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

COMPETENCY BASED CURRICULUM

HEALTH AND SANITARY INSPECTOR

(Duration: One Year)

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL: 3.5

SECTOR – HEALTHCARE

Directorate General of Training

HEALTH AND SANITARY INSPECTOR

(Non-Engineering Trade)

(Revised in August 2025)

Version: 3.0

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL: 3.5

Developed By

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE

Directorate General of Training
Ministry of Skill Development and Entrepreneurship
EN-81, Sector-V, Salt Lake City,
Kolkata – 700 091
www.cstaricalcutta.gov.in

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1. COURSE INFORMATION

During the one-year duration of "HEALTH AND SANITARY INSPECTOR" trade a candidate is trained on professional skill, professional knowledge and Employability skill related to job role. In addition to this a candidate is entrusted to undertake project work, extracurricular activities and on job training to build up confidence. The broad components covered under Professional skill subject are as below: -

After the end of the course, the trainee will be able to make a nutritional plan for all age groups under given conditions, design a balanced diet as per the requirement under given conditions and also will be able to calculate and suggest the calorie and nutritional requirements as per the specific requirements of the person. Identify disease that occurs due to various deficiencies. They will assess disease symptoms, inspect and report various food adulteration and also to suggest different food preservation techniques for different types of food. They will identify and understand water and its properties and causes of water pollution, summarize water supply system with water treatment in the city/country etc. and also able to assemble plumbing system for conservation of water, develop rainwater harvesting technique. Trainee will be able to identify and understand the water purification process and also able to handle the night soil of a city/town while keeping in mind the protection of environment and human safety. They will plan solid waste management system in an area or a small town. Identify air pollution sources and suggest the suitable remedies and also understand global warming, its effects and identify the remedial measure. Trainee will be able to suggest the measures to minimize noise pollution, trainee will able plan and suggest the ventilation requirements of a particular area. They will plan and help in construction and maintenance of sewers, traps, plumbing tools and also know the types of sewers health hazard due to liquid waste. They will suggest disposal methods for dead animals humans and also able to identify different types of soil, its importance in relation with public health and reclamation of land. They will plan and suggest sanitary prescription of medical measures in housing and fairs & festivals. Identify occupational health hazards. Follow safety rules. Prevent occupational diseases. Trainee will be able to prepare and control of biological environment and different parts of spraying equipment. The trainee will learn about how to generate awareness programs for masses on health education, illustrate importance of right behavior and personal hygiene, learn its diet impact on their personal life & society. They will perform first- aid treatment to tackle medical emergency situation, assess intensity of any disease, recognize the disease and provide first-aid treatment on time to contain the disease. They will follow the given immunization schedule and understand its importance. Identify disinfection and its importance to control diseases& carry out sterilization. Trainee will be able to understand the basics of personal hygiene and its importance on a person's health and personality and also able to recognize various factors like death rate, birth rate, morbidity, MMR, IMR etc. Analyze

importance of census survey and data collection, categorize health survey. Trainee will be familiarized with vocabulary and terminology of different acts.

2. TRAINING SYSTEM

2.1 GENERAL

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

'HEALTH AND SANITARY INSPECTOR' trade under CTS is one of the popular courses delivered nationwide through network of ITIs. The course is of one year duration. It mainly consists of Domain area and Core area. The Domain area (Trade Theory & Practical) imparts professional skills and knowledge, while Core area (Employability Skills) imparts requisite core skill & knowledge and life skills. After passing out the training program, the trainee is awarded National Trade Certificate (NTC) by DGT which is recognized worldwide.

Candidates need broadly to demonstrate that they are able to:

- Read and interpret technical parameters/ documents, plan and organize work processes, identify necessary materials and tools;
- Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- Apply professional skill, knowledge & employability skills while performing jobs.
- Check the job/ assembly as per drawing for functioning identify and rectify errors in job/ assembly.
- Document the technical parameters related to the task undertaken.

2.2 PROGRESSION PATHWAYS

- Can join industry as Assistant Physiotherapist Technician and will progress further as Senior Assistant Physiotherapist Technician, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.
- Can join Apprenticeship programme in different types of industries leading to a National Apprenticeship certificate (NAC).
- Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming instructor in ITIs.
- Can join various industries of the relevant field.
- Can become an entrepreneur.
- Can join Advanced Diploma (Vocational) courses under DGT as applicable.

2.3 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of one year: -

Sl. No.	Course Element	Notional Training Hours
		1st Year
1	Professional Skill (Trade Practical)	840
2	Professional Knowledge (Trade Theory)	240
3	Employability Skills	120
Total		**1200**
On the Job Training (OJT)/ Group Project *		150
Optional Courses**		240
Grand Total		**1590**

***** The trainee has to undergo 150 hours of mandatory OJT (On the Job Training) at nearby industry or wherever industry not available then group project has to be done with the supervision of the trade instructor for every year.

** Trainees of one-year or two-year trade can also opt for optional courses of up to 240 hours in each year for obtaining 10th/ 12th class certificate from NIOS along with ITI certification, or, short term courses for extra skills/knowledge.

2.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

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. The marks of internal assessment will be as per the formative assessment template provided on www.bharatskills.gov.in

b) The final assessment will be in the form of summative assessment method. The All India Trade Test for awarding NTC will be conducted by DGT as per the 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 before giving marks for practical examination.

2.4.1 PASS REGULATION

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50% weightage is applied to each examination for two years courses. The minimum pass percent for Trade Practical and Formative assessment is 60% & for all other subjects is 33%.

