

# Assessment Guide – Shuttering Carpenter - System - L4



**Sector:** Construction

**Occupation:** Shuttering Carpentry

**Reference id:** CON/Q0304 ver. 1.0



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## 1. Qualification structure

To achieve full certification as a Shuttering Carpenter - System, trainees must complete all **six** units, attempt and pass assessments on practical skills, viva and written test.

| Sl. no | Unit No.  | Title  | Assessment method   |
|--------|-----------|--|---|
| 001    | CON/N0302 | Make shutters used in shuttering carpentry                             | The assessment for the practical skill part should be based on the competency of the trainee to make shutters used in shuttering carpentry. Assessment of the knowledge part would be done by conducting written test, viva-voce or through observation while carrying out practical exercise                         |
| 002    | CON/N0303 | Assemble and dismantle system formwork for RCC structures              | The assessment for the practical skill part should be based on the competency of the trainee to assemble and dismantle system formwork for RCC structures. Assessment of the knowledge part would be done by conducting written test, viva-voce or through observation while carrying out practical exercise          |
| 003    | CON/N0304 | Carry out quality check for shuttering works                           | The assessment for the practical skill part should be based on the competency of the trainee to carry out quality check for shuttering works. Assessment of the knowledge part would be done by conducting written test, viva-voce or through observation while carrying out practical exercise                       |
| 004    | CON/N8001 | Work effectively in a team to deliver desired results at the workplace | Assessment for the practical skill part should be based on the competency of the trainee to work effectively in a team including proper reporting, communication, documentation, problem solving etc. Technical and professional knowledge should be judged on the basis of theory, viva-voce or through observation. |
| 005    | CON/N8002 | Plan and organize work to meet expected outcomes                       | Assessment of the practical skill of trainee would be based on the competency of effective planning and organizing to meet expected outcomes. Assessment of the knowledge part would be done by conducting written test, viva-voce or through observation while carrying out practical exercise                       |



|     |           |   |  |
|-----|-----------|---|--|
| 006 | CON/N9001 | Work according to personal health, safety and environment protocol at construction site | Assessment for the practical skill part should be based on the competency of the trainee to demonstrate PPE, identify and report hazards, pollution control, and safety standards based on the type of activity. Assessment of the knowledge part would be done by conducting written test, viva-voce or through observation while carrying out practical exercise |
|-----|-----------|---|--|



## 2. Guidance for assessors

The qualification provides the performance criteria, skills and knowledge required to perform for the position of a Shuttering Carpenter - System at Level 4 in the Construction Sector. The role is referred to as 'Shuttering Carpenter - System'.

**Brief Job Description:** Shuttering Carpenter – System is responsible for making shutters and assembling system formwork for R.C.C structures such as columns, beams, slabs, walls, foundations and other similar structures. The individual should have good knowledge of safe working practices.

**Personal Attributes:** The individual is expected to be physically fit and should be able to work across various location and height withstanding extreme condition while working. The individual should be organized, diligent, methodical, and able to implement and maintain safety practices. The individual should have independent ability to take quick decisions and have good communication skills and shall be able to work within a team to handle various carpentry tools and materials and work responsibly for own work within the defined limit.

### Introduction to assessments:

Trainees will be able to make an informed decision about their aptitude for work in this sector with an awareness of the options for career development.

The emphasis is on 'learning-by-doing' and practical demonstration of skills and knowledge based on the performance criteria. For this reason, trainees are required to complete a number of assignments to show their attainment of practical skills, viva and underpinning knowledge.

### Overview of the assessments

The weightage of skill/performance assessment is 80% and for knowledge and understanding is 20% for each NOS.

The assessment consists of two categories:

1. Performance /Skill Assessment
2. Knowledge Assessment

### Mode of Assessment

1. Demonstration/Practical for Performance /Skill Assessment
  2. Synoptic multiple choice question test.
  3. Viva
- } For Knowledge Assessment

### Grading and weightage for assessments

Trainees are graded Pass or Fail.

| Sl. no | Type of assessment                        | Sl. no |
|--------|---|--------|
| 1.     | Skill assessment by practical observation | 80     |
| 2.     | Knowledge assessment by synoptic MCQ test | 12     |
| 3.     | Knowledge assessment by viva              | 8      |



## 2.1 Performance/Skill Assessments

The performance/skill assessment will be conducted through demonstration/practical  
**Demonstration /Practical Assessment**

There will be **three** practical task for core NOS (i.e. CON/N0302 to CON/N0304) which the trainee must attempt and demonstrate the occupational skills acquired to pass. Also the practical skill for NOS – N8001, N8002 and N9001 would be judged while carrying out practical task for core NOSs. Practical assessment is externally set and externally marked.

Trainees must attempt and pass the practical test which is assessed through a given task. The basis for practical task is the performance criteria checklist given in annexures.

The practical task is of **4 hours** duration (per trainee).The trainee has to score **336 marks** to pass the practical test. The grading criteria are defined below.

### Grading criteria for Performance/Skill Assessments

| NOS          | Title   | Performance Assessment Duration (Minutes) | Min. passing marks out of 80 | Assessment Result (Total Passing Marks) |
|--------------|---|---|------------------------------|---|
| CON/N0302    | Make shutters used in shuttering carpentry  | 60  | 56                           | <b>336≥ Pass<br/>336&lt; Fail</b>       |
| CON/N0303    | Assemble and dismantle system formwork for RCC structures                               | 90  | 56                           |   |
| CON/N0304    | Carry out quality check for shuttering works  | 60  | 56                           |   |
| CON/N8001    | Work effectively in a team to deliver desired results at the workplace                  | *   | 56                           |   |
| CON/N8002    | Plan and organize work to meet expected outcomes  | *   | 56                           |   |
| CON/N9001    | Work according to personal health, safety and environment protocol at construction site | 30  | 56                           |   |
| <b>Total</b> |   | <b>4 .0 hr</b>                            | <b>336/480</b>               |   |



The assessment will be conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.

This assessment guide has a section for trainees-*Section 3*. For each assessment, the marking and grading criteria are intended only for faculty and assessors. Scheduling of the practical task assessments is flexible but to retain integrity of the assessment, they should be carried out as closely as possible to the written assessments.

Trainees are **not** permitted to use the Performance criteria checklist to work when completing the practical tasks but may familiarise themselves with it prior to an assessment.

### **Introducing the practical assessment to trainees**

It will be beneficial to take trainees through what is required in the practical assessments and the way in which each part will be graded. Trainees should have an opportunity to familiarise themselves with the way the tasks are graded.

Trainees may refer to their faculty for guidance on parts of the practical assignments only, though they should be aware that, especially for the practical assessments, the amount of guidance and support they are given may be reflected in the feedback and performance.

## **2.2 Knowledge Assessment**

The knowledge assessments are conducted through written test and viva.

### **1. Synoptic multiple choice question (MCQ) test**

Synoptic test is an MCQ (Multiple Choice Question) test to assess the underpinning knowledge. The synoptic MCQ tests are externally set and externally marked. This test is to be taken by the trainee after completion of all the units under controlled and invigilated conditions as closed-book test under the supervision of an assessor. Trainees can only achieve whole marks; half marks for partially answered questions are not permitted. Selection of two or more options will be marked as wrong. The answers should to be marked by pen only.

Synoptic test is of **90 minutes** duration and carries **72 marks for 6 NOS**. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted.

### **2. Viva**

Trainees are required to take the viva test **along with** their practical observation test which is an extended part of the practical observation and assessment. Viva test is of **30 minutes** duration per learner and carry **48 Marks**. The viva assessments are externally set and externally marked.

The trainee has to score **84 marks** to pass the Knowledge assessment test.

The grading criteria is as defined below



## Grading criteria for Knowledge assessment

| NOS No.      | Duration of Assessment (Minutes) | Knowledge Assessment |      | Min Passing marks | Assessment Result (Total Passing Marks) |
|--------------|----------------------------------|----------------------|------|-------------------|---|
|              |                                  | MCQ test             | Viva |                   |   |
| CON/N0302    | 120                              | 12                   | 8    | 14                | ≥ 84-Pass<br>< 84-Fail                  |
| CON/N0303    |                                  | 12                   | 8    | 14                |   |
| CON/N0304    |                                  | 12                   | 8    | 14                |   |
| CON/N8001    |                                  | 12                   | 8    | 14                |   |
| CON/N8002    |                                  | 12                   | 8    | 14                |   |
| CON/N9001    |                                  | 12                   | 8    | 14                |   |
| <b>Total</b> | <b>120</b>                       |                      |      | <b>84/120</b>     |   |

### 2.1 Question papers for synoptic test

The question paper of the synoptic test is a confidential document. It will be held under the custody of Assessment body. Every assessment body should prepare the question papers and get it approved from CSDCI. The centres need to follow the indenting process to obtain the question paper to administer the test.

### 2.2 Authenticity

Centres are reminded to check for authenticity of work where trainees may be using texts and the internet to complete tasks.

### 2.3 Feedback

Assessors must provide feedback on every occasion when a skills observation takes place. A pro forma for feedback is included in this assessment guide (see *Section 4*).

### 2.4 Trainee records of coursework

Trainees should be encouraged to keep their work carefully in a portfolio or scrapbook. This may be an unfamiliar form of record keeping for some but it is a good discipline which will benefit them when they progress in their learning and training.

### 2.5 Recording sheets

The recording sheets are also provided in *Section 4 Assessments*.

### 2.6 Codes of practice

Safe working practices, health and safety and codes of practice associated with the industry must always be adhered to.

### 2.7 Health and safety

The requirement to follow safe working practices is an integral part of all assessments and it is the responsibility of centres to ensure that all relevant health and safety requirements are in place before trainees start practical assessments.

Should a trainee fail to follow health and safety practice and procedures during an assessment, the assessment must be stopped and the trainee advised of the reasons why. In case of doubts, guidance should be sought from the SSC.





## **2.8 Verification of assignments**

By using marking checklists, verifiers can check that evidence for an assignment is complete and can ensure that allocation of marks has been fair and beyond dispute.

## **2.9 Internal quality assurance**

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications.

Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and CSDCI and Assessment body are jointly responsible for external quality assurance.

Full details and guidance on the internal and external quality assurance requirements and procedures, are provided by CSDCI from time to time.

The Assessment bodies are required to retain copies of trainees' assessment records and photographic evidence (in presence of trainee performing task) for three years after assessment.

## **2.10 Evidence Collection by the Assessor**

1. The assessor needs to collect a copy of the attendance for the training done. The attendance sheet needs to be signed by the Training Centre Head.
2. The centre head also needs to declare that all the students appearing in the assessments have a minimum attendance of 80% for the training.
3. The assessor needs to verify the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/ State Government. The same needs to be mentioned in the attendance sheet. Where ever required, the assessor can authenticate and cross verify trainee's credentials in the enrolment form.
4. The assessor needs to punch the trainee's roll number on all the final job pieces of learners. Different sections can have alpha numbering such as if a student's roll number is 123 then the three pieces submitted by that student can be numbered as 123a, 123b and 123c.
5. The assessor needs to take a group photograph of all the students along with the assessor standing in the middle and with the centre name/banner at the back, as evidence.
6. The assessor needs to carry a camera to click photographs of the trainees working on the job and giving theory exam as evidence.
7. The assessor also needs to carry a photo ID card.
8. Assessment Evidence Form (provided after the practical marks sheet), the assessor should place the final photographic evidence in the space provided as evidence, from appropriate angles/sides of the final job piece submitted.



### 3. Trainee guidance

#### 3.1 Information for trainees

The assessment requires a trainee to perform a combination of tasks as given below:  
The trainee will be required to:

- Demonstrate the occupational skills and competencies as mentioned in each NOS.
- Demonstrate knowledge and understanding skills as mentioned in each NOS.

#### Before the final assessments

The training partner (TP) will intimate that the trainees are ready for the assessment. The date and time of assessment would be intimated by CSDCI.

The trainee is required to reach the assessment venue at the scheduled date and time. TP is required to circulate/download the information regarding the assessment to the trainee. Failure to reach the assessment venue for the theory or the practical test as per the schedule would be considered absent. In exceptional cases, an assessor can give a maximum of half hour concession time for late coming.

The trainee is required to carry their Institutes photo ID card as well as a government issued photo ID card for verification on all days of assessments.

Any misbehaviour/unethical practice by a trainee would lead to disqualification of the trainee.

The assessment consists of two categories:

1. Knowledge/theory assessment
2. Performance /skill assessment

The first day of assessment will have the knowledge/theory test followed by practical and viva in smaller batches (20-30 trainee).

#### Assessment brief

Details of the two categories of assessments are mentioned below.

##### 1. Theory (Synoptic multiple choice question)

Synoptic test is a Multiple Choice Question (MCQ) test to assess the underpinning knowledge and is to be taken by the trainee at the start of the assessment under controlled and invigilated conditions as a closed-book test.

The synoptic test comprise of 60 questions of 90 minutes duration.

##### 2. Viva

Trainees are required to take the viva test along with their practical observation test which is an extended part of the practical observation and assessment. Viva test is of **30 minutes** duration per learner and carry 48 Marks.

A trainee has to score at least **84 marks** to pass the knowledge assessment.



### Grading criteria for knowledge assessments

| NOS No.      | Duration of Assessment (Minutes) | Knowledge Assessment |      | Min Passing marks | Assessment Result (Total Passing Marks) |
|--------------|----------------------------------|----------------------|------|-------------------|---|
|              |                                  | MCQ test             | Viva |                   |   |
| CON/N0302    | 120                              | 12                   | 8    | 14                | ≥ 84-Pass<br>< 84-Fail                  |
| CON/N0303    |                                  | 12                   | 8    | 14                |   |
| CON/N0304    |                                  | 12                   | 8    | 14                |   |
| CON/N8001    |                                  | 12                   | 8    | 14                |   |
| CON/N8002    |                                  | 12                   | 8    | 14                |   |
| CON/N9001    |                                  | 12                   | 8    | 14                |   |
| <b>Total</b> | <b>120</b>                       |                      |      | <b>84/120</b>     |   |

### 3. Performance/skill assessments

Trainees will be briefed on the practical observation and checklist to familiarise them on observation methodology. The trainees would be assessed on their working as well as their final product. Trainees are suggested to read the Qualification Pack to familiarise on Performance Criteria, Knowledge, Understanding and Skills.

