

ARCHITECTURAL DRAUGHTSMAN

NSQF LEVEL- 6



SECTOR - CONSTRUCTION

COMPETENCY BASED CURRICULUM
CRAFT INSTRUCTOR TRAINING SCHEME (CITS)



GOVERNMENT OF INDIA

Ministry of Skill Development & Entrepreneurship

Directorate General of Training

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE

EN-81, Sector-V, Salt Lake City, Kolkata – 700091



ARCHITECTURAL DRAUGHTSMAN

(Engineering Trade)

SECTOR – CONSTRUCTION

(Revised in 2019)

Version 1.1

CRAFT INSTRUCTOR TRAINING SCHEME (CITS)

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Developed By
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1. COURSEOVERVIEW

The Craft Instructor Training Scheme is operational since inception of the Craftsmen Training Scheme. The first Craft Instructor Training Institute was established in 1948. Subsequently, 6 more institutes namely, Central Training Institute for Instructors (now called as National Skill Training Institute (NSTI), NSTI at Ludhiana, Kanpur, Howrah, Mumbai, Chennai and Hyderabad were established in 1960 by DGT. Since then the CITS course is successfully running in all the NSTIs across India as well as in DGT affiliated institutes viz. Institutes for Training of Trainers (IToT). This is a competency based course for instructors of one year duration. “Architectural Draughtsman” CITS trade is applicable for Instructors of “Architectural Draughtsman” CTS Trade.

The main objective of Crafts Instructor training Programme is to enable Instructors explore different aspects of the techniques in pedagogy and transferring of hands-on skills so as to develop a pool of skilled manpower for industries, also leading to their career growth & benefiting society at large. Thus promoting a holistic learning experience where trainee acquires specialized knowledge, skills & develops attitude towards learning & contributing in vocational training ecosystem.

This course also enables the instructors to develop instructional skills for mentoring the trainees, engaging all trainees in learning process and managing effective utilization of resources. It emphasizes on the importance of collaborative learning & innovative ways of doing things. All trainees will be able to understand and interpret the course content in right perspective, so that they are engaged in & empowered by their learning experiences and above all, ensure quality delivery.

2. TRAINING SYSTEM

2.1 GENERAL

CITS courses are delivered in National Skill Training Institutes (NSTIs) & DGT affiliated institutes viz., Institutes for Training of Trainers (IToT). For detailed guidelines regarding admission on CITS, instructions issued by DGT from time to time are to be observed. Further complete admission details are made available on NIMI web portal <http://www.nimionlineadmission.in>. The course is of one-year duration. It consists of Trade Technology (Professional skills and Professional knowledge), Training Methodology and Engineering Technology/ Soft skills. After successful completion of the training programme, the trainees appear in All India Trade Test for Craft Instructor. The successful trainee is awarded NCIC certificate by DGT.

2.2 COURSE STRUCTURE

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

S No.	Course Element	Notional Training Hours
1.	Trade Technology	
	Professional Skill (Trade Practical)	640
	Professional Knowledge (Trade Theory)	240
2.	Engineering Technology	
	Workshop Calculation	120
	Workshop Science	80
3.	Training Methodology	
	TM Practical	320
	TM Theory	200
	Total	1600

2.3 PROGRESSION PATHWAYS

- Can join as an Instructor in a vocational training Institute/ technical Institute.
- Can join as a supervisor in Industries.

2.4 ASSESSMENT & CERTIFICATION

The CITS trainee will be assessed for his/her Instructional skills, knowledge and attitude towards learning throughout the course span and also at the end of the training program.

a) The Continuous Assessment (Internal) during the period of training will be done by **Formative Assessment Method** to test competency of instructor with respect to assessment criteria set against each learning outcomes. The training institute has to maintain an individual trainee portfolio in line with assessment guidelines. 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 National Craft Instructor Certificate will be conducted by DGT at the end of the year as per the guidelines of DGT. The learning outcome and assessment criteria will be the basis for setting question papers for final assessment. The external examiner during final examination will also check the individual trainee's profile as detailed in assessment guideline before giving marks for practical examination.

