APPENDIX - I

AN INTERVIEW SCHEDULE TO ELICIT INFORMATION ON ERGONOMIC ANALYSIS OF UNORGANIZED WOMEN CONSTRUCTION LABOURERS IN THEIR OCCUPATIONAL SETTINGS

I. Socio-economic status
- Name of the interviewer :
- Address :
- Age :
- Marital Status : Married Widow Divorce
- Religion : Hindu Muslim Christian
- Caste : General SC ST
- Type of Family : Nuclear Joint
- Educational Background:
  - Marital status: a) Married b) Unmarried c) Widow d) Divorcee
  - Age of marriage
  - Type of marriage
  - No of children
  - Gender of children
  - No of children begotten
  - No of children surviving
  - Family Background

<table>
<thead>
<tr>
<th>Members</th>
<th>Relation to the Women</th>
<th>Age</th>
<th>Education</th>
<th>Occupation</th>
<th>Monthly Income (₹)</th>
</tr>
</thead>
</table>

- What are the other sources of family income?
  - a. Landed properties  
  - b. Building  
  - c. Livestock  
  - d. Other specify

- Specify total family Income
- How much do you contribute for family income per month?
- Housing conditions: a. owned/rented  
  - b. Thatched/pucca house
- Resources at hand: a. Savings  
  - b. Jewels  
  - c. Materials  
  - d. Objects
- Indicate type of household activities done by you

II Work performance activities:
- Age of entry
- Experience in working in years
- Reason for going to this work
  - a. Money problems  
  - b. Unemployment
  - c. Lack of other skills  
  - d. Lack of some education
  - e. Easily available  
  - f. Because of job timings  
  - g. others

- Source of motivation
  - a. Friends  
  - b. Relatives
  - c. Only available job  
  - d. others

- Nature of work skills
  - a. Helping the members in masonry work  
  - b. Sieving sand  
  - c. Lifting tools

- Type of activities performed by you in your work centre
  - a. Lifting  
  - b. Pushing  
  - c. Pulling  
  - d. Tugging  
  - e. Twisting
  - f. Working in a single position  
  - g. Vibration

- How many months you have been unemployed or temporarily laid off this year and for what reason?
III Time and Energy management at work:
- Work timings:
- Type of activities which are fatiguing: list with reasons you attribute
- How long can you work without any rest/break:
  a. 2-4 hrs b. 4-6 hrs c. 6-8hrs
- Details of rest period: a. Morning break b. Lunch break c. Evening break
- Types of employment:
  a. Working under some contractors b. Working under Supervisors c. getting the job by themselves d. others

IV Health
- Do you suffer from any physical ailment due to involvement in this work:
- If yes what are the problems?
- How often have you experienced the problem?
  a. Everyday b. Every week c. Every month d. Once in a while
- How long does each pain last?
  a. One hour b. One day c. One week d. Once in a while
- When did you first notice the problem?
  a. Months ago b. year ago c. Others
- What do you think causes the problem?
  a. Repetitive Motions b. awkward posture c. pressure d. Materials
- How do you get relieved of your health problem?
  a. Consultation with doctors b. Applying pain relieving balm c. Taking rest d. others
- Did you suffer any accident/injuries in the work spots? Yes No
- If yes what type of accident?
- Do you suffer from harassment and sexual harassment in work place?
- Do you suffer from any violence at home?
- Do you suffer from any violence at work spots?
- Any miscarriage-abortion/still birth/due to this work? Yes No
- If yes how many times.
- Health status of children: a. premature births b. physically retarded c. Any health problems
- In summer do you feel uncomfortable working with your equipment and materials?
- In cold weather do you feel uncomfortable working with your equipment and materials?