The practical task is for **4 hours**. A trainee has to score at least **336 marks** to pass the practical observation test.

### Grading criteria for Performance/Skill Assessments

| NOS          | Title   | Performance Assessment Duration (Minutes) | Min. passing marks out of 80 | Assessment Result (Total Passing Marks) |
|--------------|---|---|------------------------------|---|
| CON/N0302    | Make shutters used in shuttering carpentry  | 60  | 56                           | 336≥ Pass<br>336< Fail                  |
| CON/N0303    | Assemble and dismantle system formwork for RCC structures                               | 90  | 56                           |   |
| CON/N0304    | Carry out quality check for shuttering works  | 60  | 56                           |   |
| CON/N8001    | Work effectively in a team to deliver desired results at the workplace                  | *   | 56                           |   |
| CON/N8002    | Plan and organize work to meet expected outcomes  | *   | 56                           |   |
| CON/N9001    | Work according to personal health, safety and environment protocol at construction site | 30  | 56                           |   |
| <b>Total</b> |   | <b>4 .0 hr</b>                            | <b>336/480</b>               |   |



## 4. Assessments

Assessments for the job role of Shuttering Carpenter - System are conducted to gauge and assess the trainees' competencies and professional expertise as well as their skill and knowledge in the specified area (Shuttering carpentry).

During the practical task, trainees will be assessed on their workmanship, quality of finished product, time management, etc., based on the performance criteria (PC), knowledge and understanding and their professional and soft skills as specified in the qualification pack. They will be graded for all their assessments based on the approved assessment strategy which is signed off by CSDCI.

The performance criteria checklist as a guide for all qualifications are given in section 5.0. Assessment tools in the form of a sample set of practical, theory and viva questions for each NOS is given as a guide in section 6 to 7. The assessment evidence, overall summary and NOS wise summary is given in section 8 to 10.



## 5. Performance criteria checklist

| Shuttering Carpenter - System   |  |                  |
|---|--|------------------|
| 1. Learner Name: _____  |  |                  |
| 2. Enrolment No: _____  |  | 3. Centre: _____ |
| <b>Guidance to assessors:</b>   |  |                  |
| 1. Assessor must exhibit the performance criteria checklist to the learners before the commencement of the practical and explain them how the learners will be observed and graded during the practical assessment. However the learners are not allowed to use this checklist during the course of the assessment or task. |  |                  |
| 2. Assessor must ensure that all the tools listed in the "List of tools" are made available by the centre to every learner being assessed.  |  |                  |
| Practical   | Details  | Marks            |
| CON/N0302: Make shutters used in shuttering carpentry   |  |                  |
| 1   | PC1. select and use regular hand tools such as hand saw, chisel, jack hammer, nailing hammer, hand drill and other tools efficiently<br>PC2. select and use power tools such as circular saw, hand drill machine, table mounted saw, planing machine and power drilling machine for cutting, sizing and planing of timber and plywood efficiently:<br><ul style="list-style-type: none"> <li>• Candidate to demonstrate the use of regular hand tools.</li> <li>• Candidate to demonstrate the use of regular power tools</li> </ul> |                  |
|   | PC3. maintain correct body posture while operating the machine<br>PC4. maintain, handle, store and upkeep all relevant tools and their basic maintenance<br><ul style="list-style-type: none"> <li>• Follow proper ergonomic principles while using all power tools.</li> <li>• Ensure pre checks on machine and follow safety precautions while operating machines and hand tools</li> </ul>  |                  |
|   | PC5. carry out visual check to ensure that timber, plywood are as per quality and requirements for making shutters<br>PC6. check that all fixtures, consumables and materials are available for shutter making<br><ul style="list-style-type: none"> <li>• Perform visual check with respect to dimension, alignment, specifications etc.</li> <li>• Estimate and ensure that the fixture, consumables and materials in stock.</li> </ul>  |                  |
|   | PC7. make use of measurement and marking tools for marking on plywood and timber<br>PC8. measure and mark form sheathing and stiffeners according to instructions and sketches:<br><ul style="list-style-type: none"> <li>• Use pencil, measuring tape and right angle for marking on plywood and timber.</li> <li>• Ensure that the marking done as per the sketch.</li> </ul>  |                  |
|   | PC9. cut form sheathing material (plywood) and stiffeners (timber) within the tolerance limit and as per instructions / specification<br>PC10. make wooden shutter panels using different types of joints such as dovetail, tennon & mortise, lap joints as per instructions and specifications  |                  |
|   |  |                  |



|   |   |           |
|---|---|-----------|
|   | <ul style="list-style-type: none"> <li>• Cut plywood board as per the sketch considering minimum wastage.</li> <li>• Carryout wooden shutter as per the sequence.</li> </ul>  |           |
|   | PC11. smooth corners and edges of panels using appropriate tools<br>PC12. carry out nailing work as per standard practice ensuring rigidity of joints <ul style="list-style-type: none"> <li>• Ensure corners and edges are smoothed using required tools.</li> <li>• Avoid over nailing or under nailing.</li> </ul>   |           |
|   | PC13. check and ensure that shutter board dimension is as per sketch<br>PC14. repair already prepared shutters by nailing and strengthening: <ul style="list-style-type: none"> <li>• Check shutter boards for dimension, right angle, rigidity, alignment etc.</li> </ul>  |           |
|   | <b>Total Marks</b>  | <b>80</b> |
| <b>CON/N0303: Assemble and dismantle system formwork for RCC structures</b> |   |           |
| <b>2</b>  | PC1. clean the shutter panels before using for shuttering work<br>PC2. check for supporting base for system formwork components: <ul style="list-style-type: none"> <li>• Remove unwanted material and clean the area where the shuttering needs to be erected.</li> <li>• Clean shuttering panels using cotton or brush</li> <li>• Ensure that the base for system form work is stable.</li> </ul>   |           |
|   | PC3. check and ensure all tools, material, components are available as per requirements<br>PC4. check that fixing and fasteners are as per system used and as per the requirements <ul style="list-style-type: none"> <li>• Shift and stack required shuttering materials near the work location (kicker, wall panel, riser, threaded, props, tie rods etc.).</li> </ul> Follow correct procedure as per the manufacturer instructions.   |           |
|   | PC5. apply release agents to sheathing material as per specifications and instructions<br>PC6. position and set out formwork manually or by mechanical means as per instructions and requirement<br>PC7. position and provide necessary support using props or other appropriate components based on system used: <ul style="list-style-type: none"> <li>• Ensure that the approved release agent applied on shutters.</li> <li>• Check the position of element using survey points.</li> </ul> Follow correct procedure as per the manufacturer instructions |           |
|   | PC8. check for block-outs and cast-in services to specified locations<br>PC9. plug all openings and gaps using foam sheet and adhesive tape or other appropriate materials<br>PC10. ensure water tightness of form by providing form sheet or necessary packing material: <ul style="list-style-type: none"> <li>• Check that electrical routings, plumbing lines, cut out are not disturbed.</li> <li>• Seal all minor gaps using foam sheet.</li> </ul>   |           |
|   | PC11. position and fix props properly and check for plumb, position and spacing is as specified or instructed   |           |



|  |  |           |
|--|--|-----------|
|  | <p>PC12. provide horizontal or vertical construction joints in case of structural element such as beam , column, slab as per standard practices<br/>Follow correct procedure as per the manufacturer instructions</p>  |           |
|  | <p>PC13. ensure tightness of tie rods, supports, and bracings<br/>PC14. provide support in placing and fixing kicker for column, walls and check its position with respect to line , alignment, and necessary grid dimension:<br/>Follow correct procedure as per the manufacturer instructions</p>  |           |
|  | <p>PC15. check erected formwork for line, level, alignment and plumb within tolerance limit<br/>PC16. check the dimensional accuracy and right angle and take necessary corrective measures if required:<br/>Follow correct procedure as per the manufacturer instructions</p>   |           |
|  | <p>PC17. follow dismantling procedure as per standard practice and system used<br/>PC18. remove bracing and all other support sequentially and safely as instructed<br/>Follow correct procedure as per the manufacturer instructions</p>  |           |
|  | <p>PC19. remove sheathing material sequentially using proper tools and tackles to avoid damage to structure or sheathing materials<br/>PC20. dismantle formwork shutters manually or by mechanical means as per requirement::<br/>Follow correct procedure as per the manufacturer instructions</p>  |           |
|  | <p>PC21. ensure that all the small components are staked properly for further use<br/>PC22. repair formwork material if required and ensure cleaning and proper stacking after dismantling:</p> <ul style="list-style-type: none"> <li>• Clean and stack all the components as per the standard practices</li> </ul>                               |           |
| <b>Total Marks</b>   |  | <b>80</b> |
| <b>CON/N0304: Carry out quality check for shuttering works</b> |  |           |
|  | <p>PC1. check fixed shutters with respect to survey layouts<br/>PC2. check for application of release agent:</p> <ul style="list-style-type: none"> <li>• Check erected formwork positions with respect to survey points.</li> <li>• Check and ensure that the approved release agent applied.</li> </ul>  |           |
|  | <p>PC3. Check cover of reinforcement steel is as specified<br/>PC4. check joints of plywood and timber and procedure used for nailing:</p> <ul style="list-style-type: none"> <li>• Check reinforcement cover with respect to the element (column, beam, slab etc.</li> <li>• Check plywood and timber joint for rigidity</li> </ul>               |           |
|  | <p>PC5. check diagonal dimensions for its accuracy, if twist observe take corrective action<br/>PC6. take rectification measures of formwork boards / plates after removal:</p> <ul style="list-style-type: none"> <li>• Check dimension, square ness, alignment using right tools.</li> </ul>   |           |
|  | <p>PC7. check for water tightness of the whole shuttering / formwork system<br/>PC8. check plumb to ensure verticality is within tolerance limit:</p> <ul style="list-style-type: none"> <li>• Check and ensure that the form work gaps are sealed properly.</li> <li>• Check verticality of the form work using plumb or spirit level.</li> </ul> |           |





|  |   |           |
|--|---|-----------|
|  | <p>PC9. check dimensions according to sketches / instructions to ensure that they are within tolerance limit</p> <p>PC10. check props for verticality, position and spacing in:</p> <ul style="list-style-type: none"> <li>• Check and ensure that the dimensions are according to the sketch.</li> <li>• Check supporting props for plumb, position and spacing.</li> </ul>  |           |
|  | <b>Total Marks</b>  | <b>80</b> |
| <b>CON/N8001: Work effectively in a team to deliver desired results at the workplace</b> |   |           |
| <b>4</b>   | <p>PC1. Pass on work related information/ requirement clearly to the team members:</p> <ul style="list-style-type: none"> <li>• Communicate work related information clearly to the team members while performing task.</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |           |
|  | <p>PC2. Inform co-workers and superiors about any kind of deviations from work:</p> <ul style="list-style-type: none"> <li>• Inform any kind of deviation to the instructor while performing the task.</li> <li>• Is able to escalate any kind of deviations to assessor/instructor.</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul> |           |
|  | <p>PC3. Address the problems effectively and if required, report to immediate supervisor appropriately:</p> <ul style="list-style-type: none"> <li>• Address the problems to the assessor/instructor (damaged tools, damaged shuttering components, material shortage etc.).</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>         |           |
|  | <p>PC4. receive instructions clearly from superiors and respond effectively on same:</p> <ul style="list-style-type: none"> <li>• Adhere to the instructions given by assessor/instructor while performing the task.</li> <li>• Is able to receive instructions clearly.</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>             |           |





|  |   |           |
|--|---|-----------|
|  | <p>PC5. Communicate to team members/subordinates for appropriate work technique and method:</p> <ul style="list-style-type: none"> <li>• Communicate work related information/techniques clearly to the team members while performing task</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>   |           |
|  | <p>PC6. Seek clarification and advice as per requirement and applicability:</p> <ul style="list-style-type: none"> <li>• Is able to seek clarification and advice as per requirement.</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |           |
|  | <p>PC7. Hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams:</p> <ul style="list-style-type: none"> <li>• Hand over the required tools/ materials to appropriate person post completion of work</li> <li>• Collect required tools/ devices from stores/ respective departments/ authority prior to start working</li> <li>• Complete tasks within provided time limit</li> <li>• Ensure material/ tools/ tackles are handed over to interfacing teams in safe condition</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul> |           |
|  | <p>PC8. Work together with co-workers in a synchronized manner:</p> <ul style="list-style-type: none"> <li>• Work together with co-worker. (Performing formwork erection and dismantling)</li> <li>• Have clear communication with the team member while performing the task.</li> <li>• Help and motivate co-workers to complete the task.</li> <li>• Advise team member on work techniques.</li> <li>• Report conflict to superior/ concerned authority</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |           |
|  | <b>Total Marks</b>  | <b>80</b> |
| <b>CON/N8002: Plan and organize work to meet expected outcomes</b> |   |           |
| <b>5</b>   | <p>PC1. Understand clearly the targets and timelines set by superiors:</p> <ul style="list-style-type: none"> <li>• Interpret the instructions from seniors.</li> </ul>   |           |