2.4.1 PASS CRITERIA

S No.	Subject		Marks	Internal assessment	Full Marks	Pass Marks	
						Exam	Internal assessment
1.	Trade Technology	Trade Theory	100	40	140	40	24
2.		Trade Practical	200	60	260	120	36
3.	Engineering Technology	Workshop Calculation	50	25	75	20	15
4.		Workshop Science	50	25	75	20	15
5.	Training Methodology	TM Practical	200	30	230	120	18
6.		TM Theory	100	20	120	40	12
Total Marks			700	200	900	360	120

The minimum pass percent for Trade Practical, TM practical Examinations and Formative assessment is 60% & for all other subjects is 40%. There will be no Grace marks.

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 the assessment. While assessing, the major factors to be considered are approaches to generate solutions to specific problems by involving standard/non-standard practices.

Due consideration should also be given while assessing for teamwork, avoidance/reduction of scrap/wastage and disposal of scrap/waste as per procedure, behavioral attitude, sensitivity to the 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 of the following:

- Demonstration of Instructional Skills (Lesson Plan, Demonstration Plan)
- Record book/daily diary
- Assessment Sheet
- Progress chart
- Video Recording
- Attendance and punctuality
- Viva-voce
- Practical work done/Models
- Assignments
- Project work

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

Performance Level	Evidence
(a) Weightage in the range of 60%-75% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with instructional design, implement learning programme and assess learners which demonstrates attainment of an acceptable standard of crafts instructorship with occasional guidance and engage students by demonstrating good attributes of a trainer.	<ul style="list-style-type: none"> • Demonstration of fairly good skill to establish a rapport with audience, presentation in orderly manner and establish as an expert in the field. • Average engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A fairly good level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Occasional support in imparting effective training.
(b) Weightage in the range of 75%-90% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with	<ul style="list-style-type: none"> • Demonstration of good skill to establish a rapport with audience, presentation in

<p>instructional design, implement learning programme and assess learners which demonstrates attainment of a reasonable standard of crafts instructorship with little guidance and engage students by demonstrating good attributes of a trainer.</p>	<p>orderly manner and establish as an expert in the field.</p> <ul style="list-style-type: none"> • Above average in engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A good level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Little support in imparting effective training.
<p>(c) Weightage in the range of more than 90% to be allotted during assessment</p>	
<p>For performance in this grade, the candidate should be well versed with instructional design, implement learning programme and assess learners which demonstrates attainment of a high standard of crafts instructorship with minimal or no support and engage students by demonstrating good attributes of a trainer.</p>	<ul style="list-style-type: none"> • Demonstration of high skill level to establish a rapport with audience, presentation in orderly manner and establish as an expert in the field. • Good engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A high level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Minimal or no support in imparting effective training.

3. GENERAL INFORMATION

Name of the Trade	Architectural Draughtsman -CITS
Trade code	DGT/4037
Reference NCO 2015	3118.0100, 2356.0100
NSQF Level	Level-6
Duration of Craft Instructor Training	One Year
Unit Strength (No. Of Student)	25
Entry Qualification	<p>Degree in Architecture from AICTE/ UGC recognized university.</p> <p style="text-align: center;">OR</p> <p>3 years Diploma in Architecture from AICTE/recognized board/institute of Technical education.</p> <p style="text-align: center;">OR</p> <p>National Trade Certificate in the Architectural Draughtsman trade or related trades.</p> <p style="text-align: center;">OR</p> <p>National Apprenticeship Certificate in Architectural Draughtsman trade or related trades.</p>
Minimum Age	18 years as on first day of academic session.
Space Norms	100 Sq.m
Power Norms	4.5KW
Instructors Qualification for	
1. ARCHITECTURAL DRAUGHTSMAN-CITS Trade	<p>B.Voc/Degree in Architecture from AICTE/UGC recognized University with Two years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>03 years Diploma in Architecture from AICTE/ recognized Board/ institution or relevant Advanced Diploma (Vocational) from DGT with five years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>NTC/ NAC passed in Architectural Draughtsman trade with seven years experience in relevant field.</p> <p>Essential Qualification: National Craft Instructor Certificate (NCIC) in Architectural Draughtsman trade, in any of the variants under DGT.</p>
2. Workshop Calculation & Workshop Science	<p>B.Voc/Degree in any Engineering discipline from AICTE/ UGC recognized Engineering College/ university with two years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>03 years Diploma in any Engineering discipline AICTE /recognized board of technical education or relevant Advanced Diploma (Vocational) from DGT with five years experience in relevant field.</p>