V. Facilities
- What are the facilities provided in the work area?
- Do you enjoy provisions for protective equipments: Yes No
- If yes give details: a. Protective clothing b. Gloves c. Gum boots d. Others
- Safety and first aid kit: Yes No
- Training to use the kit: Yes No
- Do you have regular medical check up? Yes No
- Have you attended any safety training programme? Yes No
- If yes give details
- Do you want to continue with the work? Yes No
- Give reasons
APPENDIX – II

NORMATIVE GRIP STRENGTH DATA FOR FEMALES

<table>
<thead>
<tr>
<th>Age</th>
<th>Hand</th>
<th>Mean (kg)</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 – 24</td>
<td>R</td>
<td>31.9</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>27.7</td>
<td>5.9</td>
</tr>
<tr>
<td>25 – 29</td>
<td>R</td>
<td>33.8</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>28.8</td>
<td>5.5</td>
</tr>
<tr>
<td>30 – 34</td>
<td>R</td>
<td>35.7</td>
<td>8.7</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>30.8</td>
<td>8.0</td>
</tr>
<tr>
<td>35 – 39</td>
<td>R</td>
<td>33.6</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>30.1</td>
<td>5.3</td>
</tr>
<tr>
<td>40 – 44</td>
<td>R</td>
<td>31.9</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>28.3</td>
<td>6.3</td>
</tr>
<tr>
<td>45 – 49</td>
<td>R</td>
<td>28.2</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>25.4</td>
<td>5.8</td>
</tr>
<tr>
<td>50 – 54</td>
<td>R</td>
<td>29.8</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>26.0</td>
<td>4.9</td>
</tr>
<tr>
<td>55 – 59</td>
<td>R</td>
<td>26.0</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>21.5</td>
<td>5.4</td>
</tr>
<tr>
<td>60 – 64</td>
<td>R</td>
<td>25.0</td>
<td>4.6</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>20.7</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Adapted from manual Jamar Hand Dynamometer

Procedure for Grip Strength to Gauge their Strength in the Maximum Used Body Parts – Arms and Fingers

Samples were allowed to familiarize themselves with each instrument by one sub maximal practice trial. Then they were asked to sit with their hips and knees flexed to 90° and their feet flat on the floor, with their shoulder abducted and neutrally rotated, elbow flexed to 90°, forearm in mid prone position and wrist in slightly extended position for optimal performance while recording data for both hand power grip and lateral pinch strength as shown in Plate 1.

Grip strength was tested among fifty women construction workers, selected according to purposive sampling using the Jamar hydraulic hand dynamometer and subjected to the tests beginning with the right hand, which was followed by the left hand. All the tests were performed for both dominant and non dominant hands for the individual subjects. Each subject was instructed to squeeze the hand dynamometer for three seconds and then to break for one minute before the next squeeze. Three maximum attempts for each measurement was taken and the average value of these trials was recorded. One - minute rest was given between each attempt and hands were alternated to minimize fatigue effects. No verbal encouragements were performed.
APPENDIX - III

Please answer by using the tick boxes □ one tick for each question please note that this part of the question should be answered even if the subject have never had trouble in any part of the body.