|  |  |  |
|--|--|--|
|  | <ul style="list-style-type: none"> <li>Describe duration of tasks to be performed to the assessor</li> <li>Assessor may observe this skill while following tasks are being performed by assessee</li> <li>CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |  |
|  | <p>PC2. Plan activities as per schedule and sequence:</p> <ul style="list-style-type: none"> <li>Describe steps to be followed to execute assigned task</li> <li>Follow the sequence of work.</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>   |  |
|  | <p>PC3. Provide guidance to the subordinates to obtain desired outcome</p> <p>PC8. Engage allocated manpower in an appropriate manner:</p> <ul style="list-style-type: none"> <li>Pass on work related information to subordinates</li> <li>Describe the use of tools to subordinates</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>   |  |
|  | <p>PC4. Plan housekeeping activities prior to and post completion of work:</p> <ul style="list-style-type: none"> <li>Implement housekeeping norms and instructions</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>   |  |
|  | <p>PC5. List and arrange required resources prior to commencement of work</p> <p>PC6. Select and employ correct tools, tackles and equipment for completion of desired work</p> <p>PC7. Complete the work with allocated resources</p> <ul style="list-style-type: none"> <li>Acquire tools/ materials from authorised place/ person.</li> <li>Describe required tools/ materials for assigned tasks.</li> <li>Use tools and materials to execute tasks</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul> |  |
|  | <p>PC9. Use resources in an optimum manner to avoid any unnecessary wastage</p> <p>PC10. Employ tools, tackles and equipment with care to avoid</p>  |  |



|   |  |           |
|---|--|-----------|
|   | <p>damage to the same</p> <ul style="list-style-type: none"> <li>• Is able to reduce material damage while performing task.</li> <li>• Is able to follow proper sequence of execution.</li> <li>• Is able to select right tool for right job.</li> <li>• Is able to safeguard the tools and equipment while performing the task.</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |           |
|   | <p>PC11. Organize work output, materials used, tools and tackles deployed<br/>PC12. Processes adopted to be in line with the specified standards and instructions</p> <ul style="list-style-type: none"> <li>• Is able to list and organise the material, tools and tackles used.</li> <li>• Is able to follow standard procedures while performing the task.</li> <li>• Is able to follow safe working practices while performing the task</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>   |           |
|   | <b>Total Marks</b>   | <b>80</b> |
| <b>CON/N9001: Work according to personal health, safety and environment protocol at construction site</b> |  |           |
| <b>6</b>  | <p>PC1. Identify and report any hazard, risks or breaches in site safety to the appropriate authority<br/>PC6. Use appropriate Personal Protective Equipment (PPE) as per work requirements including:<br/>Is able to identify and demonstrate the use of following PPE:</p> <ul style="list-style-type: none"> <li>• Head Protection (Helmets)</li> <li>• Ear protection.</li> <li>• Fall Protection.</li> <li>• Foot Protection.</li> <li>• Face and Eye Protection.</li> <li>• Hand and Body Protection.</li> <li>• Respiratory Protection (if required).</li> </ul> <p><b><u>*The skill is mandatory to be exhibited by assessee to pass the NOS</u></b></p> <ul style="list-style-type: none"> <li>• List possible hazards while performing different task (while shifting formwork materials, formwork erection)</li> <li>• Identify work place hazards while executing the task (high tension overhead line, un guarded deep excavations near the formwork, damaged tools etc.).</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering</li> </ul> |           |



|  |  |  |
|--|--|--|
|  | <p>carpentry</p> <ul style="list-style-type: none"> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |  |
|  | <p>PC2. Follow emergency and evacuation procedures in case of accidents, fires, natural calamities</p> <ul style="list-style-type: none"> <li>• List different types of emergency situation (Fire, flood, building collapse, war etc.)</li> <li>• Ensure proper method to respond in case of any emergency. (Candidate to perform role play based on the scenario given by assessor)</li> </ul>  |  |
|  | <p>PC3. Follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable</p> <ul style="list-style-type: none"> <li>• Follow safe working practice while performing all the task.</li> <li>• Follow safe practice while handling hand and power tools.</li> </ul>   |  |
|  | <p>PC4. Participate in safety awareness programs like Tool Box Talks, safety demonstrations, mock drills, conducted at site</p> <ul style="list-style-type: none"> <li>• List different types of emergency situation (Fire, flood, building collapse, war etc.)</li> <li>• Ensure proper method to respond in case of any emergency. (Assessor to ask viva questions to assess the knowledge)</li> <li>• Name different safety awareness program.</li> <li>• List the benefits of attending safety awareness program.</li> </ul> |  |
|  | <p>PC5. Identify near miss, unsafe condition and unsafe act</p> <ul style="list-style-type: none"> <li>• List unsafe condition found while performing the task (Lack of illumination, inadequate ventilation, overcrowded and congested work places, unguarded and faulty machineries, defective tools and equipment etc.)</li> <li>• List unsafe act found while performing the task (Not wearing safety gadgets, bullying team member, using faulty machineries etc.).</li> </ul>  |  |
|  | <p>PC7. Handle all required tools, tackles, materials &amp; equipment safely.</p> <ul style="list-style-type: none"> <li>• Follow safe practice while handling hand tools and materials Assessor may observe this skill while following tasks are being performed by assesse</li> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>  |  |
|  | <p>PC8. Follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines</p> <ul style="list-style-type: none"> <li>• Follow safe disposal of harmful waste.</li> <li>• Follow proper precautionary measures while handling harmful waste (waste shuttering oil, chemical etc.)</li> <li>• Dispose hazardous waste into designated container.</li> </ul>   |  |
|  | <p>PC9. Install and apply properly all safety equipment as instructed</p> <ul style="list-style-type: none"> <li>• Identify and demonstrate the use of air breathing equipment.</li> <li>• Identify and demonstrate the use of fire extinguisher.</li> <li>• Identify and demonstrate the use of fire blanket.</li> </ul>  |  |



|  |   |            |
|--|---|------------|
|  | <p>PC10. Follow safety protocol and practices as laid down by site EHS department.</p> <ul style="list-style-type: none"> <li>• Identify and list the information provided in emergency preparedness plan.</li> <li>• Describe safe assembly point.</li> <li>• List emergency services with contact number (Fire, ambulance etc.).</li> <li>• List the components of first aid box.</li> <li>• Describe first aid procedure for different accidents.</li> <li>• List hygienic practice to be followed.</li> </ul> |            |
|  | <p>PC11. Collect and deposit construction waste into identified containers before disposal, separate containers that may be needed for disposal of toxic or hazardous wastes</p> <ul style="list-style-type: none"> <li>• Collect the waste into designated yard or container based on the type of waste</li> <li>• Follow correct method to shift waste materials to the designated yard</li> </ul>  |            |
|  | <p>PC12. Apply ergonomic principles wherever required.</p> <ul style="list-style-type: none"> <li>• Follow proper ergonomic principles while performing all the task</li> </ul> <p>Assessor may observe this skill while following tasks are being performed by assessee</p> <ul style="list-style-type: none"> <li>• CON/N0302: Make wooden shutters used in shuttering carpentry</li> <li>• CON/N0303: Assemble and dismantle system formwork for RCC structures</li> </ul>                                     |            |
|  | <b>Total Marks</b>  | <b>80</b>  |
|  | <b>Grand Total</b>  | <b>480</b> |



## 6. Tools, materials and consumable list

Below tools list is prepared based on the practical questions for the NOS CON/N0302 to CON/N0304.

| Tools and consumables required   |        |  |                   |             |
|----------------------------------|--------|--|-------------------|-------------|
| Category                         | Sl.no. | Particulars                                | Specification     | Quantity    |
|                                  | 1.     | Mash hammer                                | 5 lb              | 4 sets      |
|                                  | 2.     | Jack plane                                 | Any reputed brand | 4 sets      |
|                                  | 3.     | Axe  | Any reputed brand | 4 sets      |
|                                  | 4.     | Rebate plane                               | Any reputed brand | 4 sets      |
|                                  | 5.     | Ratchet brace                              | Any reputed brand | 4 sets      |
|                                  | 6.     | Clamp                                      | Any reputed brand | 4 sets      |
|                                  | 7.     | Gimlet                                     | Any reputed brand | 4 sets      |
|                                  | 8.     | Mallet                                     | Any reputed brand | 4 sets      |
|                                  | 9.     | Plier                                      | Any reputed brand | 4 sets      |
|                                  | 10.    | Chisel                                     | Any reputed brand | 4 sets      |
|                                  | 11.    | Adze                                       | Any reputed brand | 4 sets      |
|                                  | 12.    | Pincer                                     | Any reputed brand | 4 sets      |
|                                  | 13.    | Straight back saw                          | Any reputed brand | 4 sets      |
|                                  | 14.    | Tenon saw                                  | Any reputed brand | 4 sets      |
|                                  | 15.    | Compass saw                                | Any reputed brand | 4 sets      |
|                                  | 16.    | Podge spanner                              | Any reputed brand | 4 sets      |
|                                  | 17.    | Ring spanner                               | 17, 19, 21        | 4 sets      |
|                                  | 18.    | Open end spanner                           | 17, 19, 21        | 4 sets      |
|                                  | 19.    | Claw hammer                                | Short handle      | 4 sets      |
|                                  | 20.    | Line string                                | Nylon             | 4 sets      |
| Measuring instruments            | 1.     | Steel scale                                | 30 cm             | 25          |
|                                  | 2.     | Try square                                 | 150 X150 mm       | 15          |
|                                  | 3.     | Spirit level                               | 3 meter           | 02          |
|                                  | 4.     | Plumb bob                                  | Brass (150 gram)  | 04          |
|                                  | 5.     | Measuring tape                             | 5 meter           | 4 sets      |
| Power tools                      | 1.     | Drilling machine                           | Any reputed brand | 4 sets      |
|                                  | 2.     | Power saw                                  | Any reputed brand | 4 sets      |
|                                  | 3.     | Power planer                               | Any reputed brand | 4 sets      |
| Materials required for practical | 1.     | Nails (1", 1.5", 2", 2.5", 3.5", 4")       | Steel             | 1 kg        |
|                                  | 2.     | Timber 3'X4'                               | Soft wood         | As required |
|                                  | 3.     | Timber 2'X1'                               | Soft wood         | As required |
|                                  | 4.     | Water proof plywood                        | 8'x4'             | As required |
|                                  | 5.     | U jack                                     | 300 mm            | As required |
|                                  | 6.     | Base plate                                 | 150 x 150         | As required |
|                                  | 7.     | Tie rods (0.5, 0.75, 1, 1.5 meter)         | 350 X 350         | As required |
|                                  | 8.     | D clamp                                    | 200 width         | As required |
|                                  | 9.     | Gogo nut                                   | MS ( 3'x5')       | As required |
|                                  | 10.    | Props                                      | 3.2 meter         | As required |
|                                  | 11.    | ISLChannel                                 | 3 meter           | As required |
|                                  | 12.    | Turn buckle set                            | 4 meter           | As required |
|                                  | 13.    | Wedge (wood)                               | Wood              | As required |
|                                  | 14.    | System shuttering components for column    | Any reputed brand | As required |
|                                  | 15.    | System shuttering components for staircase | Any reputed brand | As required |





|                |     |  |                   |               |
|----------------|-----|--|-------------------|---------------|
| Consumables    | 1.  | Helmet   | Any reputed brand | 1 per learner |
|                | 2.  | Face shield  | Any reputed brand | 1 per learner |
|                | 3.  | Safety goggles   | Any reputed brand | 1 per learner |
|                | 4.  | Safety shoes   | Any reputed brand | 1 per learner |
|                | 5.  | Safety belt  | Any reputed brand | 1 per learner |
|                | 6.  | Ear defenders  | Any reputed brand | 1 per learner |
|                | 7.  | Particle masks   | Any reputed brand | 1 per learner |
|                | 8.  | Overalls   | Any reputed brand | 1 per learner |
|                | 9.  | Knee pad   | Any reputed brand | 1 per learner |
|                | 10. | Reflective jackets   | Any reputed brand | 1 per learner |
|                | 11. | Pencil   | Any reputed brand | 1 per learner |
| Infrastructure | 1.  | Class room for theory assessment with 30 study chairs                                  | 300 sq.ft         | 1 per batch   |
|                | 2.  | Workshop for practical assessment  | 900 sq.ft         | 1 per batch   |
|                | 3.  | Toilet/Urinals (Separate for gents and Ladies)   | 2 WC +5 urinals   | 1 per batch   |
|                | 4.  | 3 phase power supply points  | Any reputed brand | As required   |
|                | 5.  | Single phase power supply points   | Any reputed brand | As required   |
|                | 6.  | Fire extinguishers (mechanical foam, DCP, CO <sub>2</sub> and sand buckets with stand) | Any reputed brand | As required   |
|                | 7.  | First aid kit  | Any reputed brand | As required   |
|                | 8.  | Tool box with lock and key   | Any reputed brand | As required   |



## 7. Assessment methods/tools

### 7.1 CON/N0302: Make shutters used in shuttering carpentry

#### A. Practical questions

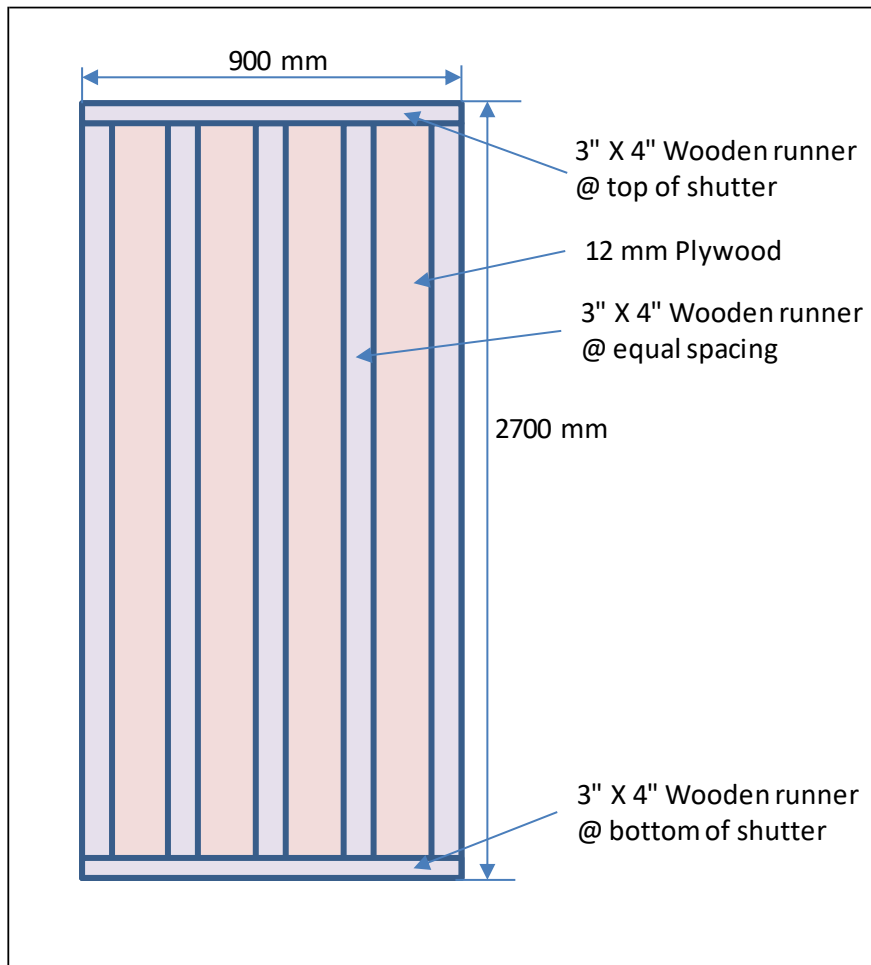
**Total Marks: 80**  
**Duration: 60 minutes**