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 teamwork, avoidance/reduction of scrap/wastage and disposal of scrap/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 some of 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
- Computer based multiple choice question examination
- Practical Examination

Evidences and records of internal (Formative) assessments are to be preserved until forthcoming examination for audit and verification by examination body. The following marking pattern to be adopted for formative assessment:

Marks Allotted during Assessment	Performance Level	Evidence

Marks between 60% to 75%	For performance in this grade, the candidate should produce work which demonstrates attainment of an acceptable standard of craftsmanship with occasional guidance, and due regard for safety procedures and practices	• Demonstration of good skills and accuracy in the field of work/ assignments. • A fairly good level of neatness and consistency to accomplish job activities. • Occasional support in completing the task/ job.
Marks above 75% to 90%	For this grade, a candidate should produce work which demonstrates attainment of a reasonable standard of craftsmanship, with little guidance, and regard for safety procedures and practices	• Good skill levels and accuracy in the field of work/ assignments. • A good level of neatness and consistency to accomplish job activities. • Little support in completing the task/job.
Marks Above 90%	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.	• High skill levels and accuracy in the field of work/ assignments. • A high level of neatness and consistency to accomplish job activities. • Minimal or no support in completing the task/ job.

3. JOB ROLE

Sanitary Inspector; Health Assistant takes measures to maintain and improve standard of public health in the specified area. Inspects houses, shops, factories, entertainment places, bazars, 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 individuals violating sanitation and public health regulations and performs inoculation work. Controls and supervises work of Sanitary Darogas. 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, Slaughter House Inspector, Mosquito Inspector, etc. according to nature of work performed.

Reference NCO Code 2015:

a) 3257.0100– Sanitary Inspector

4. GENERAL INFORMATION

Name of the Trade	**HEALTH AND SANITARY INSPECTOR**
Trade Code	DGT/1012
NCO – 2015	3257.0100
NSQF Level	Level: 3.5
Duration of Craftsmen Training	One Year (1200 Hours +150 hours OJT/Group Project)
Entry Qualification	Passed 10th class examination
Minimum Age	14 years as on first day of academic session.
Eligibility for PwD	LD, LC, DW, AA, LV, HH, DEAF, AUTISM, SLD, ID
Unit Strength (No. of Student)	24 (There is no separate provision of supernumerary seats)
Space Norms	40 Sq. m
Power Norms	4 KW
Instructors Qualification for:	
(i) HEALTH AND SANITARY INSPECTOR	Diploma (Minimum 2 years) in Sanitary Inspector from recognized board or relevant Advanced Diploma (Vocational) from DGT with two-yearpost qualification experience in the relevant field. **OR** NTC/NAC passed in the Trade of "HEALTH AND SANITARY INSPECTOR" With three years' experience in the relevant field. **Essential Qualification:** Regular / RPL variants of National Craft Instructor Certificate (NCIC) in HEALTH AND SANITARY INSPECTOR trade under DGT. ***Note: Out of two Instructors required for the unit of 2 (1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications. However, both of them must possess NCIC in any of its variants.***
(ii) Employability Skill	MBA/ BBA / Any Graduate/ Diploma in any discipline with Two years' experience **w**ith short term ToT Course in Employability Skills. (Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above) **OR** Existing Social Studies Instructors in ITIs with short term ToT Course in Employability Skills.

(iii) Minimum age for Instructor	21 years
List of Tools and Equipment	As per Annexure – I

5. LEARNING OUTCOME

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

5.1 LEARNING OUTCOMES

Sl. No.	Learning Outcome	Duration		
		Practical	Theory	Total
	First Year			
1.	Make a plan for balanced nutrition diet based on individual requirements considering deficiency related diseases.	80	25	105
2.	Identify and explain water and its properties and causes of water pollution.	45	15	60
3.	Inspect water supply system with water treatment process in the rural/ urban areas.	45	15	60
4.	Handle the night soil of a city/ town with protection of environment and human being.	45	15	60
5.	Plan solid waste management system in an area or a small town.	45	15	60
6.	Practice Bio Medical and E- waste management system.	45	15	60
7.	Inspect the effects of air pollution, global warming, noise pollution and suggest suitable remedies.	45	15	60
8.	Inspect flushing tank, manholes, sewage treatment plant and maintenance of sewers.	45	15	60
9.	Suggest disposal methods for dead animals and humans.	45	15	60
10.	Identify different types of soil, its importance in relation to public health and reclamation of land.	45	15	60
11.	Plan and suggest sanitary prescription of medical measures in housing and fairs & festivals.	10	5	15
12.	Identify occupational health hazards. Follow safety rules. Prevent occupational diseases.	10	5	15
13.	Prepare and control of biological environment and different parts of spraying equipment.	20	10	30
14.	Generate awareness programmes for masses on health education.	20	10	30
15.	Illustrate importance of right behavior and personal hygiene, learn its direct impact on their personal life & society.	120	15	135
16.	Perform first- aid treatment to tackle medical emergency situation.	120	15	135
17.	Recognize communicable and non-communicable	10	5	15

	diseases and prepare its immunization process.			
18.	Perform basic personal hygiene and interpret its impact on a person's health and personality.	20	10	30
19.	Recognize various factors like death rate, birth rate, morbidity, MMR, IMR etc., analyze importance of census & health survey and data collection.	25	5	30
	Employability Skills		**120**	**120**
	Grand Total	**840**	**360**	**1200**