	<p style="text-align: center;">OR</p> <p>NTC/ NAC in any Engineering trade with seven years experience in relevant field.</p> <p>Essential Qualification: National Craft Instructor Certificate (NCIC) in relevant trade OR NCIC in RoDA or any of its variants under DGT</p>					
3. Training Methodology	<p>B.Voc/Degree in any discipline discipline from AICTE/ UGC recognized College/ university with two years experience in training/teaching field. OR Diploma in any discipline from recognized board / University with five years experience in training/teaching field. OR NTC/ NAC passed in any trade with seven years experience in training/teaching field.</p> <p>Essential Qualification: National Craft Instructor Certificate (NCIC) in any of the variants under DGT/ B.Ed /ToT from NITTTR or equivalent.</p>					
Distribution of training on Hourly basis: (Indicative only)						
Total Hrs. /week	Trade Practical	Trade Theory	Workshop Calculation	Workshop Science	TM Practical	TM Theory
40 Hours	16 Hours	6 Hours	3 Hours	2 Hours	8 Hours	5 Hours

4. JOB ROLE

Brief description of job roles:

Manual Training Teacher/Craft Instructor; instructs students in ITIs/Vocational Training Institutes in respective trades as per defined job role. Imparts theoretical instructions for the use of tools & equipment of related trades and related subjects. Demonstrate process and operations related to the trade in the workshop; supervises, assesses and evaluates students in their practical work. Ensures availability & proper functioning of equipment and tools in stores.

Draughtsman Architectural; Prepares drawings of buildings, parks, gardens, monuments etc. from sketches, designs or data for construction. Studies notes, sketches and other engineering data of buildings, parks, gardens, monuments, etc. to be constructed. Draws sketches of required construction according to directions of Architect to suit purpose and environment; alters them if directed and get them approved by him. Draws to scale drawings according to approved sketches showing plan, elevations, settings, arrangements etc. as necessary. May trace drawing and make blue prints. May prepare architectural designs, may prepare estimate schedules for material and labour. May prepare perspectives designs and render them in Colour or monochrome. May prepare model of constructions work. May work as Draughtsman Civil.

Reference NCO-2015:

- a) 2356.0100 – Manual Training Teacher/Craft Instructor.
- b) 3118.0100 – Draughtsperson, Architectural

5. LEARNING OUTCOMES

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

5.1 TRADE TECHNOLOGY

1. Explain the procedure for designing of residential and public building considering change in position of Sun and effect of climate change.
2. Develop an initial sketch of any type building, ecofriendly to climate with help of CAD.
3. Demonstrate a final project drawing along with its different orthographic views.
4. Prepare a project report.
5. Execute a model of the project with the help of 3D modelling.
6. Plan and prepare thematic drawing of energy efficient design (green building concept).
7. Evaluate the correctness and perfection of a drawing that shows detailed views of construction and expansion joints in different level.
8. Assess the design of a false ceiling with respect to furniture, function of room.
9. Check the correctness percentage of a drawing for different types of partitions according to functional usage.
10. Analyze the design of panelling, exterior cladding.