1. Select and use regular hand tools used in shuttering carpentry work. 10 Marks
  - Candidate to use regular hand tools such as hand saw, chisel, jack hammer, nailing hammer, hand drill and other tools efficiently.
2. Select and use power tools used in shuttering carpentry work. 10 Marks
  - Candidate to use regular power tools such as circular saw, hand drill machine, table mounted saw, planning machine and power drilling machine for cutting, sizing and planning of timber and plywood.
  - Maintain correct body posture while operating the machine
  - Maintain, handle, store and upkeep all relevant tools and their basic maintenance
3. Carry out visual check on materials and consumable to be used. 10 Marks
  - Ensure that timber, plywood are as per quality and requirements for making shutters.
  - Check that all fixtures, consumables and materials are available for shutter making.
4. Carryout marking activity to make shutters. 30 Marks
  - Make use of measurement and marking tools for marking on plywood and timber
  - Measure and mark form sheathing and stiffeners according to instructions and sketches.
5. Carryout making of wooden shutter panels as per the sketches. 10 Marks
  - Cut plywood and timber within the tolerance limit.
  - Smooth corners and edges of panels using appropriate tools
  - Carry out nailing work as per standard practice ensuring rigidity of joints
6. Check and ensure that shutter board as per the sketch 10 Marks
  - Check shutter boards for dimension, right angle, rigidity of joint, alignment etc.

(All tasks should be considered accepted only on completion of task within acceptable tolerance limit. Also keep in view that **completion of given task within permissible tolerance limit** will be awarded full marks otherwise zero. Accepted tolerance limit for this task is attached in annexure 5 and also mentioned in respective assessment sheet)



**Make column shutter as per the drawing**



**Note:** This task can be modified without deviating the performance criteria. Helper to be provided to perform the task.

## B. Multiple choice questions

Total Marks: 12  
Duration: 15 Minutes

(Preferably written but oral is also permitted)

1. Identify the tools shown below.

1 Mark



- a. Gimlet
- b. Jack plane
- c. Bench vice
- d. Ratchet brace**

2. Identify the power tool shown below.

1 Mark



- a. Power saw
- b. Portable power planer**
- c. Drilling machine
- d. Polishing machine

3. If you see a visible crack on a grinding wheel, what would you do?

1 Mark

- a. Dispose the grinding wheel**
- b. Use the same grinding wheel
- c. Apply adhesive on grinding wheel
- d. Repair the grinding wheel

4. Which one of the portable machine tool is very competent for cutting wood, composition board, veneer, plastics, and chard board?

2 Marks

- a. Portable electric circular hand saw.
- b. Portable Sander.
- c. Portable electric jig saw.**
- d. Portable planer.

5. In given statement, which one is **not an advantage** of a wooden form?

1 Mark

- a. It is cheap and easily available.
- b. It can be shaped easily into different form a designs.
- c. It can be repaired and reused.
- d. Repetition of wooden form will be more than metal form.**



6. Strongest among half lap joint is-----.
- a. Corner half lap joint.
  - b. Dovetail half lap joint.**
  - c. Tee half lap joint.
  - d. Cross half lap joint.
7. The length of the Tenon blind mortise and Tenon joint is -----.
- a. 1/2 with of the mortise piece.
  - b. 2/3rd with of the mortise piece.**
  - c. 3/4th with of the mortise piece.
  - d. 4/5th with of the mortise piece.
8. 1 square meter is equal to -----square feet?
- a. **10.76.**
  - b. 3.54.
  - c. 12.
  - d. 35.31.
9. Which tool is provided to avoid sharp corners at the junction of two adjacent surfaces in wood work?
- a. Fillet.**
  - b. Fish plate.
  - c. Nut and bolt.
  - d. Vice.
10. Identify the incorrect option among the following?
- a. Tools that are not being used should always be kept in a tool kit.
  - b. A dull tool requires excessive pressure.
  - c. Clean the tool after every use.
  - d. Chisel can be used as a screw driver.**



### C. Viva questions

**Total Marks: 8**  
**Duration: 5 Minutes**

**(These questions could be asked during practical observation)**

1. List few different nails used during carpenter work. 2 Marks  
**Possible answers**
  - a. Diamond head nails
  - b. Bullet head nails
  - c. Flat head nails
  - d. Roofing nails
  - e. Panel pins
  - f. Wire nails
  - g. Tack nails
  - h. Corrugated nails
  
2. List different types of carpentry joints? 2 Marks  
**Possible answers**
  - a. Cross lap joint
  - b. Tenon and mortise joint
  - c. Simple butt joint
  - d. Dove tail joint
  - e. Rebate joint
  - f. Table scarf joint
  - g. Bevel scarf joint
  
3. List common cutting tool used in shuttering work? 2 Marks  
**Possible answers:**
  - a. Cross cut or hand saw
  - b. Rip saw
  - c. Tenon saw
  - d. Compass saw
  - e. Firmer chisel
  - f. Dovetail chisel
  - g. Mortise chisel
  
4. What are characteristics of good timber used in shuttering work? 2 Marks  
**Possible answers**
  - a. It should have minimum moisture content.
  - b. It must retain its straightness after seasoning.
  - c. It should be free from knots or cracks.
  - d. It should be of uniform colour.
  - e. It should respond well to the finishing and polishing operations.
  - f. During driving the nails and screw, it should not split easily



## 7.2 CON/N0303: Assemble and dismantle system formwork for RCC structures

### A. Practical questions

Total Marks: 80

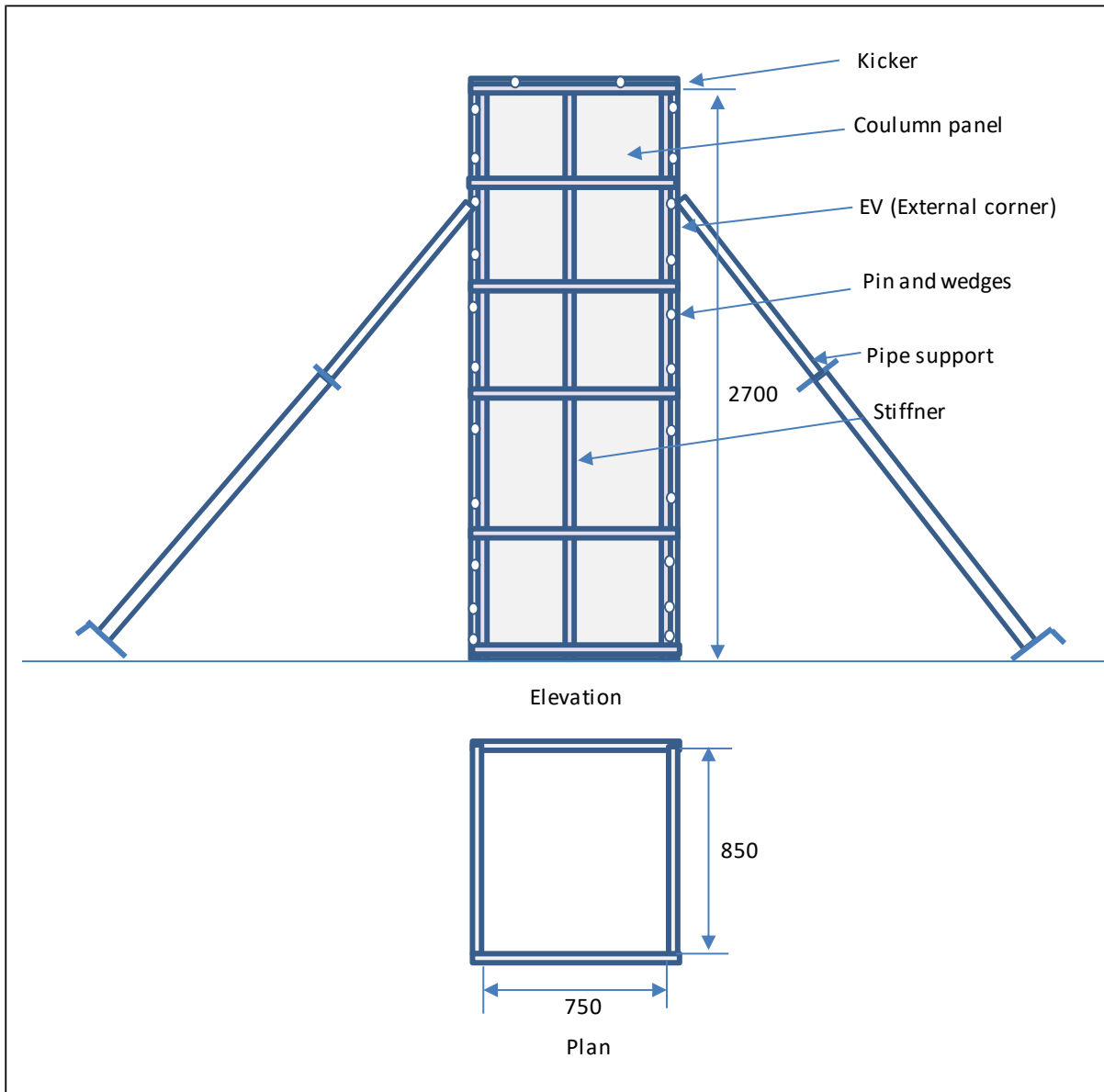
Duration: 90 minutes

**Note:** Candidate to perform any one practical question given below.

1. Prepare the area to assemble system form work. 5 marks
  - Remove unwanted materials and clean the area.
  - Barricade the area with guard rails to avoid unauthorised entries.
2. Select required components and tools as per the drawing. 8 marks
  - Candidate to select required size of column panels, kicker, EV, props screw jack, claw hammer, mash hammer, spirit level, plumb bob, line string etc.)
3. Apply release agents to system form work. 5 marks
  - Candidate to select and apply approved release agent to system shutter.
4. Position and set out form work manually as per the drawing/instruction. 20 Marks
  - Check and ensure that the layout marking is done as per the requirement.
  - Follow correct sequence as per the industry standards.
  - Check for supports and tightness of pin and wedges.
5. Plug all opening and gaps using foam sheet. 10 Marks
  - Seal all openings using foam sheet
6. Provide supports in placing kicker for column. 10 Marks
  - Provide tie rod supports to place kicker.
7. Check erected form work for line, level, alignment, and plumb. 12 Marks
  - Check erected shuttering for line, level, alignment and plumb using required tool.
  - Check dimensional accuracy and right angle
8. Dismantle system form work as per the standard practices 10 Marks
  - Dismantle as per the manufacturer instruction.
  - Clean and stack materials in a designated area.
  - Ensure housekeeping after the completion of job.