6. ASSESSMENT CRITERIA

LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Make a plan for balanced nutrition diet based on individual requirements considering deficiency related diseases.	• Identify different nutrients. • Identify the requirements of nutrients. • Make a nutritional plan for the given age group. • Identify calories and nutrients for different food items. • Calculate the calories and total nutrients of food items taken. • Identify various nutrition deficiencies. • Identify symptoms and suggest the important food nourishment required.
2. Identify and understand water and its properties and causes of water pollution.	• Identify the resources of water. • Recognize the various resources of water pollution. • Explain the water borne diseases, causes, effects and symptoms. • Identify different type of water quality with various parameters of water in physical, chemical and bacteriological aspects. • Different water treatment techniques ranging from traditional to the modern.
3. Inspect water supply system with water treatment process in the rural/ urban areas.	• Various types of water purification in rural and urban areas. Disinfection process of water resources and drinking water. • Identify the water supply system in different areas such as rural and urban areas. • Identify and recognize the control measures for water pollution. • Identify the water treatment plant and the process.
4. Handle the night soil of a city/ town with protection of environment and human being.	• Difference between brackish water, sewage effluent and night soil. • Recognize the various impact of night soil on the soil, water resources, atmosphere etc. • Different types of faecally-borne diseases due to unsanitary disposal of night soil. • Identify the various types of latrines and their

	construction. • Sewage treatment plant and understand the process diagram.
5. Plan solid waste management system in an area or a small town.	• Recognize various waste materials. • Recognize resources that increase solid waste. • Classify & collect waste. • Apply segregation techniques and segregate the waste. • Apply suitable disposal techniques for waste disposal. • Identify the working of biogas plant. • Apply principles of recycling.
6. Practice Bio Medical Waste and E- Management	• Apply Techniques of segregation, packaging, storage, transport of infectious waste • Demonstrate different treatment method for Bio Medical Waste • Exhibit process of accumulation, storage and disposal of hazardous waste
7. Inspect the effects of air pollution, global warming, noise pollution and suggest suitable remedies.	• Identify sources of air pollution. • Suggest preventive measures to abort air pollution. • Know the global warming and its effects. • Identify need of ventilation. • Measure the noise pollution. • Understand the concept of ventilation. • Suggest ventilation requirements of a particular area.
8. Inspect flushing tank, manholes, sewage treatment plant and maintenance of sewers.	• Observe various sources of liquid waste. • Understand human waste management system. • Identify health hazards due to liquid waste.
9. Suggest disposal methods for dead animals and humans.	• Observe importance for proper disposal of dead body and maintenance of record as per legal provision. • Illustrate methods for preservation of dead. • Identify basic requirements of a burial and cremation ground.

10. Identify different types of soil, its importance in relation with public health and reclamation of land.	• Identify types of soil and its importance. • Identify agricultural benefits of soil. • Observe moisture level in soil. • Understand concept of land reclamation.
11. Plan and suggest sanitary prescription of medical measures in housing and fairs & festivals.	• Understand concept of a healthy housing. • Identify sanitary requirement of a house. • Explain importance of housing and its good health impacts. • Identify requirements of sanitation in a fair. • Estimate number of sanitation facility required for a particular event. • Plan emergency sanitation, food, water supply for a large gathering.
12. Identify occupational health hazards. Follow safety rules. Prevent occupational diseases.	• Identify the occupational hazards to the employees. • Identify the various safety programs and equipment to control the occupational hazards. • Implement measures for health protection of workers.
13. Prepare and control of biological environment and different parts of spraying equipment.	• Identify and use insect circles and disinfections. • Distinguish technique of sterilization and disinfection of various articles. • Identify different parts of spraying equipment. • Identify operation and maintenance of spraying equipment. • Identify larvaecidals. • Identify rodenticides.
14. Generate awareness programmes for masses on health education.	• Understand importance of health education. • Identify working opportunities for a health inspector. • Plan health education awareness programme. • Contribute in health education awareness.
15. Illustrate importance of right	• Learn importance of behavior.

behavior and personal hygiene, learn its direct impact on their personal life & society.	• Impact of behavior on personal hygiene. • Identify behavioral changes as per age groups. • Understand concept of defence mechanism.
16. Perform first-aid treatment to tackle medical emergency situation.	• Perform CPR. • Make first-aid box. • Identify types of bandages. • Perform dressing when needed. • Treat causalities properly. • Transportation and care of victims can be done. • Perform first-aid procedures in various conditions.
17. Recognize communicable and non-communicable diseases and prepare its immunization process.	• Identify symptoms of diseases. • Identify types of disease weather it is communicable or non-communicable. • Implement preventive measure to contain any disease. • Identify age group for various immunizations. • Understand requirement of disinfection and sterilization. • Identify disinfection and sterilization process in hospitals.
18. Perform basic personal hygiene and interpret its impact on a person's health and personality.	• Understand importance of personal hygiene habits. • Do proper care of their own nails and hands cleaning etc. • Do care of dental care procedures. • Develops regular hand washing habits. • Develops healthy food habit of eating raw food-vegetables. • Develops regular exercise and improves personal hygiene habits results in a better personality.
19. Recognize various factors like death rate, birth rate, morbidity, MMR, IMR etc., analyze importance of census & health survey and data collection.	• Identify death rate, birth rate, MMR, IMR etc. • Understand importance of census. • Fill survey forms. • Perform data collection. • Understands importance of acts. • Identify epidemic and endemic situations at a given area. • Understand air and water pollution control acts.

