communication.
<b>2. I.T. Literacy</b> Duration: 20 Hrs. <span style="float: right;">Marks : 09</span>	
<b>Basics of Computer</b>	Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.
<b>Computer Operating System</b>	Basics of Operating System, WINDOWS, The user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc, Use of Common applications.
<b>Word processing and Worksheet</b>	Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion & creation of Tables. Printing document. Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets.
<b>Computer Networking and Internet</b>	Basic of computer Networks (using real life examples), Definitions of Local Area Network (LAN), Wide Area Network (WAN), Internet, Concept of Internet (Network of Networks). Meaning of World Wide Web (WWW), Web Browser, Web Site, Web

## Health Sanitary Inspector

	page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication. Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT - ACT, types of cyber crimes.
<b>3. Communication Skills</b>	
Duration: 15 Hrs.	Marks : 07
<b>Introduction to Communication Skills</b>	Communication and its importance Principles of Effective communication Types of communication - verbal, non verbal, written, email, talking on phone. Non verbal communication -characteristics, components-Para-language Body language Barriers to communication and dealing with barriers. Handling nervousness/ discomfort.
<b>Listening Skills</b>	Listening-hearing and listening, effective listening, barriers to effective listening guidelines for effective listening. Triple- A Listening - Attitude, Attention & Adjustment. Active Listening Skills.
<b>Motivational Training</b>	Characteristics Essential to Achieving Success. The Power of Positive Attitude. Self awareness Importance of Commitment Ethics and Values Ways to Motivate Oneself Personal Goal setting and Employability Planning.
<b>Facing Interviews</b>	Manners, Etiquettes, Dress code for an interview Do's & Don'ts for an interview.
<b>Behavioral Skills</b>	Problem Solving Confidence Building Attitude
<b>4. Entrepreneurship Skills</b>	
Duration: 15 Hrs.	Marks : 06
<b>Concept of Entrepreneurship</b>	Entrepreneur - Entrepreneurship - Enterprises:-Conceptual issue Entrepreneurship vs. management, Entrepreneurial motivation. Performance & Record, Role & Function of entrepreneurs in relation to the enterprise & relation to the economy, Source of business ideas, Entrepreneurial opportunities, The process of setting up a business.
<b>Project Preparation &amp; Marketing analysis</b>	Qualities of a good Entrepreneur, SWOT and Risk Analysis. Concept & application of PLC, Sales & distribution Management. Different Between Small Scale & Large Scale Business, Market Survey, Method

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	of marketing, Publicity and advertisement, Marketing Mix.
<b>Institutions Support</b>	Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non financing support agencies to familiarizes with the Policies /Programmes & procedure & the available scheme.
<b>Investment Procurement</b>	Project formation, Feasibility, Legal formalities i.e., Shop Act, Estimation & Costing, Investment procedure - Loan procurement - Banking Processes.
<b>5. Productivity</b> <span style="float: right;">Duration: 10</span>	
Hrs.	Marks : 05
<b>Benefits</b>	Personal / Workman - Incentive, Production linked Bonus, Improvement in living standard.
<b>Affecting Factors</b>	Skills, Working Aids, Automation, Environment, Motivation - How improves or slows down.
<b>Comparison with developed countries</b>	Comparative productivity in developed countries (viz. Germany, Japan and Australia) in selected industries e.g. Manufacturing, Steel, Mining, Construction etc. Living standards of those countries, wages.
<b>Personal Finance Management</b>	Banking processes, Handling ATM, KYC registration, safe cash handling, Personal risk and Insurance.
<b>6. Occupational Safety, Health and Environment Education</b> <span style="float: right;">Marks : 06</span>	
Duration: 15 Hrs.	
<b>Safety &amp; Health</b>	Introduction to Occupational Safety and Health importance of safety and health at workplace.
<b>Occupational Hazards</b>	Basic Hazards, Chemical Hazards, Vibroacoustic Hazards, Mechanical Hazards, Electrical Hazards, Thermal Hazards. Occupational health, Occupational hygienic, Occupational Diseases/ Disorders & its prevention.
<b>Accident &amp; safety</b>	Basic principles for protective equipment. Accident Prevention techniques - control of accidents and safety measures.
<b>First Aid</b>	Care of injured & Sick at the workplaces, First-Aid & Transportation of sick person.
<b>Basic Provisions</b>	Idea of basic provision legislation of India. Safety, health, welfare under legislative of India.
<b>Ecosystem</b>	Introduction to Environment. Relationship between Society and Environment, Ecosystem and Factors causing imbalance.
<b>Pollution</b>	Pollution and pollutants including liquid, gaseous, solid and hazardous waste.
<b>Energy Conservation</b>	Conservation of Energy, re-use and recycle.
<b>Global warming</b>	Global warming, climate change and Ozone layer depletion.
<b>Ground Water</b>	Hydrological cycle, ground and surface water, Conservation and Harvesting of water.

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<b>Environment</b>	Right attitude towards environment, Maintenance of in-house environment.
<b>7. Labour Welfare Legislation</b>	
Duration : 05 Hrs. <span style="float: right;">Marks : 03</span>	
<b>Welfare Acts</b>	Benefits guaranteed under various acts- Factories Act, Apprenticeship Act, Employees State Insurance Act (ESI), Payment Wages Act, Employees Provident Fund Act, The Workmen's compensation Act.
<b>8. Quality Tools</b>	
Duration: 10 Hrs. <span style="float: right;">Marks : 05</span>	
<b>Quality Consciousness</b>	Meaning of quality, Quality characteristic.
<b>Quality Circles</b>	Definition, Advantage of small group activity, objectives of quality Circle, Roles and function of Quality Circles in Organization, Operation of Quality circle. Approaches to starting Quality Circles, Steps for continuation Quality Circles.
<b>Quality Management System</b>	Idea of ISO 9000 and BIS systems and its importance in maintaining qualities.
<b>House Keeping</b>	Purpose of House-keeping, Practice of good Housekeeping.
<b>Quality Tools</b>	Basic quality tools with a few examples.