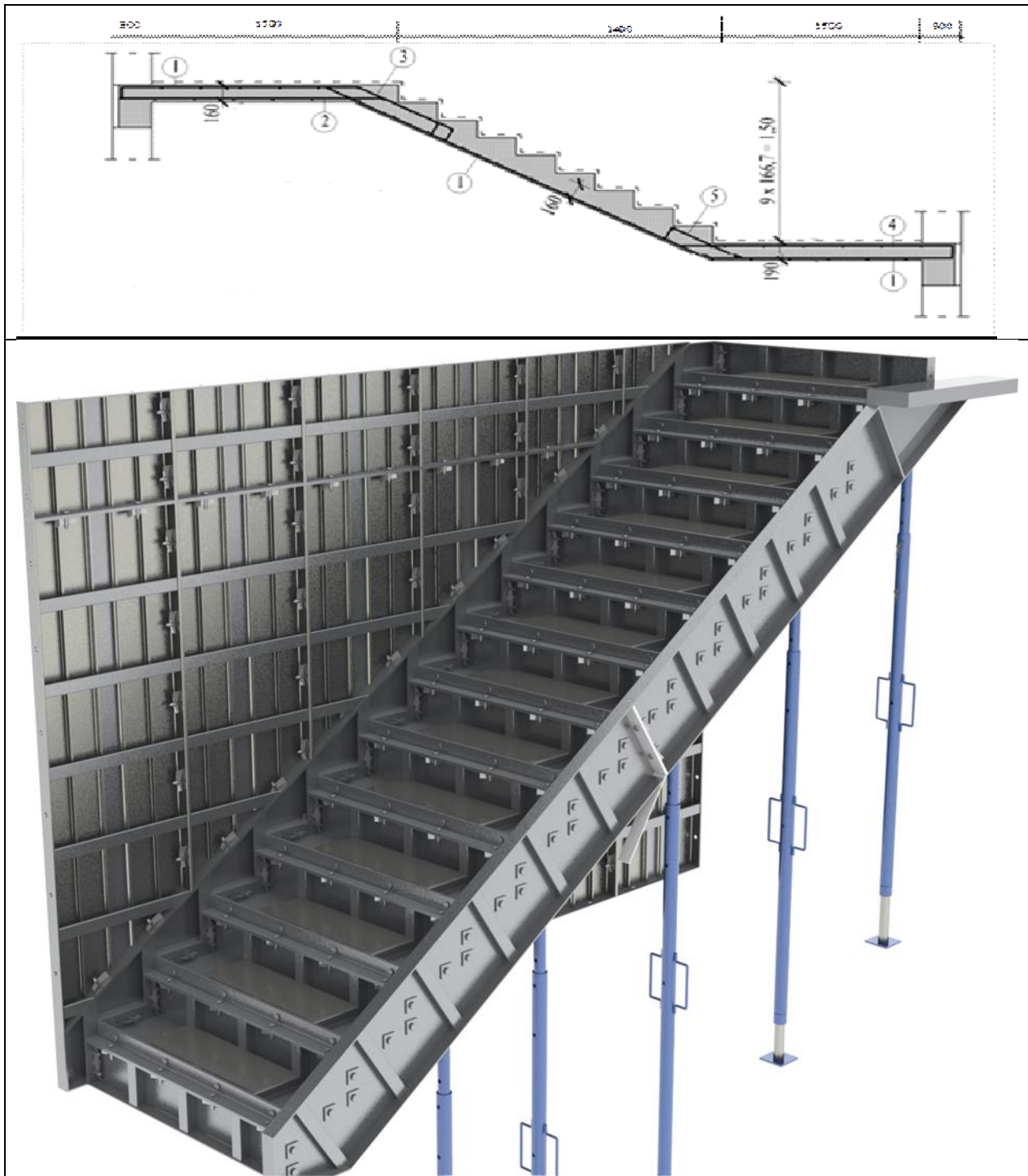
(All tasks should be considered accepted only on completion of task within acceptable tolerance limit. Also keep in view that **completion of given task within permissible tolerance limit** will be awarded full marks otherwise zero. Accepted tolerance limit for this task is attached in annexure 5 and also mentioned in respective assessment sheet)

**A. Carryout assemble and dismantling of system formwork for column as per the drawing/instruction**



**Note:** This task can be modified without deviating the performance criteria. Helper to be provided to perform the task.

**B. Carryout assemble and dismantling of system formwork for staircase as per the drawing/instruction**



**Note:** This task can be modified without deviating the performance criteria. Helper to be provided to perform the task.



## B. Multiple choice questions

Total Marks: 12  
Duration: 15 Minutes

(Preferably written but oral is also permitted)

1. What is the unit of measurement for column shuttering? 2 Marks
  - a. Running meter
  - b. Square meter**
  - c. Cubic meter
  - d. Numbers
  
2. Why should release agents applied to form work? 1 Mark
  - a. To enable easy de shuttering.**
  - b. To strengthen the form work.
  - c. To correct surface defects in the form work.
  - d. To enhance the workability of the concrete mix.
  
3. Why are PVC sleeve used in flat wall tie? 1 Mark
  - a. To enable easy removal of flat tie.**
  - b. To align the flat tie
  - c. To increase the thickness of flat tie
  - d. To strengthen the wall tie.
  
4. Identify the image shown below. 1 Mark



- a. End beam.
  - b. Slab panel.
  - c. Prop head.**
  - d. Wall panel
  
5. In system formwork \_\_\_\_\_ is the key component, which act as a starter for column and wall shuttering. 1 Mark
  - a. Wall tie.
  - b. Pin and wedges.
  - c. Kicker.**
  - d. Soldier.
  
6. What is the purpose of using turn buckle? 1 Mark
  - a. To pull the form work**
  - b. To push the form work
  - c. To lift form work material
  - d. To shift formwork material
  
7. Which type of scaffold is assembled from individual parts joined at any point and is capable of conforming to almost unlimited shapes? 1 Mark
  - a. Frame
  - b. System
  - c. Hanging
  - d. Tube and clamp**





8. What is the correct sequence for the removal of forms from the underside of an elevated slab? 1 Mark
- From the outermost columns inwards.
  - From the innermost columns outwards.
  - From the middle of the span in one direction.
  - From the middle of the span in both directions.**
9. When should wall ties be removed in system formwork? 1 Mark
- Along with de shuttering**
  - Wall ties need not be removed
  - After completion of curing period
  - At the time plastering
10. Which of the following is the ideal time for column de shuttering after pouring? 2 Marks
- 16 to 24 hours after pouring.**
  - 8 to 10 hours after pouring.
  - 10 days after pouring.
  - 3 days after pouring.



### C. Viva questions

**Total Marks: 8**  
**Duration: 5 Minutes**

**(These questions could be asked during practical observation)**

1. List major types of system form work used in India. 2 Marks  
**Possible answers**
  - a. ALUFORM
  - b. MIVAN
  - c. Cup lock
  - d. DOKA
  - e. PERI
  
2. List major components of system form work 2 Marks  
**Possible answers**
  - a. Kicker
  - b. Slab panel
  - c. Beam bottom panel
  - d. Prop heads
  - e. Middle beam
  - f. End beam
  - g. Joint bar
  - h. Slab corner
  - i. Wall tie
  - j. Pin and wedges
  - k. Wall panel
  - l. Vertical prop
  
3. List standard form work de shuttering time for different elements after pouring? 2 Marks  
**Possible answers**
  - a. Vertical formwork to columns, walls, beam : 16-24 h
  - b. Soffit formwork to slabs: 3 days (props to be re fixed immediately after removal of formwork)
  - c. Soffit formwork to beams: 7 days (props to be re fixed immediately after removal of formwork)
  - d. Props to slabs:
    - Spanning up to 4.5 m: 7 days
    - Spanning over 4.5 m: 14 days
  - e. Props to beams and arches
    - Spanning up to 6 m: 14 days
    - Spanning over 6 m: 21 days
  
4. Convert the following 2 Marks
  - a. 1cm= .....mm (Ans:10mm)
  - b. 1 inch= ....cm (2.54cm)
  - c. 1 feet= ....inch (12inch)
  - d. 1 feet = ....cm (30.48cm)



### 7.3 CON/N0304: Carry out quality check for shuttering works

**Note:** Assessor can make use of core task (N0304) done by different team / candidate. (I.e. shuttering assemble work done by team A will be checked by team B and vice versa.)

#### A. Practical questions

**Total Marks: 80**

**Duration: 60 minutes**

- |  |          |
|--|----------|
| 1. Check fixed form work with respect to survey layouts.   | 7 marks  |
| • Check form work position with reference to the survey points   |          |
| 2. Check for application of release agents.  | 6 marks  |
| • Check and ensure that the approved release agent used  |          |
| 3. Check cover of reinforcement steel is as specified  | 7 Marks  |
| • Check and ensure reinforcement cover with respect to the element.  |          |
| 4. Check joints of plywood and timber and procedure used for nailing   | 10 Marks |
| • Check that the proper nailing done on the shutter.   |          |
| 5. Check diagonal dimensions for its accuracy, if twist observe take corrective action                         | 10 Marks |
| • Check diagonal dimensions with respect to the drawing  |          |
| 6. Check for water tightness of the whole shuttering / formwork system   | 10 Marks |
| 7. Check plumb to ensure verticality is within tolerance limit   | 10 Marks |
| 8. Check lines and levels according to sketches / instructions to ensure that they are within tolerance limit. | 10 Marks |
| 9. Check support for shuttering and formwork to ensure stability   | 10 Marks |



## B. Multiple choice questions

**Total Marks: 12**  
**Duration: 15 Minutes**

**(Preferably written but oral is also permitted)**

1. Tool used for testing the straightness of large surface? 1 Mark
  - a. Steel rule
  - b. Try square
  - c. **Straight edge**
  - d. Foot rule
  
2. The purpose of applying mould oil is: 1 Mark
  - a. to avoid decay of formwork
  - b. to lubricate metal parts
  - c. to delay concrete setting time
  - d. **to facilitate the removal of formwork**
  
3. Which of the following is the ideal reinforcement cover for column? 1 Mark
  - a. 15 mm
  - b. 50 mm.
  - c. **40 mm.**
  - d. 20 mm.
  
4. Which of the following component is the best selection to rectify diagonal at the top of column form work? 1 Mark
  - a. **C clamp.**
  - b. Turn buckle.
  - c. Vertical prop.
  - d. Wooden beam.
  
5. Which of the following is the minimum vertical surfaces (sides) to be checked for plumb in a square column? 2 Marks
  - a. **2 sides**
  - b. 1 side
  - c. All four sides
  - d. Three sides
  
6. Which of the following is the allowable deviation from specified dimensions of cross section of columns and beams? 2 Marks
  - a. **+12mm / -6mm.**
  - b. +/-3mm.
  - c. +/- 6mm.
  - d. +/- 0mm.
  
7. The gap in the formwork will cause\_\_\_\_\_. 1 Mark
  - a. Helps to remove voids from the concrete
  - b. **honey comb**
  - c. colour spot on concrete surface
  - d. Curved wall surface
  
8. While pouring concrete to a column, masons and workers are allowed to stand on form work support. 1 Mark
  - a. Correct
  - b. **Not correct**



9. What should be done to fill 3mm gap in a form work system?
- Use polythene sheet to ensure a tight seal.
  - Use a small bead of low expansion foam to seal.**
  - Fill with small amounts of concrete prior to pouring.
  - Block the gap using hessian cloth.

1 Mark

10. Form work need not be checked after pouring concrete.
- Correct.
  - Not correct**

1 Mark



### C. Viva questions

**Total Marks: 8**  
**Duration: 5 Minutes**

**(These questions could be asked during practical observation)**

1. What are the common information available in a ply wood board? 2 Marks  
**Possible answers:**
  - a. Name of the manufacturer, his initials and/or his recognized trade mark.
  - b. Dimension of the board;
  - c. Type of plywood and designation
  - d. Control unit number to trace back factory test records.
  - e. Year of manufacture.
  
2. What are the points to be considered while selecting a form work system 2 Marks  
**Possible Answer:**
  - a. Rigid and durability.
  - b. Strength.
  - c. Water tightness.
  - d. Easy removal
  - e. Surface finish required
  - f. Economy
  
3. What are the main causes for failure of formwork? 2 Marks  
**Possible Answer:**
  - a. Improper stripping and shore removal
  - b. Inadequate bracing
  - c. Over vibration
  - d. Unstable soil under mudsills (a plank, frame, or small footing on the ground used as a base for a shore or post in formwork), shoring not plumb
  - e. Inadequate control of concrete placement
  - f. Lack of attention to formwork details.
  - g. Poor quality material and poor workmanship
  
4. What are the basic check point for form work? 2 Marks  
**Possible Answer:**
  - a. Layout and location
  - b. Application of release agent
  - c. Joints of plywood and timber
  - d. Dimensions (linear, diagonal)
  - e. Verticality, line and alignment
  - f. Supports and stability
  - g. Water tightness of formwork



## 7.4 CON/N8001: Work effectively in a team to deliver desired results at the workplace

### A. Practical questions

**Total Marks: 80**

Assessor is required to assess this NOS bases on his/her observation skill and knowledge to observe, ask questions and assess trainee while performing all core NOS's during the practical task for following points:

1. How the candidate communicates work related information to team member or to assessor. 10 Marks
  - Is the candidate able to explain the process/sequence before performing every task? (Like making wooden shutters, assemble and dismantling system formwork etc.)
  - Is the candidate able to communicate properly with other candidate while performing any task?
2. How the candidate escalated deviations to the seniors/assessor. 10 Marks
  - If the candidate noticed any deviations in drawing, deviations in material specifications, deviations in placement and locations etc.
3. How the candidate addresses and reports problems. 15 Marks
  - If the candidate noticed damaged tool or material
  - If candidate noticed shortage of materials while performing task (Assessor to provide less quantity of coupler to assess this skill)
  - If trainee facing problem with shortage of working space
  - If trainee found lack of illumination while performing the task.
4. How a person receive and follow the instructions given by seniors/assessor. 15 Marks
  - Is candidate able to follow class room disciplines?
  - Is candidate able to follow instructions given by assessor?
5. How a person seeks clarifications and resolves the issues raised during performing the task. 15 Marks
  - Is the candidate able to clarify if the information given for particular task is insufficient?
6. How a person works as a team, like, proper cooperation, timely handing over tools and materials, helping and advising team members, etc. 15 Marks
  - Is the candidate able to take support of team member? (While shifting form work materials from the yard, while assembling form work, while checking measurements and alignments etc.)
  - Is the candidate able to hand over the tools timely to other candidates or other group? (For example Hand tool, power tools, PPE's, measurement tape etc.)



## **B. Multiple choice questions**

**Total Marks: 12**  
**Duration: 10 Minutes**

**(Preferably written but oral is also permitted)**

1. Accurate information about the drawing / job clarification is obtained from \_\_\_\_\_. 2 Marks
  - a. Manager and operator
  - b. **Supervisor and manager**
  - c. Security and manager
  - d. Operator and supervisor
  
2. How to give information to others in the work place? 2 Marks
  - a. **In clear and understandable manner**
  - b. Give in writing about headings
  - c. Just summarise the information
  - d. Just drop a message
  
3. What action should be taken if the co-worker has not completed the job? 2 Marks
  - a. Make fun of him
  - b. Ignore him
  - c. Chat with others
  - d. **Assist him**
  
4. Being able to clearly state, one's thoughts or message to another person is called \_\_\_\_\_ 2 Marks
  - a. **Communication**
  - b. Speaking
  - c. Arguing
  - d. Chatting
  
5. What should be done if there is material shortage while executing a task? 2 Marks
  - a. Inform to the higher management
  - b. **Report to senior and contact store keeper for arrangement.**
  - c. Use damaged materials and complete the task
  - d. Borrow/Adjust the material from co-worker
  
6. Being a decent listener helps one to build \_\_\_\_\_relationship with family, friends and superiors. 2 Marks
  - a. Bad
  - b. Harsh
  - c. **Good**
  - d. Cruel





### C. Viva questions

**Total Marks: 08**

**Duration: 3 Minutes**

**(These questions could be asked during practical observation)**

1. What are the benefits of receiving feedback from the reporting senior? 2 Marks  
**Possible answers**
  - a. Know the quality of work executed.
  - b. Learn from the mistakes, if any.
  - c. Improve the skill set from past experience of reporting senior.
  - d. Aware of latest technology from reporting senior.
  - e. Support from and mutual understanding with reporting senior.
  - f. Helps to get rewards and salary hike.
  