7. TRADE SYLLABUS

SYLLABUS FOR HEALTH AND SANITARY INSPECTOR TRADE			
FIRST YEAR			
Duration	**Reference Learning Outcome**	**Professional Skills (Trade Practical)**	**Professional Knowledge (Trade Theory)**
Professional Skill 80 Hrs; Professional Knowledge 25 Hrs	Make a plan for balanced nutrition diet based on individual requirements considering deficiency related diseases.	1. Point out the requirement of nutrition. 2. Demonstrate on charts of various deficiency diseases. 3. Nutrient requirement of infant, wearing pregnancy, location, preschool child, school going child. 4. Survey of nutrition education & its importance. 5. Preparation of diet menu for hypertensive, diabetic nephritis & heart patients. 6. Images of patients suffering from diseases. 7. Audio-video aids. 8. Tabular differentiation of types of malnutrition. 9. Importance of health education to overcome the problem of malnutrition. 10. Display videos (Audio-video) on demographic malnutrition. Deficiency diseases of vitamins & minerals e.g. night blindness, beriberi, scurvy, rickets, anaemia, goitre: causes,	Food (definition) & function of food & introduction of nutrition & nutrients. Classification of food, their sources, nutrient diets proteins, fat, vitamins & minerals – sources, function, deficiency excess & daily requirement. Balanced diet- definition & importance – Factors to be considered on planning meals. – Nutrient requirement of different age group – Diet survey Family assessment – clinical examination of all members – height & weight BMI [Body mass index], Head circumference, -Blood test for Hb. Nutrition education malnutrition- causes

		symptoms and treatment. 11. Demonstration of sources of Hb by pictorial chart. 12. Demonstration of spoilage of some food items. 13. Application of common salt & sugar to increase shelf life of many food items. 14. Cleanliness of Kitchen equipment and cooking utensils.	prevention, low birth weight (LBW), causes of LBW, prevention of LBW, special care to be given to malnourished children. Therapeutic Diet: Introduction for balanced diet, weight reducing diet- low fat diet, bland diet, cirrhosis of liver, renal stone, importance of regular exercise in it. Food Preservation: definition & methods, household &industrial method of preservation, shelf-life, Pasteurization: methods, types &importance. Refrigeration: Prevents spoilage. Health awareness programs & field working
Professional Skill 45 Hrs; Professional Knowledge 15 Hrs	Identify and explain water and its properties and causes of water pollution. Inspect water supply system with water treatment process in the rural/ urban areas.	15. Draw a chart sowing various environmental factors. 16. Tabulate various types of water with their properties. 17. Classify water resources (surface water and ground water). 18. Prepare a pie chart of total availability of water on the earth (Fresh water, saltwater, potable water etc.) 19. Tabulate the per capital	WHO's definition for environmental sanitation. Safe and whole some water. Sources of water. Various uses of water and its needs. Water borne diseases. Conservation sources of water. Quality of water.

		water demand for domestic purpose. 20. Prepare a chart of water demand in different areas such as hospitals, hotels, industries, schools etc. 21. Prepare a chart for impact of polluted water on human health, animals, plants etc. 22. Tabulate the different methods for conservation of water in different areas. 23. Draw and sketch a picture of rainwater harvesting. 24. Identify the difference between portable water, safe and whole some water. 25. Prepare a chart for physical, chemical and bacteriological quality of water. 26. Explain the disinfection with various disinfectant for well disinfection 27. Prepare the list of sources of water pollution with their different characteristics. 28. Visit to a water treatment plant. 29. Make a diagram of water treatment plant with different process of water purification. 30. Collection and dispatch of water sample for chemical and bacteriological examination. 31. Prepare and construct a	Physical, chemical and biological standard for portable water. Public health aspect of very hard water. Steps of disinfection of well. Sources and nature of pollution of water& control of it. Purification of water: i) Large Scale: Rapid sand filter process & working procedure followed in Jal Board ii) Small Scale Prepare of a sanitary well and tube well. Plumbing system and its maintenance. Water supply and storage system at the community and domestic. Pot method of chlorination. Swimming pool. Water testing labs. Importance of alkaline water.

		purification system in the rural areas. 32. Calculate the chlorine demand and prepare the graph also for residual chlorine in water. 33. Collect the water sample from the domestic taps, surface and ground water resources. 34. Perform the practical for physical and chemical parameters of given water sample in testing labs - pH - Turbidity - Chlorine - Hardness - TDS - Acidity - Alkalinity etc.	
Professional Skill 45 Hrs; Professional Knowledge 15 Hrs	Handle the night soil of a city/ town with protection of environment and human being.	35. Show the difference between water and sewage with given samples in the bottles in the testing labs. 36. Categorises the numerous impacts of night soil on the water bodies, atmosphere, soil etc. 37. Tabulate numerous impacts of food chain and impact of food contamination on human bodies. 38. Prepare a chart for various diseases due to unsanitary disposal of night soil. 39. Describe the construction and	**Night soil disposal** Sewage in liquid waste containing human excreta. Numerous impacts of night soil on the environmental factors. Faucal borne disease due to unsanitary disposal of night soil. Different types of latrines in use principal of construction of