6. COURSE CONTENT

SYLLABUS FOR ARCHITECTURAL DRAUGHTSMAN – CITS TRADE			
TRADE TECHNOLOGY			
Duration	Reference Learning Outcome	Professional Skills (Trade Practical)	Professional Knowledge (Trade Theory)
Practical 48 Hrs Theory 18 Hrs	Explain the procedure for designing of residential and public building considering change in position of Sun and effect of climate change.	Design topics <ol style="list-style-type: none"> 1. Residential - Duplex house 2. Group housing/ apartments/ row house (300-1000 sq. m. approx.) 3. Primary / play school (300-1000 sq. m. approx.) 4. Bank (300-1000 sq. m. approx.) 5. Luxury farmhouse with landscape, courtyard, swimming pool etc. (300-1000 sq. m. approx.) 6. Case study- similar building need to be studied in detail and report to be submitted. 	Orientation <ul style="list-style-type: none"> • Movement of sun • Sun path diagram, change in angle with respect to change in weather
Practical 48 Hrs Theory 18 Hrs	Develop an initial sketch of any type building, eco-friendly to climate with help of CAD.	Requirements to be framed (as per client in case of live project) Concept to be worked on which the design will be based. <ol style="list-style-type: none"> 7. Initial sketches / preliminary drawings to be submitted in CAD 	Climatic zones of India <ul style="list-style-type: none"> • Hot and dry • Warm and humid • Cold and cloudy • Composite
Practical 96 Hrs Theory 36 Hrs	Demonstrate a final project drawing along with its different orthographic views.	<ol style="list-style-type: none"> 8. Final presentation drawings of the project (plan, elevation) 	Main consideration of design and planning <ul style="list-style-type: none"> • Orientation • Effect of wind • Site topography • Comfort zone • Factors at site level • Factors at building level • Window positioning • Building material

		9. Final presentation drawings of the project (sections and site plan) details with landscape	Site planning <ul style="list-style-type: none"> • identification and preparation • Factors involved in analysis of site -geology, topography • Soil - its classification, vegetation, wild life, climatic factor
Practical 32 Hrs Theory 12 Hrs	Prepare a project report	10. A brief report of the project	Climate and climatic control techniques <ul style="list-style-type: none"> • Effect of vegetation on wind flow • effect of water body / ponds • Protection of walls from sun andrain • Walls and openings • Effect of roof treatment
Practical 48 Hrs Theory 18 Hrs	Execute a model of the project with the help of 3D modelling.	11. 3D modeling .rendering on 3d software's like auto cad, Revit or 3d max(whichever available) Creating 3d model from 2d plane 12. Generation of surfaces 13. Material editor 14. Lighting 15. Rendering	Contemporary Architecture <ul style="list-style-type: none"> • Realization of character and style of modern architecture • Study of design concepts and contribution to architects Le Corbusier, louis I khan, Walter Gropius, Charles correa, F.L.wright, B.V.doshi, kanvinde, sathishgujral, Laurie baker. (Questions must be restricted to above mentioned architects)
Practical 48 Hrs Theory 18 Hrs	Plan and prepare thematic drawing of energy efficient design (green building concept)	16. Create 3D model from 2D plan of any of the above project may be interior or exterior generation of surfaces, material editor, lighting and rendering	Green building and its concept of energy conservation
Practical	Evaluate the	Joints in structure	Joints in structure

<p>128 Hrs Theory 48 Hrs</p>	<p>correctness and perfection of a drawing that shows detailed views of construction and expansion joints in different level.</p>	<p>17. Construction joints - wall, columns, slab details</p>	<ul style="list-style-type: none"> • Need for joints in building • Construction joints - position, method of forming construction joint
		<p>Expansion joint 18. Demonstrate various types of expansion joints and its usage in building with complete details along with sliding/ isolation joints</p>	<ul style="list-style-type: none"> • Expansion joints - need for expansion joint, details of expansion joints fixing in roofs and walls • Distance between 2 expansion joints and materials used in expansion and construction joints • Sliding/ isolation joints
<p>Practical 64 Hrs Theory 24 Hrs</p>	<p>Assess the design of a false ceiling with respect to furniture, function of room,</p>	<p>False ceiling 19. Design and detail a false ceiling of living room, bed room, dining, lounge of a designed residence (POP ceiling)</p>	<p>False ceiling (suspended)</p> <ul style="list-style-type: none"> • Requirement of false ceiling • Material uses for false ceiling to suit different purpose like acoustical/ thermal/ ordinary/ lighting • Classification of false ceiling and related theory of acoustics • Construction details of false ceiling as per materials and design
<p>Practical 64 Hrs Theory 24 Hrs</p>	<p>Check the correctness percentage of a drawing for different types of partitions according to functional usage.</p>	<p>Partition 20. Design and detail partition wall using aluminum and timber sections. Fixing detail of materials used for partitions</p>	<p>Partition</p> <ul style="list-style-type: none"> • Partition material used like brick, glass, timber, acoustical, gypsum, semi glazed, PVC partition and construction details for the same
<p>Practical 64 Hrs Theory 24 Hrs</p>	<p>Analyze the design of paneling, exterior cladding</p>	<p>Paneling 21. Design and detail paneling of a conference, office or auditorium Draw plan, elevation and section and fixing detail 22. External cladding</p>	<p>Paneling& cladding</p> <ul style="list-style-type: none"> • Requirement of paneling • Materials used for paneling • Types of paneling • Construction details of traditional paneling and modern paneling • Stone cladding • HPL cladding • Glass curtain wall