2. What are the requirements of good communication skill? 2 Marks  
**Possible answers**
  - a. Speak clearly with known language
  - b. Listening to the person
  - c. Make positive facial expressions
  - d. Making eye contact while communicating with people
  - e. Ask for the clarification
  
3. What are the negative impacts of improper communication among team? 2 Marks  
**Possible answers**
  - a. Deviation from working standards/procedures
  - b. Delay in scheduled completion of work
  - c. More possible Occurrence of quality issues
  - d. Improper utilization of resource
  - e. Hindrance on working conditions for interfacing team
  - f. Unsynchronized working atmosphere
  
4. What are the benefits of discussing work related information's with colleagues? 2 Marks  
**Possible answers**
  - a. Understanding the timeline and targets.
  - b. Understand the scope of work.
  - c. More ideas by knowledge sharing.
  - d. Helps team member to achieve their targets.
  - e. Avoid conflicts within the team.
  - f. Build good working environment



## 7.5 CON/N8002: Plan and organize work to meet expected outcomes

### A. Practical questions

**Total Marks: 80**

Assessor is required to assess this NOS bases on his/her observation skill and knowledge to observe, ask questions and assess trainee while performing all core NOS's during the practical task for following points:

1. How a person understand the targets and time line set by supervisor. 15 Marks
  - Is candidate able understand the target clearly? (**compulsory**) (Ex. Type of shuttering, component details, duration for each task etc.)
2. How a person plan activities as per schedule and sequence. 15 Marks
  - Is candidate able to explain the plan and sequence before performing any core task? (**Compulsory**: assessor to ask candidate to explain the sequence of task (for any core task)
3. How a person provide guidance to the subordinates to obtain desired outcome. 15 Marks
  - Is candidate able to guide other candidate while working together? (Ex. While checking formwork level using spirit level, while checking plumb, while transferring level etc.)
4. How a person arrange required resources prior to commencement of work. 15 Marks
  - Is candidate able to arrange right quantity of material? (Ex. Quantity of form work materials, number of helper, tools etc.)
5. How a person utilize resources effectively during performing the task. 10 Marks
  - Is candidate able to use the formwork materials, tools and man power within the allowable limit?
  - Is able to engage helpers properly?
6. How a person adhere to the standard instructions while performing the task. 10 Marks
  - Is candidate able to follow standard instructions? (Ex. Class room discipline, using proper PPE's, care on tools, materials and surrounding environments etc.)



## B. Multiple choice questions

**Total Marks: 12**  
**Duration: 10 Minutes**

**(Preferably written but oral is also permitted)**

1. Which of the following is a desired quality necessary to meet expected work output?  
2 Marks
  - a. Hardworking
  - b. Understanding and helpful
  - c. Sincerity and punctuality**
  - d. Honesty
  
2. Who should be contacted in case a work permit is required for a particular job? 2 Marks
  - a. Any contract labourer
  - b. The reporting manager**
  - c. The security personnel
  - d. Daily wage earners at site
  
3. What helps to select the correct equipment for the completion of a desired work?  
1 Mark
  - a. Select the most popularly used item
  - b. It depends on the available resources
  - c. Depending on personal strength and experience
  - d. Knowing its usage and limitations before selecting it**
  
4. Which instrument is required to ensure that a surface is perfectly level? 1 Mark
  - a. Compass
  - b. Spirit level**
  - c. Jackplane
  - d. Mallet
  
5. What should a worker know to prepare for the shuttering for columns? 2 Marks
  - a. To read and write
  - b. To read the shuttering drawing**
  - c. To be able to draw the column shape
  - d. To erect and tie the column shuttering
  
6. Which of the following is correct while selecting material for shuttering carpentry?  
1 Mark
  - a. Material should be used only once
  - b. Material should be used 3 times
  - c. Material should be re-usable several times**
  - d. Material should be used for at least 2 years
  
7. Which of the following should be done to ensure that the process is followed at a construction site? 2 Marks
  - a. Follow safety procedures and instructions**
  - b. Procedures and instructions to be told to new workers
  - c. Modify safety procedure to suit the situation
  - d. Wear the appropriate safety gear



8. Which among the following is an example of using appropriate manpower for an activity?  
1 Mark
- a. Only supervisors should be allowed to operate the equipment
  - b. Only experienced workers should be allowed to operate the equipment
  - c. Any employee should be allowed to operate the equipment
  - d. **Only authorised person should be allowed to operate the equipment**



### **C. Viva questions**

**Total Marks: 08**  
**Duration: 5 Minutes**

**(These questions could be asked during practical observation)**

1. List at least 4 good work practices which helps in avoiding damage to tools and equipment 2 Marks

**Possible answers:**

- a. Use the right tool for the right job
- b. Keep the tools and equipment clean at all times
- c. Keep the tools and equipment in the correct storing place
- d. Only authorised people to use the tools and equipment
- e. Follow manufacturer's instructions when handling tools and equipment
- f. Ensure regular maintenance of tools and equipment

2. List at least 4 methods by which targets and timelines set by superiors can be met. 2 Marks

**Possible answers:**

- a. Ensure that the instructions given by the superiors are clearly understood
- b. If in doubt, request for the instructions again until it is properly understood
- c. If the targets and timelines given is unreasonable, speak about it immediately and come to an understanding
- d. Ensure that the drawings and designs given for the work are understood correctly
- e. Ensure that the job given is within one's capability
- f. Ensure that the required tools and equipment are available before work begins
- g. Ensure that the required manpower is available before work begins
- h. Ensure that the required work permits are available before work begins
- i. Ensure that the required safety equipment and safety gear is available before work begins
- j. Be Sincere, punctual, hardworking, understanding, helpful and honesty

3. What are the resources required to begin a shuttering carpentry activity? List any 5 items. 2 Marks

**Possible answers:**

- a. Manpower
- b. Raw materials
- c. Consumables
- d. Tools and equipment
- e. Safety signage
- f. First aid
- g. Safety gear

4. What are the steps to be followed for risk assessment? 2 Marks

**Possible answers:**

- a. Step 1: Look for the hazard.
- b. Step 2: Decide who might be harmed and how.
- c. Step 3: Evaluate the risks and decide whether the existing procedures are adequate or not.
- d. Step 4: Record or report findings.
- e. Step 5: Review and revise.



## 7.6 CON/N9001: Work according to personal health, safety and environment protocol at construction site

### A. Practical questions

**Total Marks: 80**

**Duration: 30 Minutes**

Assessor is required to assess this NOS bases on his/her observation skill and knowledge to observe, ask questions and assess trainee while performing all core NOS's during the practical task for following points (If particular outcome is not covered in any of the core NOS's, assessor need to insist candidate to perform the activities):

1. How person identify hazards, risks in site and report to seniors 8 Marks
  - Is candidate able to escalate hazards, risks to the senior? (Ex. Damaged tools, unguarded machineries, inadequate illumination, co-worker working at height without using safety harness, deep excavation without barricading, high tension overhead cable etc.)
2. How a person respond to emergency and evacuation procedures in case of accidents, fires. 8 Marks
  - Is candidate able to explain the emergency evacuation procedure in case of different emergencies? (Ex. Fire, building collapse, flood etc.)
3. Use of personal protective equipment listed below (**Compulsory**). 30 Marks

(Use of PPEs specified at NOS is mandatory for all the assessee and candidate should score 100% mark in this particular outcome.)

  - Is candidate able to demonstrate the use of all personal protective equipment's? (Ex. Helmet, harness, safety goggles, safety shoes, hand gloves, gum boot, earplug, dust mask, reflective jacket, shoulder pack, etc.)
  - Is the candidate able to list PPE's required for the particular task? (Ex. While erecting shuttering, while shifting material etc.)
4. Identification and operation procedure for fire extinguishers. 8 Marks
  - Is candidate able to identify different types of fire extinguishers? (Ex. DCP, CO2, Foam etc.).
  - Is candidate able to demonstrate the operating procedure for different types of fire extinguishers? (Assessor to insist candidate to perform this task)
5. Handling technique of tools, materials and equipment. 8 Marks
  - Is candidate able to explain the handling techniques of tools, materials and equipment? (Ex. Operating power tools, shifting materials through machines etc.)
6. Adhere to safe working practices while working at height, using tools and equipment, material shifting, working with hazardous materials etc. 9 Marks
  - Is candidate able to maintain proper ergonomic principles while performing the task?
  - Is candidate able to adhere safe working practices?
7. Ensure cleaning, housekeeping and waste disposal. 9 Marks
  - Is candidate able to plan housekeeping while performing the task?
  - Is candidate able explain the method to shift waste to designated yard?



## B. Multiple choice questions

**Total Marks: 12**  
**Duration: 10 Minutes**

**(Preferably written but oral is also permitted)**

1. What is the significance of a prohibition notice that is given to a particular work site?
  - a. The site will need to be reviewed for safety features
  - b. Only a skilled crew is allowed to continue working
  - c. **All personnel must immediately stop working**
  - d. An on-site supervisor has been fined due to a lack of safety protocol
2. What must be done if an equipment has been issued a prohibition notice?
  - a. Operated by approved personnel
  - b. Operated by senior staff only
  - c. **Cease to be operated until checked for safety**
  - d. Discarded immediately
3. Where must all workers assemble if a fire is encountered on the work site?
  - a. All employees must vacate the premises and head to the nearest source of water
  - b. **The designated fire assembly point**
  - c. Workers must remain on the site unless they are in immediate physical danger
  - d. Workers must immediately find their supervisor for further instructions
4. How many times can a disposable ear plug be worn?
  - a. **Only once**
  - b. Twice
  - c. Three times if they are cleaned after
  - d. As long as the sound is inhibited, they can be used indefinitely
5. What is the primary reason that employees must report all accidents that occur on the job site?
  - a. Insurance reasons dictate that all incidents be reported
  - b. Accountability needs to be firmly established
  - c. Just for the purpose of documentation
  - d. **Employers and employees can learn from the incident**
6. What one must do when working in a hearing protection zone?
  - a. Cease using loud equipment and machinery
  - b. **Wear adequate hearing protection**
  - c. Avoid speaking to others as they may become distracted
  - d. Work quickly and exit the area to avoid hearing damage
7. Which of the following is **not** the outcome of maintaining a clean working environment?
  - a. Reduce slips, trips and falls
  - b. Increase the quality of work produced
  - c. **Decrease the progress of work**
  - d. Reduce the impact on environment
8. What does a risk assessment tell you?
  - a. **The hazards involved in a particular job and a safe method of carrying out that task**
  - b. The correct procedure for reporting accidents in your workplace
  - c. The total amount of employees on site
  - d. Your contracted working hours





### C. Viva questions

**Total Marks: 08**

**Duration: 4 Minutes**

**(These questions could be asked during practical observation)**

1. Which of these should you consider before carrying a load? 2 Marks  
**Possible Answer**
  - a. The distance you need to travel
  - b. Whether or not the path is clear and hazard free
  - c. The weight and dimensions of the object
  
2. Why does a work environment need to be kept clean? 2 Marks  
**Possible Answer**
  - a. To reduce the risk of slips and fall
  - b. To protect the environment
  - c. To fulfil statutory requirement
  - d. To avoid fire accidents
  - e. To increase the productivity
  - f. To deter rodents and other such animals
  
3. What are some good general safe practices followed at site? 2 Marks  
**Possible Answer**
  - a. Work safely with all equipment:
  - b. Use, maintain and store personal protective equipment as recommended by the manufacturer
  - c. Follow safe lifting techniques
  - d. Follow company safety rules
  - e. Learn about chemical hazards
  - f. Know how to report a hazard
  - g. Follow good housekeeping procedures
  
4. What should you avoid when working with wood working machines? 2 Marks  
**Possible Answer**
  - a. Do not wear loose clothing, work gloves, neckties, rings, bracelets or other jewelry that can become entangled with moving parts
  - b. Avoid awkward operations and hand positions where a sudden slip could cause your hand to move into the cutting tool or blade
  - c. Do not remove sawdust or cuttings from the cutting head by hand while a machine is running. Use a stick or brush when the machine has stopped moving
  - d. Do not use compressed air to remove sawdust, turnings, etc. from machines or clothing
  - e. Do not leave machines running unattended (unless they are designed and intended to be operated while unattended). Do not leave a machine until the power off is turned off and the machine comes to a complete stop
  - f. Do not try to free a stalled blade before turning the power off
  - g. Do not distract or startle an operator while he or she is using woodworking equipment
  - h. Horse play should be prohibited. It can lead to injuries





## 8. Assessment Evidence Form

Trainee name:

Trainee roll number:

Centre name/ Code Date:

This is to confirm that the trainee has handed over the final job to the assessor.  
(For each task separate sheet can be used)

Assessor to affix photographs of the practical output (end product)

Trainee's signature:

---

Trainee's name (please print):

---

Assessor's signature:

---

Assessor's name (please print):

---

Centre Head's seal and signature:

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## 9. Assessment summary

### Assessor's comments

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This is to confirm that the trainee has undertaken the assessment for the job role of Shuttering Carpenter - System.