		maintenance of service and non-service type latrines bore hole, dug well, RCA, septic tank, sulabh souchalaya. 40. Visit to sulabh souchalaya. 41. Demonstrating the construction and maintenance of trenching ground.	sanitary latrines and their uses. i) Bore hole ii) Dug well iii) RCA iv) Septic tank latrines. v) Sanitary engineering
Professional Skill 45 Hrs; Professional Knowledge 15 Hrs	Plan solid waste management system in an area or a small town.	42. Identify resources of increasing solid waste. 43. Tabulate the category of solid waste based on sources. 44. Classify solid waste according to their different properties such as medical, municipal, commercial, construction. 45. Demonstration of collection methods of solid waste. 46. Prepare a plan chart of solid waste management in a city. 47. Prepare pie chart composition of MSW. 48. Explain the disposal methods of solid waste in sanitary methods. 49. Illustrate the bad effects of solid waste disposal in a chart. 50. Compare the different methods of collection and transportation of solid waste with diagrams. 51. Visit disposal site. i. Sanitary landfills ii. Composting iii. Incineration	**Solid waste disposal** – Source, generation, storage, collection and disposal methods of solid waste. – Classification of solid waste in community. – Polluting effects of different types of solid waste. – System of collection of solid waste from the houses & streets. – Sanitary transportation of solid waste. – Sanitary process of disposal of solid waste such as composting, sanitary land filling, incineration etc.

		iv. Biogas plant	
Professional Skill 45 Hrs; Professional Knowledge 15 Hrs	Practice Bio Medical and E- waste management system.	**Bio Medical Waste Management** 52. Techniques of segregation, packaging, storage transport of infectious waste. 53. Techniques of Biomedical waste management. 54. Treatment method- Autoclave, Hydro clave, Microwave, Chemical Disinfection, Solidification and stabilization, Bioremediation, 55. Accumulation and storage of hazardous waste, 56. Land disposal of hazardous waste	**Bio Medical Waste Management** – Definition of Bio Medical Waste - Sources of Bio Medical Waste - Waste minimisation - BMW – segregation, collection, transportation, treatment and disposal (including color coding) - Liquid BMW, Radioactive waste, Metals/Chemicals/Drug waste - BMW management and method of disinfection - Modern technology for handling BMW - Use of personal protective equipment (PPE) - Monitoring and controlling of cross infection (protective devices) - Identifying the risk of Bio Medical Waste – 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.
Professional	Inspect the effects	57. Demonstration of	**<u>Air pollution</u>**

Skill 45 Hrs; Professional Knowledge 15 Hrs	of air pollution, global warming, noise pollution and suggest suitable remedies.	humidity and temperature. 58. Point out sources of air pollution. 59. Prepare charts or posters of Global warming. 60. Prepare posture on prevention techniques for Air pollution. 61. Demonstration of an AC plant for thermal comfort. 62. Point out types of ventilation. 63. Measurement of noise level. 64. Process to control noise pollution	– Introduction of air pollution. – Composition of air. – Sources and nature of air pollution. – Effect of air pollution on health. – Prevention and controlling methods for air pollution. – Explain global warming and its impact. – Concept of temperature, humidity, radiation, thermal comfort, evaporation etc. – Green house effect, causes & impact. – Air disinfection. – Definition of ventilation. – Concept and importance of adequate ventilation. – Types of ventilation **Noise pollution** – Introduction. – Sources. – Health Impacts. – Preventive measures for controlling Noise pollution.
Professional Skill 45 Hrs; Professional Knowledge 15 Hrs	Inspect flushing tank, manholes, sewage treatment plant and maintenance of sewers.	65. Point out the sewage treatment plant. 66. Inspection of flushing tank, manholes etc. 67. Demonstration of various traps ‘p’ trap, ‘s’ trap, ‘q’ trap etc. 68. Demonstration of manholes by video calls. 69. Demonstration of various plumbing tools like hacksaw, pipe cutter, pipe vice, pipe wrench set of spanners etc.	**Liquid waste disposal** – Definition of liquid waste and its sources. – Human waste management system. – Various methods for liquid waste disposal. – Pollution of water due to sewage. – Health hazard associated with liquid waste. – Sewers and its types. – Methods of laying sewers. – Construction and

		70. Inspection and maintenance of sewage treatment plant. 71. Identify various equipment of sewage disposal. 72. Identify pollution of water from sewage.	maintenance of sewers. – Sewer appurtenances. – Traps introductions. – Types of traps. – Definition of plumbing. – Plumbing tools and operations. **Sewage disposal** – Definition and types of sewage system. – Sewage farming and land treatment. – Sewage disposal by biogas plant. – Methods of disinfecting sewage. – Sewage farming.
Professional Skill 45 Hrs; Professional Knowledge 15 Hrs	Suggest disposal methods for dead animals and humans.	73. Visit to burial ground, proper process of disposal of dead bodies and maintenance of records as per legal provisions.	**Burial and Cremation** – Introduction – Disposal of dead. – Types of disposal methods. – Methods of preservation of dead. – Importance of electrical & bio gas cremation. – Commonly and less commonly used methods for disposal of dead. – Basic requirements for burial and cremation grounds. – Health hazards associated with unsanitary disposal of dead bodies.
Professional Skill 45 Hrs; Professional Knowledge	Identify different types of soil, its importance in relation to public health and	74. Identify soil sample equipment. 75. Sampling for assessment of soil pollution. 76. Treatment of soil after the PH and disinfection.	**Soil sanitation** – Introduction and importance of soil. – Classification of soil. – Classification from the view point of importance