NORDIC PAIN QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Have you at any time during the last 12 months had trouble (such as ache, pain, discomfort) in:</th>
<th>Have you at any time during the last 12 months been prevented from doing your normal work (at home or away from home) because of the trouble?</th>
<th>Have you had trouble at any time during the last 7 days?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck</td>
<td>Neck</td>
<td>Neck</td>
</tr>
<tr>
<td>1. YES () 2. NO ()</td>
<td>1. Yes () 2. NO ()</td>
<td>1. Yes () 2. NO ()</td>
</tr>
<tr>
<td>&quot;Shoulder&quot;</td>
<td>&quot;Shoulder&quot;</td>
<td>&quot;Shoulder (both/either)&quot;</td>
</tr>
<tr>
<td>1. Yes () 2. NO ()</td>
<td>1. Yes () 2. NO ()</td>
<td>1. Yes () 2. NO ()</td>
</tr>
<tr>
<td>3. In the right shoulder ()</td>
<td>3. In the right shoulder ()</td>
<td></td>
</tr>
<tr>
<td>4. In the left shoulder ()</td>
<td>4. In the left shoulder ()</td>
<td></td>
</tr>
<tr>
<td>5. In the both shoulder ()</td>
<td>5. In the both shoulder ()</td>
<td></td>
</tr>
<tr>
<td>&quot;Elbows&quot;</td>
<td>&quot;Elbows&quot;</td>
<td>&quot;Elbows (both/either)&quot;</td>
</tr>
<tr>
<td>1. NO () 2. YES ()</td>
<td>1. NO () 2. YES ()</td>
<td>1. Yes () 2. NO ()</td>
</tr>
<tr>
<td>3. In the right Elbow ()</td>
<td>3. In the right Elbow ()</td>
<td></td>
</tr>
<tr>
<td>4. In the left Elbow ()</td>
<td>4. In the left Elbow ()</td>
<td></td>
</tr>
<tr>
<td>5. In the both Elbow ()</td>
<td>5. In the both Elbow ()</td>
<td></td>
</tr>
<tr>
<td>&quot;Wrist/hands&quot;</td>
<td>&quot;Wrist/hands&quot;</td>
<td>&quot;Wrist/hands (both/either)&quot;</td>
</tr>
<tr>
<td>1. NO () 2. YES ()</td>
<td>1. NO () 2. YES ()</td>
<td>1. Yes () 2. NO ()</td>
</tr>
<tr>
<td>3. In the right wrist/hand ()</td>
<td>3. In the right Wrist/hand ()</td>
<td></td>
</tr>
<tr>
<td>4. In the left wrist/hand ()</td>
<td>4. In the left Wrist/hand ()</td>
<td></td>
</tr>
<tr>
<td>5. In the both wrist/hand ()</td>
<td>5. In the both Wrist/hand ()</td>
<td></td>
</tr>
<tr>
<td>&quot;Upper back&quot;</td>
<td>&quot;Upper back&quot;</td>
<td>&quot;Upper back&quot;</td>
</tr>
<tr>
<td>1 No () 2 Yes ()</td>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
</tr>
<tr>
<td>&quot;Lower back (small of the back)&quot;</td>
<td>&quot;Lower back&quot;</td>
<td>&quot;Lower back&quot;</td>
</tr>
<tr>
<td>1 No () 2 Yes ()</td>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
</tr>
<tr>
<td>&quot;One or both hip/thigh/buttocks&quot;</td>
<td>&quot;Hip/thigh/buttocks&quot;</td>
<td>&quot;Hip/thigh/buttocks&quot;</td>
</tr>
<tr>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
</tr>
<tr>
<td>&quot;One or both knees&quot;</td>
<td>&quot;Knees&quot;</td>
<td>&quot;Knees&quot;</td>
</tr>
<tr>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
</tr>
<tr>
<td>&quot;One or both ankles/feet&quot;</td>
<td>&quot;Ankles/feet&quot;</td>
<td>&quot;Ankles/feet&quot;</td>
</tr>
<tr>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
<td>1.No () 2.Yes ()</td>
</tr>
</tbody>
</table>

Total Nordic Pain Score…
Procedure for Nordic Musculoskeletal Questionnaire (NMQ)

NMQ was administered on the selected 50 women construction workers. To see the validity of the questionnaire a pilot study was carried out in their local language among five samples from the total 500 women construction workers during the survey. It interviewed the workers in their local dialect (Tamil). Based on the pilot study the type of interviewing and the style of putting questions were modified so as to make the samples understand the ethos of the NMQ better and respond effectively. Thereafter the NMQ was applied on 50 selected samples.

At first the workers were asked whether they had any trouble (such as ache, pain, discomfort) during the last 12 months. For those who answered in the affirmative the second question, whether during the last 12 months they had been prevented from doing their normal work (at home or away from home) because of the trouble was thrown. Then they were also asked whether they had any trouble during the last seven days prior to the interview. The findings obtained are presented under the Table 51.