Trainee's signature: \_\_\_\_\_

Trainee's name (please print): \_\_\_\_\_

Assessor's signature: \_\_\_\_\_

Assessor's name (please print): \_\_\_\_\_

Centre Head's seal and signature: \_\_\_\_\_

Trainee's photo ID (other than the Institute ID): \_\_\_\_\_



Assessment completion date: \_\_\_\_\_





# 10. Assessment Summary Sheets

| <b>ASSESSMENT SUMMARY</b><br><b>Qualification Pack - Shuttering Carpenter - System - L4</b> |                   |           |            |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
|---|-------------------|-----------|------------|------------------------|------------|-------------|------------------------|-------------------|------------|------------------------|------------|------|------------------------|-----------|------|------------------------|-----------|------|
| Training Provider :   |                   |           |            |                        |            |             |                        | Testing Centre    |            |                        |            |      |                        |           |      |                        |           |      |
| Affiliation No.   |                   |           |            |                        |            |             |                        | Accreditation No. |            |                        |            |      |                        |           |      |                        |           |      |
| Candidate Detail  |                   |           | Roll No. : | Roll No. :             | Roll No. : | Roll No. :  | Roll No. :             | Roll No. :        | Roll No. : | Roll No. :             | Roll No. : |      |                        |           |      |                        |           |      |
|   |                   |           | Batch:     | Batch:                 | Batch:     | Batch:      | Batch:                 | Batch:            | Batch:     | Batch:                 | Batch:     |      |                        |           |      |                        |           |      |
|   |                   |           | Name:      | Name:                  | Name:      | Name:       | Name:                  | Name:             | Name:      | Name:                  | Name:      |      |                        |           |      |                        |           |      |
| <b>Assessment Summary :</b>   |                   |           |            |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| NOS No.   | Allotted (Marks)  |           |            | Marks Obtained         |            |             | Marks Obtained         |                   |            | Marks Obtained         |            |      | Marks Obtained         |           |      | Marks Obtained         |           |      |
|   | Skill (Practical) | Knowledge |            | Skill (Practical)      | Knowledge  |             | Skill (Practical)      | Knowledge         |            | Skill (Practical)      | Knowledge  |      | Skill (Practical)      | Knowledge |      | Skill (Practical)      | Knowledge |      |
|   |                   | Theory    | Viva       |                        | Theory     | Viva        |                        | Theory            | Viva       |                        | Theory     | Viva |                        | Theory    | Viva |                        | Theory    | Viva |
| CON/N0302   | 80                | 12        | 8          |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| CON/N0303   | 80                | 12        | 8          |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| CON/N0304   | 80                | 12        | 8          |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| CON/N8001   | 80                | 12        | 8          |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| CON/N8002   | 80                | 12        | 8          |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| CON/N9001   | 80                | 12        | 8          |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| <b>Total : 800</b>  | <b>480</b>        | <b>12</b> | <b>8</b>   |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| Percentage weightage  | 80%               | 12%       | 8%         |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| Minimum pass % to qualify   | 70%               |           | 70%        |                        |            |             |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
|   |                   |           |            | Result : Passed/Failed |            |             | Result : Passed/Failed |                   |            | Result : Passed/Failed |            |      | Result : Passed/Failed |           |      | Result : Passed/Failed |           |      |
| Assessors Name:   |                   |           |            |                        |            | Signature : |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| Assessing Body Representative Name:   |                   |           |            |                        |            | Signature : |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |
| Assessment Agency :   |                   |           |            |                        |            | Date        |                        |                   |            |                        |            |      |                        |           |      |                        |           |      |





|   |                     |   |   |  |                                      |          |          |          |          |          |          |
|---|---------------------|---|---|--|--------------------------------------|----------|----------|----------|----------|----------|----------|
|    | 1. Roll No. & Name: | 4. Roll No. & Name:   |  |  |                                      |          |          |          |          |          |          |
|   | 2. Roll No. & Name: | 5. Roll No. & Name:   |   |  |                                      |          |          |          |          |          |          |
|   | 3. Roll No. & Name: | 6. Roll No. & Name:   |   |  |                                      |          |          |          |          |          |          |
| <b>Ref.QP Code- CON/Q0304</b>   |                     | <b>Assessment Sheet for NOS No. - CON/N0302</b>                               |   |  | <b>Marks Obtained by candidates</b>  |          |          |          |          |          |          |
| <b>QP &amp; NOS Detail</b>  |                     | <b>Skills (Total Marks = 80)</b>  |   |  | <b>Allo tted Marks</b>               | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| QP : Shuttering Carpenter - System  |                     | 1. Select and use regular hand tools used in shuttering carpentry work        |   |  | 10                                   |          |          |          |          |          |          |
|   |                     | 2. Select and use power tools used in shuttering carpentry work.              |   |  | 10                                   |          |          |          |          |          |          |
| CON/N0302: Make wooden shutters used in shuttering carpentry  |                     | 3. Carry out visual check on materials and consumable to be used.             |   |  | 10                                   |          |          |          |          |          |          |
|   |                     | 4. Carryout marking activity to make shutters.                                |   |  | 30                                   |          |          |          |          |          |          |
|   |                     | 5. Carryout making of wooden shutter panels as per the sketches.              |   |  | 10                                   |          |          |          |          |          |          |
|   |                     | 6. Check and ensure that shutter board as per the sketch                      |   |  | 10                                   |          |          |          |          |          |          |
|   |                     | <b>Total Marks</b>  |   |  | <b>80</b>                            |          |          |          |          |          |          |
| <b>General tolerance</b><br>Length +6mm / -0mm<br>Width +3mm / -0mm<br>Thickness less than 6 mm +/- 10 percent<br>Thickness less 6 mm and above +/- 5 percent<br>Edge straightness per 1 meter 2mm<br>Square ness per 1 meter 2mm<br>Ladder placing (75 degree from horizontal)<br>Stability of joint |                     | <b>Knowledge -MCQ (Total Marks =12)</b>                                       |   |  |                                      |          |          |          |          |          |          |
|   |                     | 1. Knowledge about the hand tools   |   |  | 4                                    |          |          |          |          |          |          |
|   |                     | 2. Knowledge about the power tools  |   |  | 4                                    |          |          |          |          |          |          |
|   |                     | 3. knowledge about the advantage of a wooden form                             |   |  | 1                                    |          |          |          |          |          |          |
|   |                     | 4. Knowledge about the joints used in carpentry                               |   |  | 2                                    |          |          |          |          |          |          |
|   |                     | 5. Knowledge about unit conversions   |   |  | 1                                    |          |          |          |          |          |          |
|   |                     | <b>Total Marks</b>  |   |  | <b>12</b>                            |          |          |          |          |          |          |
|   |                     | <b>Knowledge Viva (Total Marks = 08)</b>                                      |   |  |                                      |          |          |          |          |          |          |
|   |                     | 1. Knowledge about different nails used during carpenter work                 |   |  | 2                                    |          |          |          |          |          |          |
|   |                     | 2. Knowledge about the different types of carpentry joints                    |   |  | 2                                    |          |          |          |          |          |          |
|   |                     | 3. knowledge about common cutting tool used in shuttering work                |   |  | 2                                    |          |          |          |          |          |          |
|   |                     | 4. knowledge about the characteristics of good timber used in shuttering work |   |  | 2                                    |          |          |          |          |          |          |
|   |                     | <b>Total Marks</b>  |   |  | <b>8</b>                             |          |          |          |          |          |          |
| <b>Batch No. &amp; TP:</b>  |                     | <b>Assessors Name:</b>  |   |  | <b>Assessors Signature :</b>         |          |          |          |          |          |          |
| <b>Assessors Reg. No. :</b>   |                     | <b>Assessors Body(AB) Representative Name:</b>                                |   |  | <b>AB Representative Signature :</b> |          |          |          |          |          |          |
|   |                     |   |   |  | <b>Date :</b>                        |          |          |          |          |          |          |
| <b>Assessment Agency :</b>  |                     |   |   |  |                                      |          |          |          |          |          |          |





|   |  |                       |   |          |          |          |          |          |
|---|--|-----------------------|---|----------|----------|----------|----------|----------|
|  | 1. Roll No. & Name:  | 4. Roll No. & Name:   |  |          |          |          |          |          |
|   | 2. Roll No. & Name:  | 5. Roll No. & Name:   |   |          |          |          |          |          |
|   | 3. Roll No. & Name:  | 6. Roll No. & Name:   |   |          |          |          |          |          |
| <b>Ref.QP Code- CON/Q0304</b>   | <b>Assessment Sheet for NOS No. - CON/N0303</b>                            |                       | <b>Marks Obtained by candidates</b>   |          |          |          |          |          |
| <b>QP &amp; NOS Detail</b>  | <b>Skills (Total Marks = 80)</b>   | <b>Allotted Marks</b> | <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| <b>QP : Shuttering Carpenter - System</b>   | 1. Prepare the area to assemble system form work.                          | 5                     |   |          |          |          |          |          |
|   | 2. Select required components and tools as per the drawing.                | 8                     |   |          |          |          |          |          |
| <b>CON/N0303: Assemble and dismantle system formwork for RCC structures</b>       | 3. Apply release agents to system form work.                               | 5                     |   |          |          |          |          |          |
|   | 4. Position and set out form work manually as per the drawing/instruction. | 20                    |   |          |          |          |          |          |
|   | 5. Plug all opening and gaps using foam sheet.                             | 10                    |   |          |          |          |          |          |
|   | 6. Provide supports in placing kicker for column.                          | 10                    |   |          |          |          |          |          |
|   | 7. Check erected form work for line, level, alignment, and plumb.          | 12                    |   |          |          |          |          |          |
|   | 8. Dismantle system form work as per the standard practices                | 10                    |   |          |          |          |          |          |
|   | <b>Total Marks</b>   | <b>80</b>             |   |          |          |          |          |          |
|   | <b>Knowledge -MCQ (Total Marks =12)</b>                                    |                       |   |          |          |          |          |          |
|   | 1. Knowledge about unit of measurement for column shuttering               | 2                     |   |          |          |          |          |          |
|   | 2. Knowledge about the propose of release agents applied to form work      | 2                     |   |          |          |          |          |          |
|   | 3. Knowledge about the components of system shuttering                     | 4                     |   |          |          |          |          |          |
|   | 4. Knowledge about purpose of using turn buckle                            | 1                     |   |          |          |          |          |          |
|   | 5. Knowledge about scaffold  | 1                     |   |          |          |          |          |          |
|   | 6. Knowledge about dismantling of system scaffold                          | 2                     |   |          |          |          |          |          |
| <b>Total Marks</b>  | <b>12</b>  |                       |   |          |          |          |          |          |
| <b>Knowledge Viva (Total Marks = 08)</b>  |  |                       |   |          |          |          |          |          |
|   | 1. Knowledge about the major types of system form work used in India       | 2                     |   |          |          |          |          |          |
|   | 2. Knowledge about major components of system form work                    | 2                     |   |          |          |          |          |          |
|   | 3. Knowledge about de shuttering time for different elements               | 2                     |   |          |          |          |          |          |
|   | 4. Knowledge about unit conversion   | 2                     |   |          |          |          |          |          |
| <b>Total Marks</b>  | <b>8</b>   |                       |   |          |          |          |          |          |
| <b>Batch No. &amp; TP:</b>  |  |                       |   |          |          |          |          |          |
| <b>Assessors Reg. No. :</b>   |  |                       | <b>Assessors Signature :</b>  |          |          |          |          |          |
|   |  |                       | <b>AB Representative Signature :</b>  |          |          |          |          |          |
| <b>Assessment Agency :</b>  | <b>Assessors Name:</b>   |                       | <b>Date :</b>   |          |          |          |          |          |
|   | <b>Assessors Body(AB) Representative Name:</b>                             |                       |   |          |          |          |          |          |





|   |  |  |   |          |          |               |          |          |          |
|---|--|--|---|----------|----------|---------------|----------|----------|----------|
|  | 1. Roll No. & Name:  | 4. Roll No. & Name:                            |  |          |          |               |          |          |          |
|   | 2. Roll No. & Name:  | 5. Roll No. & Name:                            |   |          |          |               |          |          |          |
|   | 3. Roll No. & Name:  | 6. Roll No. & Name:                            |   |          |          |               |          |          |          |
| <b>Ref.QP Code- CON/Q0304</b>   | <b>Assessment Sheet for NOS No. - CON/N0304</b>  |  | <b>Marks Obtained by candidates</b>   |          |          |               |          |          |          |
| <b>QP &amp; NOS Detail</b>  | <b>Skills (Total Marks = 80)</b>   |  | <b>Alotted Marks</b>  | <b>1</b> | <b>2</b> | <b>3</b>      | <b>4</b> | <b>5</b> | <b>6</b> |
| <b>QP : Shuttering Carpenter - System</b>   | 1. Check fixed form work with respect to survey layouts  |  | 7   |          |          |               |          |          |          |
|   | 2. Check for application of release agents.  |  | 6   |          |          |               |          |          |          |
| <b>CON/N0304: Carry out quality checks for shuttering works</b>                   | 3. Check cover of reinforcement steel is as specified  |  | 7   |          |          |               |          |          |          |
|   | 4. Check joints of plywood and timber and procedure used for nailing   |  | 10  |          |          |               |          |          |          |
|   | 5. Check diagonal dimensions for its accuracy, if twist observe take corrective action                         |  | 10  |          |          |               |          |          |          |
|   | 6. Check for water tightness of the whole shuttering / formwork system   |  | 10  |          |          |               |          |          |          |
|   | 7. Check plumb to ensure verticality is within tolerance limit   |  | 10  |          |          |               |          |          |          |
|   | 8. Check lines and levels according to sketches / instructions to ensure that they are within tolerance limit. |  | 10  |          |          |               |          |          |          |
|   | 9. Check support for shuttering and formwork to ensure stability   |  | 10  |          |          |               |          |          |          |
|   | <b>Total Marks</b>   |  | <b>80</b>   |          |          |               |          |          |          |
|   | <b>Knowledge -MCQ (Total Marks =12)</b>  |  |   |          |          |               |          |          |          |
| 1. Knowledge about the tools  |  | 2  |   |          |          |               |          |          |          |
| 2. Knowledge about the purpose of applying mould oil                              |  | 2  |   |          |          |               |          |          |          |
| 3. Knowledge about reinforcement cover  |  | 4  |   |          |          |               |          |          |          |
| 4. Knowledge about shuttering components  |  | 1  |   |          |          |               |          |          |          |
| 5. Knowledge about checking form work   |  | 1  |   |          |          |               |          |          |          |
| 6. Knowledge about the effect of form work gap                                    |  | 2  |   |          |          |               |          |          |          |
| <b>Total Marks</b>  |  | <b>12</b>                                      |   |          |          |               |          |          |          |
| <b>Knowledge Viva (Total Marks = 08)</b>  |  |  |   |          |          |               |          |          |          |
| 1. Knowledge about the common information available in a ply wood board           |  | 2  |   |          |          |               |          |          |          |
| 2. Knowledge about important characteristics of Formwork                          |  | 2  |   |          |          |               |          |          |          |
| 3. Knowledge about main causes for failure of formwork                            |  | 2  |   |          |          |               |          |          |          |
| 4. Knowledge about basic check point for form work                                |  | 2  |   |          |          |               |          |          |          |
| <b>Total Marks</b>  |  | <b>8</b>                                       |   |          |          |               |          |          |          |
| <b>Batch No. &amp; TP:</b>  |  |  |   |          |          |               |          |          |          |
| <b>Assessors Reg. No. :</b>   |  | <b>Assessors Signature :</b>                   |   |          |          |               |          |          |          |
|   |  | <b>AB Representative Signature :</b>           |   |          |          |               |          |          |          |
| <b>Assessment Agency :</b>  |  | <b>Assessors Name:</b>                         |   |          |          | <b>Date :</b> |          |          |          |
|   |  | <b>Assessors Body(AB) Representative Name:</b> |   |          |          |               |          |          |          |