15 Hrs	reclamation of land.		in public health. – Reason of excessive moisture in the soil. – Reclamation of land. – Soil health.
Professional Skill 10 Hrs; Professional Knowledge 05 Hrs	Plan and suggest sanitary prescription of medical measures in housing and fairs & festivals.	77. Visit of housing for assessing sanitary standards and prescription of remedial measures. 78. Classify the overcrowding. 79. Inspection and preparation of fairs and festivals. 80. Preparation of sanitary arrangements associated with natural calamities. 81. Role of disaster management committee in natural calamities.	**Housing** – General principle of healthy housing. – Home sanitation. – Utility services of house. – Sanitary standards for construction of house. – Food hygiene at home. – Specification for healthy housing. **Sanitation in fairs and festivals** – Sanitation management at fairs and festivals. – Sanitary problems associated with human gatherings and temporary settlements. – Alternative emergency sanitary provisions to prevent sanitation crisis for food, housing, water supply, lighting. – Disposal of community waste and prevention of outbreak of epidemics.
Professional Skill 10 Hrs; Professional Knowledge 05 Hrs	Identify occupational health hazards. Follow safety rules. Prevent occupational diseases.	82. Visit various trade premises (diary, bakery etc.) 83. Visit to a factory for survey of sanitation problems of workplace. 84. Identification of danger zones and adequacy of safety arrangements. Seminars on various safety arrangements programme.	**Occupational health** – Introduction – Occupational environmental measures. – Occupational risk factor and its preventive measure. – Occupational diseases. – State the importance of safety and health at work place. – State the role of

			employer, trade union and employees for health and safety program. – Factory & ESI Act. – Measures for health protection workers. – Prevention of occupational diseases. – Provision- benefit to employees. – Occupational health in India.
Professional Skill 20 Hrs; Professional Knowledge 10 Hrs	Prepare and control of biological environment and different parts of spraying equipment.	85. Identification and use of insecticides, pesticides and disinfectants. 86. Application of techniques of sterilisation and disinfection of various articles. 87. Identification of different part of spraying equipment. 88. Identify and use of larvicides. 89. Operation and maintenance of spraying equipment. 90. Identify and use of rodenticides.	**Control of biological environment** – Introduction – Study on insecticides, pesticides and disinfections. – Sterilisation and disinfection of different articles. – Various spraying equipment. – Uses of rodenticides and larvaecidals. – Principal of arthropod control. – Advantage of natural insecticides over chemicals.
Professional Skill 20 Hrs; Professional Knowledge 10 Hrs	Generate awareness programmes for masses on health education.	91. Designing of posters on Malaria. 92. Designing of posters on roles and responsibilities of a health inspector. 93. Demonstration of health awareness program as a class activity. 94. Designing environmental sanitation posters.	– Definition of health – Content of health education. – Principal of health education. – Health education opportunities for health inspector in his work place. – Use of audio-visual aids and media. – Health education approach. – Planning health education

		95. Designing posters on balanced diet. 96. Designing poster on basic hygiene practices. 97. Preparing power point presentation on health awareness. 98. Demonstration of preparation of ORS.	activities, education in relation to environmental sanitation, Health committees. – Disaster management – Awareness on need of sanitation amenities. – Health education material. – Contribution of public health centres in health education. – Utilising community resources for health education. – Benefits of personal contract group meetings to provide health education.
Professional Skill 120 Hrs; Professional Knowledge 15 Hrs	Illustrate importance of right behavior and personal hygiene, learn its direct impact on their personal life & society.	99. Preparing charts on personal hygiene habits. 100. Designing posters on Do's and Don'ts in a social behaviour. 101. Demonstration of hand washing and caring. 102. Demonstration on oral hygiene. 103. Impact of good habits on personality.	**Behavioral Science** – Definition of behavioural science. – Importance of behavioural science. – Basic hygiene practices. – Habits and customs affecting personal hygiene. – Factors influencing human behaviour, change of behavioural pattern in different age groups.
Professional Skill 120 Hrs; Professional Knowledge 15 Hrs	Perform first- aid treatment to tackle medical emergency situation.	104. Dressing of wounds, bandages. 105. Management of bone injuries with splints, slings. 106. Transportation of injured and unconscious cases and their management. 107. Diagnosis and treatment of minor ailments, cough, fever,	**First-Aid** – Aim of first-aid. – Principles and practice of first-aid. – Contents of a basic first-aid box. – CPR – Types of dressing and bandages. – Types of wounds. – Open & closed wounds. – Miscellaneous conditions.

		bleeding, toothache etc. 108. Poisoning case managements 109. Management in case of heat attack, sun stroke, haemorrhage, burns, electrical injuries etc. 110. Training on artificial respiration. 111. Arranging first-aid treatment in various emergency cases.	– Approach to a casualty. – Psychological first-aid. – Handling multiple casualties. – Types of injuries like road accidents, factories accidents and disaster injuries. – Transportation of victims and proper care provided.
Professional Skill 10 Hrs; Professional Knowledge 05 Hrs	Recognize communicable and non-communicable diseases and prepare its immunization process.	112. Demonstration on communicable and non-communicable diseases symptoms and their control measures. 113. Preparation of immunisation programme 114. Conducting health and general survey and report making. 115. Videos on disinfection and sterilisation techniques. 116. Various chemicals use with safety for disinfection through videos. 117. EVIN (Electronic Vaccine Intelligence Network) NCCMIS (National Cold Chain Management Information System) Mission Indradhabush: Full immunization coverage.	**<u>Communicable diseases</u>** – Definition and introduction on communicable disease. – Air-borne and transmission of diseases through contact. – Symptoms of diseases. – Explain in detail various communicable diseases like Swine Flu, T.B., AIDS, Diphtheria, Polio, measles, diarrhoea etc. – General measures for prevention and control of communicable diseases. **<u>Non-communicable diseases</u>** – Introduction of non-communicable disease. – Explain in detail diseases like cancer, hypertension, cardiac disease, diabetes etc. – In detail symptoms, prevention and control of non-communicable diseases. **<u>Immunity and immunization</u>** – Importance of immunity and immunisation – Types, purpose and effect of immunisation.