SYLLABUS FOR CORE SKILLS

1. Workshop Calculation & Workshop Science (120Hrs + 80 Hrs)
2. Training Methodology (TM)(Common for all CITS trades) (320 Hrs + 200 Hrs.)

Learning outcomes, assessment criteria, syllabus and Tool List of above Core Skills subjects which is common for a group of trades, provided separately in www.bharatskills.gov.in

7. ASSESSMENT CRITERIA

LEARNING OUTCOME	ASSESSMENT CRITERIA
TRADE TECHNOLOGY (TT)	
1. Explain the procedure for designing of residential and public building considering change in position of Sun and effect of climate change.	Prepare a report with respect to Case Study of similar building
	List the factors to be considered in case of building plan
	Identify the essential parts of a primary or play school
	Plan area measurement of a land for establishment of an apartment
2. Develop an initial sketch of any type building,eco-friendly to climate with help of CAD.	Develop a free hand sketch for luxury farm house
	Draw bubble drawing/ Flow chart as per requirement of client and scheduled area, flexi design supports green building aspect
	Draw preliminary drawing of layout plan
	Draw Line diagram
3. Demonstrate a final project drawing along with its different orthographic views.	Draw Circulation activity along with furniture arrangement,
	Design Land scape drawing
	Draw final presentation drawing shows the detail along with comfort zone, factors at site level i.e., topography, geological conditions.
4. Prepare a project report.	Develop Plan (window positioning, orientation).
	Draw elevation with rendering.
	Prepare a official format of project report
5. Execute a model of the project with the help of 3D modelling.	List the main features of a project report
	Put the data s in relevant place on it.
	Sketch the 3d conceptual drawings as necessary to project
6. Plan and prepare thematic drawing of energy efficient design (green building concept)	Draw Lounge detail (Entrance)
	Draw Room interior in 3D
	Draw3D modelling of exterior with material rendering, lighting.
7. Evaluate the correctness and perfection of a drawing that shows detailed views of construction and expansion joints in different level	Sketch thematic project with energy efficiency (Any topic choice).
	Draw plan and section.
8. Assess the design of a false	Draw construction joints at Brickwall.
	Draw construction joints at Column RCC.
	Draw construction joints at Slab & Bean.
	Plan detail at roof level.
	Draw Sliding joints/ isolating joint.
	Draw expansion joints in building at levels (Brick/ RCC framed structure) at Chajja, compound wall.
8. Assess the design of a false	Design and draw false ceiling with details at Living room.

ceiling with respect to furniture, function of room.	Design and draw false ceiling with details at Bed room.
	Design and draw false ceiling with details at Lounge (Entrance/ Reception).
	Draw Acoustical/ Thermal/ Air condition/ lighting details in enlarged scale.
9. Check the correctness percentage of a drawing for different types of partitions according to functional usage.	Draw different types of partitions of different materials.
	Draw brick partition.
	Draw concrete partition.
	Terracotta clay blocks.
	Draw & design glass partition.
	Draw block partition.
	Draw Gypsum partition (Acoustical).
	Draw PVC partition (moulded& fabricated sizes).
	Draw Timber partition.
Design aluminium partition.	
10. Analyze the design of panelling, exterior cladding	Draw panelling of different materials.
	Draw Wooden panelling (Plan, elevation, section and fixing details) Tradition/ ornamental panelling.
	Draw Batten panelling.
	Design & Draw gypsum panelling at auditorium.
	Draw composite panelling at conference hall.
	Draw details of External cladding/ sustainable stone cladding / HPL board.
	Draw Glass – Curtain wall.