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|---|---|-------------------------------|---|----------|----------|----------|----------|----------|
|  | 1. Roll No. & Name:   | 4. Roll No. & Name:           |  |          |          |          |          |          |
|   | 2. Roll No. & Name:   | 5. Roll No. & Name:           |   |          |          |          |          |          |
|   | 3. Roll No. & Name:   | 6. Roll No. & Name:           |   |          |          |          |          |          |
| <b>Ref.QP Code- CON/Q0304</b>   | <b>Assessment Sheet for NOS No. - CON/N8001</b>   |                               | <b>Marks Obtained by candidates</b>   |          |          |          |          |          |
| <b>QP &amp; NOS Detail</b>  | <b>Skills (Total Marks = 80)</b>  | <b>Allo tte d Marks</b>       | <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| QP : Shuttering Carpenter - System  | 1. How the candidate communicate work related information to team member or to assessor   | 10                            |   |          |          |          |          |          |
|   | 2. How the candidate escalate deviations to the seniors/assessor  | 10                            |   |          |          |          |          |          |
| CON/N8001: Work effectively in a team to deliver desired results at the workplace | 3. How the candidate address and report problems  | 15                            |   |          |          |          |          |          |
|   | 4. How a person receive and follow the instructions given by seniors/assessor   | 15                            |   |          |          |          |          |          |
|   | 5. How a person seek clarifications and resolve the issues raised during performing the task                                      | 15                            |   |          |          |          |          |          |
|   | 6. How a person work as team like, proper cooperation, timely handing over tools and materials, helping and advising team members | 15                            |   |          |          |          |          |          |
|   | <b>Total Marks</b>  | <b>80</b>                     |   |          |          |          |          |          |
|   | <b>Knowledge -MCQ (Total Marks =12)</b>   |                               |   |          |          |          |          |          |
|   | 1. Knowledge about the job clarity  | 2                             |   |          |          |          |          |          |
|   | 2. Knowledge about the reporting system   | 4                             |   |          |          |          |          |          |
|   | 3. Knowledge about communication system   | 2                             |   |          |          |          |          |          |
|   | 4. Knowledge about the description of work and technique to be used   | 2                             |   |          |          |          |          |          |
|   | 5. Knowledge about the team coordination  | 2                             |   |          |          |          |          |          |
|   | <b>Total Marks</b>  | <b>12</b>                     |   |          |          |          |          |          |
| <b>Knowledge Viva (Total Marks = 08)</b>  |   |                               |   |          |          |          |          |          |
|   | 1.Knowledge about the benefits of receiving feedback from the reporting senior  | 2                             |   |          |          |          |          |          |
|   | 2.Knowledge about requirements of good communication skill  | 2                             |   |          |          |          |          |          |
|   | 3. knowledge about negative impacts of improper communication among team  | 2                             |   |          |          |          |          |          |
|   | 4.Knowledge about the benefits of discussing work related information's with colleagues   | 2                             |   |          |          |          |          |          |
|   | <b>Total Marks</b>  | <b>8</b>                      |   |          |          |          |          |          |
| <b>Batch No. &amp; TP:</b>  |   |                               |   |          |          |          |          |          |
| Assessors<br>Reg. No. :   | Assessors Name:   | Assessors Signature :         |   |          |          |          |          |          |
|   | Assessors Body(AB) Representative Name:   | AB Representative Signature : |   |          |          |          |          |          |
| Assessment Agency :   |   | Date :                        |   |          |          |          |          |          |



|   |  |                       |          |          |                                     |          |          |   |  |
|---|--|-----------------------|----------|----------|-------------------------------------|----------|----------|---|--|
|                                    | 1. Roll No. & Name:  | 4. Roll No. & Name:   |          |          |                                     |          |          |  |  |
|   | 2. Roll No. & Name:  | 5. Roll No. & Name:   |          |          |                                     |          |          |   |  |
|   | 3. Roll No. & Name:  | 6. Roll No. & Name:   |          |          |                                     |          |          |   |  |
| <b>Ref.QP Code- CON/Q0304</b>   | <b>Assessment Sheet for NOS No. - CON/N8002</b>  |                       |          |          | <b>Marks Obtained by candidates</b> |          |          |   |  |
| <b>QP &amp; NOS Detail</b>  | <b>Skills (Total Marks = 80)</b>   | <b>Allotted Marks</b> | <b>1</b> | <b>2</b> | <b>3</b>                            | <b>4</b> | <b>5</b> | <b>6</b>  |  |
| <b>QP : Shuttering Carpenter - System</b><br><br><b>CON/N8002: Plan and organize work to meet expected outcomes</b> | 1. Is candidate able understand the target clearly   | 15                    |          |          |                                     |          |          |   |  |
|   | 2. Is candidate able to explain the plan and sequence before performing any core task        | 15                    |          |          |                                     |          |          |   |  |
|   | 3. Is candidate able to guide other candidate while working together in a team               | 15                    |          |          |                                     |          |          |   |  |
|   | 4. Is candidate able to arrange right quantity of material                                   | 15                    |          |          |                                     |          |          |   |  |
|   | 5. Is candidate utilize resources effectively during performing the task                     | 10                    |          |          |                                     |          |          |   |  |
|   | 6. Is candidate adhering to the standard instructions while performing the task              | 10                    |          |          |                                     |          |          |   |  |
|   | <b>Total Marks</b>   | <b>80</b>             |          |          |                                     |          |          |   |  |
|   | <b>Knowledge -MCQ (Total Marks =12)</b>  |                       |          |          |                                     |          |          |   |  |
|   | 1. Knowledge about desired quality of worker   | 2                     |          |          |                                     |          |          |   |  |
|   | 2. Knowledge about reporting system  | 2                     |          |          |                                     |          |          |   |  |
|   | 3. Knowledges about resources  | 4                     |          |          |                                     |          |          |   |  |
|   | 4. Knowledge about the utilization of tools  | 2                     |          |          |                                     |          |          |   |  |
|   | 5. Knowledge about the safety procedures and instructions                                    | 2                     |          |          |                                     |          |          |   |  |
|   | <b>Total Marks</b>   | <b>12</b>             |          |          |                                     |          |          |   |  |
|   | <b>Knowledge Viva (Total Marks = 08)</b>   |                       |          |          |                                     |          |          |   |  |
|   | 1. Knowledge about good work practices which helps in avoiding damage to tools and equipment | 2                     |          |          |                                     |          |          |   |  |
|   | 2. Knowledge about the methods by which targets and timelines can be met                     | 2                     |          |          |                                     |          |          |   |  |
| 3. Knowledge about resources required to begin a shuttering carpentry activity                                      | 2  |                       |          |          |                                     |          |          |   |  |
| 4. Knowledges about the steps to be followed for risk assessment  | 2  |                       |          |          |                                     |          |          |   |  |
| <b>Total Marks</b>  | <b>8</b>   |                       |          |          |                                     |          |          |   |  |
| <b>Batch No. &amp; TP:</b>  |  |                       |          |          |                                     |          |          |   |  |
| Assessors<br>Reg. No. :   | Assessors Name:  |                       |          |          | Assessors Signature :               |          |          |   |  |
|   | Assessors Body(AB) Representative Name:  |                       |          |          | AB Representative Signature :       |          |          |   |  |
| Assessment Agency :   |  |                       |          | Date :   |                                     |          |          |   |  |





|  |  |                       |   |          |          |          |          |          |
|--|--|-----------------------|---|----------|----------|----------|----------|----------|
|                   | 1. Roll No. & Name:  | 4. Roll No. & Name:   |  |          |          |          |          |          |
|  | 2. Roll No. & Name:  | 5. Roll No. & Name:   |   |          |          |          |          |          |
|  | 3. Roll No. & Name:  | 6. Roll No. & Name:   |   |          |          |          |          |          |
| <b>Ref.QP Code- CON/Q0304</b>  | <b>Assessment Sheet for NOS No. - CON/N9001</b>  |                       | <b>Marks Obtained by candidates</b>   |          |          |          |          |          |
| <b>QP &amp; NOS Detail</b>   | <b>Skills (Total Marks = 80)</b>   | <b>Allotted Marks</b> | <b>1</b>  | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| QP : Shuttering Carpenter - System   | 1. How person identify hazards, risks in site and report to seniors  | 8                     |   |          |          |          |          |          |
|  | 2. How a person respond to emergency and evacuation procedures in case of accidents, fires   | 8                     |   |          |          |          |          |          |
| CON/N9001: Work according to personal health, safety and environment protocol at construction site | 3. Use of personal protective equipment listed below (Compulsory)  | 30                    |   |          |          |          |          |          |
|  | 4. Identification and operation procedure for fire extinguishers   | 8                     |   |          |          |          |          |          |
|  | 5. Handling technique of tools, materials and equipment  | 8                     |   |          |          |          |          |          |
|  | 6. Adhere to safe working practices while working at height, using tools and equipment, material shifting, working with hazardous materials etc. | 9                     |   |          |          |          |          |          |
|  | 7. Ensure cleaning, housekeeping and waste disposal  | 9                     |   |          |          |          |          |          |
|  | <b>Total Marks</b>   | <b>80</b>             |   |          |          |          |          |          |
|  | <b>Knowledge -MCQ (Total Marks =12)</b>  |                       |   |          |          |          |          |          |
| 1. Knowledge about significance of a prohibition notice  | 2  |                       |   |          |          |          |          |          |
| 2. Knowledge about safe evacuation procedure   | 2  |                       |   |          |          |          |          |          |
| 3. Knowledge about PPE   | 2  |                       |   |          |          |          |          |          |
| 4. Knowledge about reporting accidents   | 2  |                       |   |          |          |          |          |          |
| 5. Knowledge about the emergency equipment   | 2  |                       |   |          |          |          |          |          |
| 7. Knowledge about safe evacuation procedure   | 2  |                       |   |          |          |          |          |          |
| <b>Total Marks</b>   | <b>12</b>  |                       |   |          |          |          |          |          |
| <b>Knowledge Viva (Total Marks = 08)</b>   |  |                       |   |          |          |          |          |          |
| 1. Knowledge about the considerations before carrying a load                                       | 2  |                       |   |          |          |          |          |          |
| 2. Knowledge about why work environment need to be kept clean                                      | 2  |                       |   |          |          |          |          |          |
| 3. Knowledge about some good general safe practices followed at site                               | 2  |                       |   |          |          |          |          |          |
| 4. Knowledge about safe techniques while working with machines                                     | 2  |                       |   |          |          |          |          |          |
| <b>Total Marks</b>   | <b>8</b>   |                       |   |          |          |          |          |          |
| <b>Batch No. &amp; TP:</b>   |  |                       |   |          |          |          |          |          |
| Assessors<br>Reg. No. :  | Assessors Name:  |                       | Assessors Signature :   |          |          |          |          |          |
|  | Assessors Body(AB) Representative Name:  |                       | AB Representative Signature :   |          |          |          |          |          |
| Assessment Agency :  |  |                       | Date :  |          |          |          |          |          |



## 11. Annexure:

### General tolerance related to the practical task N0302 and N0304

| Shuttering Carpenter - System  |  |                        |                    |                  |
|--|--|------------------------|--------------------|------------------|
| 1. Learner Name: _____   |  | 2. Enrolment No: _____ |                    | 3. Centre: _____ |
| S.No   | Description                                | Permitted tolerance    | Observed variation | Assessments      |
| <b>General tolerance limit on the nominal sizes of finished boards</b> |  |                        |                    |                  |
| 1.   | Length                                     | +6mm / -0mm            |                    |                  |
| 2.   | Width                                      | +3mm / -0mm            |                    |                  |
| 3.   | Thickness less than 6 mm                   | +/- 10 percent         |                    |                  |
| 4.   | Thickness less 6 mm and above              | +/- 5 percent          |                    |                  |
| 5.   | Edge straightness per 1 meter              | 2mm                    |                    |                  |
| 6.   | Square ness per 1 meter                    | 2mm                    |                    |                  |
| 7.   | Ladder placing (75 degree from horizontal) | +/- 15 degree          |                    |                  |
| 8.   | Stability of joint                         | Rigid (No shake)       |                    |                  |
| <b>Assessor Comment:</b>   |  |                        |                    |                  |
|  |  |                        |                    |                  |
| Assessor Name  |  |                        | Assessor Signature |                  |
|  |  |                        |                    |                  |