			– National immunisation schedule. – Measles, typhoid vaccines and pentavalent vaccine. **Disinfection and sterilisation** – Need of disinfection and sterilisation. – Physical methods of sterilisation. (Hot air oven, autoclave etc.) – Importance of disinfection and sterilisation in hospitals. – Introduction and uses of various disinfection agents like Halogen, KMnO4 solution, solid and liquid agents. – Effective disinfectants like formaldehyde, sulphur, chlorine gases etc. – Use of UV radiation and ozone as disinfectant.
Professional Skill 20 Hrs; Professional Knowledge 10 Hrs	Perform basic personal hygiene and interpret its impact on a person's health and personality.	118. Making posters on dental care. 119. Making posters on skin and hair hygiene. 120. Making posters on basic hygiene habits. 121. Demonstration on right method for hand washing. 122. Demonstration on oral health.	**Personal hygiene** – Need and importance of personal hygiene in daily life. – Factors influencing health and hygiene habits. – Maintaining basic hygiene habits of skin, hair, oral, nails etc. – Developing dental care, care of hands, washing etc. – Importance of regular exercise and nutritious food.
Professional Skill 25 Hrs; Professional Knowledge	Recognize various factors like death rate, birth rate, morbidity, MMR, IMR etc., analyze importance of	123. Data collection from hospitals for Malaria cases. 124. Data collection from hospitals for Dengue cases. 125. Health survey of people	**Demography and health survey** – Definition and introduction of demography. – Factors of demography. – Various stage of demo.

05 Hrs	census & health survey and data collection.	of a locality. 126. Vaccination survey in a locality. 127. Design and prepare population control measures on chart. 128. Collection and dispatch of food samples for analysis preparation of papers for legal proceeding. 129. Performance of simple household tests to identify adulteration in milk, ghee, oil, sugar, tea etc. 130. Acquaintance with registration of acts. 131. Prepare reporting of different acts. 132. Documentation process for implementation of different acts. 133. Prepare a chart of pollution levels of toxins of different industries in an area.	1. High stationary 2. Early expending 3. Late expending 4. Low stationary – Health survey includes birth rate, death rate, morbidity, IMR, MMR etc. – Population control measures. **Public Health Act** – Definition, introduction and importance of acts. – Indian Epidemic Disease Act. – Explain endemic, pandemic with examples. – Define epidemiology. – Air and Water Pollution Control Act. – Prevention of Food Adulteration Act. – Birth and Death Registration Act. – M.T.P. Act. – Suppression of Immoral Traffic Act (SITA). – Municipal and Local Body Acts related to Housing Sanitation Act. – Factory Act and ESI Acts. – Bio Medical Waste Management (BMW) Act – Employee Act: Insurance medical benefits – Keypoints of recent modification in public health acts.

Project work/ Hospital visit

Broad Areas:

a) Arranging first-aid treatment in various emergency cases.
b) Design and prepare population control measures on chart.
c) Various chemical uses with safety for disinfection through video.
d) Preparing charts on personal hygiene habits.
e) Data collection from hospitals for malaria cases.
f) Visit to Cremation ground to understand, traditional & electric cremation method.
g) Visit to any dairy plant to understand pasteurization, refrigeration & process technique for food preservation.

SYLLABUS FOR CORE SKILLS
1. Employability Skills (Common for all CTS trades) (120 Hrs.)

Learning outcomes, assessment criteria, syllabus and Tool List of Employability Skills is provided separately in www.cstaricalcutta.gov.in / www.bharatskills.gov.in / www.dgt.gov.in

ANNEXURE-I

List of Tools & Equipment			
HEALTH AND SANITARY INSPECTOR			
S No.	**Name of the Tools and Equipment**	**Specification**	**Quantity**
1.	Diagram of – Modalities (i) Human System (ii) Exercises Charts		1 set
2.	Wax bath		1 no.
3.	I. R. Radiator		1 no.
4.	Short wave Diathermy unit		1 no.
5.	Electric Muscle Nerve Stimulator		1 no.
6.	Battery	6 V & 12V	2 nos.
7.	Battery Eliminator	6 V, 9 V, 12 V	2 nos.
8.	Traction table,		1 nos.
9.	Weight Machine		1 no.
10.	Sphygmomanometer		1 no.
11.	Apparatus for various exercises-shoulder wheel		1 set
12.	Shoulder pulley		1 set
13.	Wall ladder		1 set
14.	Swiss ball		1 set
15.	Pronator-Supinator exerciser		1 set assorted
16.	Durra mats & therabands		12nos.
17.	Table& Mannequin full body		1 no.
18.	Chair with (Dual Desk)		12+1nos.
19.	Cupboard		2 nos.
20.	IFT (Interferential Therapy)		1 no.
21.	TENS (Trans Electronic Nerve Stimulator)		1 no.
22.	Ultrasonic m/c		1 no.
23.	Weight cuffs		1 set
24.	Hydrocollator Unit		2set
25.	Quadriceps Chair		1 no.
26.	CPM & LASER		1 no.
27.	Students Lockers		24 nos.
28.	Instructor Chair		1 no.