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## **10. DETAILS OF COMPETENCIES (ON-JOB TRAINING)**

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BROAD LEARNING TO BE COVERED IN INDUSTRY FOR HEALTH SANITARY INSPECTOR TRADE:

6. Safety and best practices /Basic Industrial Culture (5S, KAIZEN, etc.)
7. Record keeping and documentation

**Note:** Actual training will depend on the existing facilities available in the establishments.

The competencies/ specific outcomes on completion of On-Job Training are detailed below:

### **BLOCK – I**

1. Instruction and safety precaution as applicable to the trade.
2. Explain Food Hygiene and Cleanliness of Kitchen equipment and cooking utensils
3. Demonstrate sanitary inspection and purification of water.
4. Explain Process of air purification and disinfection.
5. Method of waste disposal, Night disposal, sewage disposal.
6. Various policies and law regarding industry, hygiene, environment, Biomedical.
7. Suggest the measures to minimise the noise pollution.
8. Participation in various programmers, Arranging First aid treatment in case of emergency.
9. Collection and dispatch of food samples for analysis and preparation of Paper for legal Proceeding.
10. Visit to different types of health organization and acquaintance with their system.
11. Concept of behavior change communication, various mode of communication, Impact of communication.
12. Dressing of wounds, Bandaging, management of bone injuries with splints, slings.
13. Transportation of injured and unconscious case and their managements.
14. Assessment of desirable and organize health education program to bring about Desirable change.
15. Control of Biological Environment.
16. Prepare a report on general survey of health, Basic epidemiology.
17. Mode of disease transmission, Natural history of disease, immunity and Immunization, Treatment and prevention.
18. Epidemics and control of Epidemics and knowledge about WHO.
19. Health information and basic statistics, Demography-Family planning. Related Statistics.
20. Practice Bio Medical waste and E- management system

## ***Health Sanitary Inspector***

21. Preparation of simple house hold test to identify adulteration in milk, ghee, Oil, sugar, tea etc.
22. Study and maintenance of record and reports to public health organization.
23. Diagnosis and treatment of minor ailment.

### **Note:**

1. Industry must ensure that above mentioned competencies are achieved by the trainees during their on job training.
2. In addition to above competencies/ outcomes industry may impart additional training relevant to the specific industry.



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**INFRASTRUCTURE FOR PROFESSIONAL SKILL & PROFESSIONAL KNOWLEDGE**

<b>HEALTH SANITARY INSPECTOR</b>			
<b>LIST OF TOOLS AND EQUIPMENT for Basic Training (For 20 Apprentices)</b>			
<b>A. TRAINEES TOOL KIT ( For each additional unit trainees tool kit Sl. 1-18 is required additionally)</b>			
<b>Sl. no.</b>	<b>Name of the Tool &amp; Equipments</b>	<b>Specification</b>	<b>Quantity</b>
<b>A. AUDIO-VISUAL AIDS.</b>			
1	LCD/LED Projector		1no.
2	Personnel Computer with latest configuration		1no.
<b>B : INSTRUMENTS &amp; GENERAL SHOP OUTFIT</b>			
1	Refrigerator		1 no
2	Autoclave		1 no
3	Sterilizer		1 no
4	TDS meter		1 no
5	Thermometer		1 no
6	Laboratory Microscope		1 no
7	First Aid Kit.		1 no
8	Needles and Syringes		As Required
9	Instrument for Noise Measurement		04 sets
10	Hydroclave		02 nos.
11	Microwave		02 nos.
<b>C : Working Model</b>			
1	Ventilation system		1 no
2	Sewage system and Treatment plant		1 no
3	Water purification plant		1 no
4	Sanitary plant		1 no
5	Waste disposal plant		1 no
6	Chemical Disinfection unit		02 nos.

**Health Education Charts**

Standard charts related to Health and Sanitation - Assorted.

Books/Manuals on Air and Water Pollution Acts, Epidemic diseases Act, Public and Health Acts and Municipal Acts, Factory Acts and State Insurance Act.

## HEALTH SANITARY INSPECTOR

TOOLS & EQUIPMENTS FOR EMPLOYABILITY SKILLS		
Sl. No.	Name of the Equipment	Quantity
1.	Computer (PC) with latest configurations and Internet connection with standard operating system and standard word processor and worksheet software	10 Nos.
2.	UPS - 500VA	10 Nos.
3.	Scanner cum Printer	1 No.
4.	Computer Tables	10 Nos.
5.	Computer Chairs	20 Nos.
6.	LCD Projector	1 No.
7.	White Board 1200mm x 900mm	1 No.

*Note: - Above Tools & Equipments not required, if Computer LAB is available in the institute.*

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## FORMAT FOR INTERNAL ASSESSMENT

Name & Address of the Assessor :						Year of Enrollment :								
Name & Address of ITI (Govt./Pvt.) :						Date of Assessment :								
Name & Address of the Industry :						Assessment location: Industry / ITI								
Trade Name :			Semester:			Duration of the Trade/course:								
Learning Outcome:														
Sl. No	Maximum Marks (Total 100 Marks)		15	5	10	5	10	10	5	10	15	15	Total internal assessment Marks	Result (Y/N)
	Candidate Name	Father's/Mother's Name	Safety consciousness	Workplace hygiene	Attendance/ Punctuality	Ability to follow Manuals/ Written instructions	Application of Knowledge	Skills to handle tools & equipment	Economical use of materials	Speed in doing work	Quality in workmanship	VIVA		
1														
2														