8. INFRASTRUCTURE

LIST OF TOOLS AND EQUIPMENT -ARCHITECTURAL DRAUGHTSMAN (CITS)			
For Batch Of 25 Candidates			
S No.	Name of the Tool &Equipment	Specification	Quantity
A. Hand Tools			
1.	Adjustable set square with beveled edge	30 cm	26 sets
2.	Parallel Bar / T scale	1250 mm long	26 Nos.
3.	Compass with Long arm & pen holder		26 Nos.
4.	Protractor	15 cm	26 Nos.
5.	Graphic Pens		As per requirement
6.	Triangular Scale	30 cm	26 Nos.
7.	Clutch pencil	0.5mm, 0.2 mm, 2mm.	26 Nos.
8.	Pen Drive		As per requirement
B. Tools, Instrument & General Shop Outfit			
9.	Dual Desk		15 Nos.
10.	Draughtsman stool with back (revolving type)		26 Nos.
11.	Students Lockers - with 8 compartments		3 Nos.
12.	Chest of Drawers		4 Nos.
13.	Steel book case (with lockable glass shutters)		1 No.
14.	Theory room / Studio table		1 No.
15.	Instructor's table		1 No.
16.	Revolving Chair for Class room		2 Nos.
17.	Instructor's revolving with arm chair		2 Nos.
18.	Visitor's revolving chair		2 Nos.
19.	Steel Almirah		2 Nos.
20.	Magnetic White Board		2 Nos.
21.	Pin-up board (with or without stand)		6 Nos.
D. FURNITURE			
22.	Computer work station (module type)	CPU: 32/64 Bit i3/i5/i7 or latest processor, Speed: 3 GHz or Higher. RAM:-4 GB DDR-III or Higher, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB	26 Nos.

		Keyboard and Monitor (Min. 17 Inch. Licensed Operating System and Antivirus compatible with trade related software.	
23.	Printer Table (module type)		1 No.
24.	Operator's revolving chair		27 Nos.
25.	Instructor 's Lab table		2 Nos.
26.	Instructor's revolving chair with arm		2 Nos.
27.	Book shelf with glass shutters		1 No.
28.	Air conditioner 1.5 / 2.0 tons (preferably split type) for CAD lab		As required
29.	Air conditioner 1.5 / 2.0 tons (preferably split type) for theory class room/Practical room		As required.
30.	LAN connectivity		As per requirement
31.	Internet connection		1 No.
32.	Visualizer		1 No.
33.	Vacuum Cleaner		1 No.
34.	LCD Projector		1 No.
35.	Interactive Board		1 No.

ANNEXURE - I

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts and all others who contributed in revising the curriculum. Special acknowledgement is extended by DGT to the expert members who had contributed immensely in this curriculum.

List of Expert members participated for finalizing the course curricula of Architectural Draughtsman -CITS			
SNo.	Name & Designation Sh./Mr./Ms.	Organization	Remarks
1.	Prof. NirjharDhang. (H.O.D)	Dept. of Civil Engg. IIT Kharagpur	Chairman
2.	Col. N. B. Saxena.	Construction Skill Development Council of India (CSDCI)	Member
3.	Satish Gottipati. (M. D.)	Preca Solutions (E)	Member
4.	Meena Raghunathan. (Director, Community Science.)	GMRU Foundation, Hyderabad.	Member
5.	D. K. Chattopadhyay. (Training Officer.)	ATI, Kolkata. Dasnagar, Howrah.	Member
6.	S. R. Vhatkar. (Training Officer.)	ATI, Kolkata. Dasnagar, Howrah.	Member
7.	A. K. Naskar. (Training Officer.)	ATI, Kolkata. Dasnagar, Howrah.	Member
8.	S. Chockalingam. (Training Officer.)	CTI, Chennai,	Member
9.	Tapan Kr. Halder. (Training Officer.)	RDAT, Kanpur.	Member
10.	Arpana Singh. (T.O.)	N.V.T.I (W) Noida.	Member
11.	P.Karithashankar. (T. O.)	N.V.T.I (W) Noida.	Member
12.	Simni (T. O.)	N.V.T.I (W) Noida.	Member
13.	Suman Kumari (T. O.)	N.V.T.I (W) Noida.	Member