29.	Instructor Table		1 no.
30.	Smart Board		1 no.

Note:

1. Internet facility is desired to be provided in the class room.

ANNEXURE-II

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts, trainers of ITIs, NSTIs, faculties from universities and all others who contributed in revising the curriculum.

Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

List of Contributors			
S No.	**Name & Designation Sh./Mr./Ms.**	**Organization**	**Remarks**
1.	T. Ragulan, Director	CSTARI, Kolkata	Chairman
2.	Dr. Anamika Singh, Principal	NITC	Member
3.	Urmila Pandey, Faculty Radiology Instructor	NITC	Member
4.	Mr. Harshit Soni, Faculty Radiology Instructor	NITC	Member
5.	Arun, Radiology Supervisor & RSO	Paras Hospital GGN	Member
6.	Abhishek, SR. Radiology Technician	Paras Hospital Gurugram	Member
7.	Yadram Choudhary, SR. Radiology Technician	Paras Hospital Gurugram	Member
8.	Krishnakant Yadav, SR. Radiology Technician	Paras Hospital Gurugram	Member
9.	Akhil	IBS Hospital, Lajpatnagar	Member
10.	Aditya	miracles mediclinic sector 56, Gurgaon	Member
11.	Ms.Jyoti Tripathi	ISIC Hospital, Vasant kunj	Member
12.	Dr. Preeti, Physiotherapy Instructor	NITC	Member
13.	Ms. Priti Kumari, Health Sanitary inspector, Instructor	NITC	Member
14.	Kirti Sharma, Health sanitary inspector	NITC	Member
15.	Bhawna, Health Sanatory inspector		Member
16.	Ranjeet Kumar Verma, Health sanitary inspector, Instructor		Member
17.	Tanu Pratap Sing, Health sanitary inspector, Trainer	Saraswati ITI, Amass Skill Venture	Member
18.	Mr.Amrish Tyagi, Heath Inspector	U.C.M.S. & G.T.B Hospital Dilshad Garden Delhi	Member

19.	Mr. Harender Singh, Health inspector	U.C.M.S. & G.T.B Hospital Dilshad Garden Delhi	Member
20.	Shalu Rai,	Goyal Hospital & Urology Centre Krishna Nagar Delhi	Member
21.	Pawan Kumar	Goyal Hospital & Urology Centre Krishna Nagar Delhi	Member
22.	Bijender	DDMA, South west Kapashera New Delhi	Member
23.	Reena, HEALTH AND SANITARY INSPECTOR	Ortho Star Hospital	Member
24.	Vijay Kumar, HEALTH AND SANITARY INSPECTOR	Chender Bihar Cheritabe	Member
25.	Subhash Singh Rana	RANA Yog & Healing Center	Member
26.	Karena	Thrive Physiotherapy and Pain Clinic	Member
27.	Ram Bhul	Artios Hospital (PaniPat)	Member
28.	Naina	Brain and Movement Clinic	Member
29.	Yatin Kumar Sharma	Sheetla Physiotherapy and Neurotherapy	Member
30.	Karan Bhardwaj	NITC DWARKA MOR, Delhi	Member
31.	Dr. Nisha Gulia	Civil Hospital Bahadurgarh	Member
32.	Dr. Annu Gahlot	Singh Dental Hospital Dwarka mor	Member
33.	Dr. Jalaj Trikha	Singh Dental Hospital Dwarka Mor	Member
34.	Dr. Meenakshi Chouhan	Singh Dental Hospital Dwarka Mor	Member
35.	Subhash Kumar, Dental Technician	National Industrial Training Centre	Member
36.	Ravi Kant Arora	National Industrial Training Centre	Member
37.	Sachin Rana	National Industrial Training Centre	Member
38.	Neeraj Singh Rautela	National Industrial Training Centre	Member
39.	Augusteen singh	National Industrial Training Centre	Member
40.	Tarun Sharma	National Industrial Training Centre	Member
41.	Munish Gupta	National Industrial Training Centre	Member
42.	Tanu Pratap Singh	Saraswati ITI, Amass Skill Venture	Member
43.	Dr. Ritesh Garg	Shivam Diagnostics	Member
44.	M.N Alam	Shivam Diagnostics	Member
45.	Saroj Bala	CSTARI, Kolkata	Member
46.	P.K Bairagi, T.O.	CSTARI, Kolkata	Member
47.	B. Biswas, T.O.	CSTARI, Kolkata	Member

ANNEXURE-III

ABBREVIATIONS	
CTS	Craftsmen Training Scheme
ATS	Apprenticeship Training Scheme
CITS	Craft Instructor Training Scheme
DGT	Directorate General of Training
MSDE	Ministry of Skill Development and Entrepreneurship
NTC	National Trade Certificate
NAC	National Apprenticeship Certificate
NCIC	National Craft Instructor Certificate
LD	Locomotor Disability
CP	Cerebral Palsy
MD	Multiple Disabilities
LV	Low Vision
HH	Hard of Hearing
ID	Intellectual Disabilities
LC	Leprosy Cured
SLD	Specific Learning Disabilities
DW	Dwarfism
MI	Mental Illness
AA	Acid Attack
PwD	Person with disabilities


कौशलं बलम्