Procedure for Body Discomfort/Pain

A body map as shown below was used for the study. It was given with a five point scale, with the extremes anchored by the terms “nothing at all” and “extreme discomfort” to each of the workers asking them to judge the present level of overall discomfort felt during the study period. In the current study two times of the day were chosen and two templates for each time of the day were made for each sample.

Depending on the extent of discomfort felt, scores were awarded for each part with score card based on the intensity of the discomfort felt from 0 – 4. The graphs (Figures given along with numerical data) attached represent the information pertaining to the discomfort rate experienced in different body regions by 50 samples performing all the
different types of activities. The findings are consolidated and are discussed under results and discussion.

**Procedure for Ovako Working posture Assessment system (OWAS)**

The samples (50) selected were videographed while they were performing their activities on a particular day and stills showing sequence of actions were taken for further analysis.

**OWAS Posture Analysis Status for the Selected Sample (n=50)**

<table>
<thead>
<tr>
<th>Task</th>
<th>Duration (hrs/day)</th>
<th>Posture studied</th>
<th>OWAS Code</th>
<th>Action Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrying Loads</td>
<td>6 - 7</td>
<td>1</td>
<td>2 Back</td>
<td>3 Arm 3 Leg 7 Load 4</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>1 Back</td>
<td>3 Arm 3 Leg 7 Load 4</td>
</tr>
<tr>
<td>Passing bricks Manually</td>
<td>3 - 4</td>
<td>1</td>
<td>4 Back</td>
<td>1 Arm 4 Leg 1 Load 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>1 Back</td>
<td>2 Arm 2 Leg 2 Load 1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>1 Back</td>
<td>1 Arm 2 Leg 1 Load 1</td>
</tr>
<tr>
<td>Sieving sand</td>
<td>3 - 4</td>
<td>1</td>
<td>1 Back</td>
<td>2 Arm 2 Leg 1 Load 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>1 Back</td>
<td>2 Arm 2 Leg 1 Load 1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>1 Back</td>
<td>2 Arm 2 Leg 1 Load 1</td>
</tr>
<tr>
<td>Shoveling</td>
<td>2 - 3</td>
<td>1</td>
<td>2 Back</td>
<td>1 Arm 7 Leg 1 Load 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>1 Arm 7 Leg 1 Load 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>1 Arm 7 Leg 1 Load 1</td>
<td></td>
</tr>
<tr>
<td>Filling mud in the foundation</td>
<td>3 - 4</td>
<td>1</td>
<td>2 Back</td>
<td>1 Arm 4 Leg 1 Load 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>1 Arm 4 Leg 1 Load 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>1 Arm 4 Leg 1 Load 1</td>
<td></td>
</tr>
<tr>
<td>Sweeping</td>
<td>1 - 2</td>
<td>1</td>
<td>2 Back</td>
<td>1 Arm 7 Leg 1 Load 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>1 Arm 7 Leg 1 Load 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>1 Arm 7 Leg 1 Load 1</td>
<td></td>
</tr>
</tbody>
</table>

**Procedure for Rapid Upper Limb Assessment (RULA)**

Rapid Upper Limb Assessment (RULA) (McAtamney and Corlett, 1993) provides an easily calculated rating of musculoskeletal loads in tasks where people have a risk of neck and upper-limb loading. It assesses a working posture and the associated level of risk in a short time frame and with a need for equipment beyond pen and paper. The tool provides a single score as a snapshot of the task, which is a rating of the posture, force and movement required. The risk is calculated within a score range of 1 (low) to 7 (high). These scores are grouped into four action levels that provide an indication of the time frame in which it is reasonable to expect risk control to be initiated.
Procedure for Body mass index was calculated as per the standard formula

\[
\text{Body mass index} = \frac{\text{Weight (Kilograms)}}{\text{Height (Meters}^2)}
\]

Categorization of the Activities based on Severity of Prolonged Physical Work

<table>
<thead>
<tr>
<th>Severity of work</th>
<th>Heart rate response (beats(^{-1}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light work</td>
<td>90 beats(^{-1})</td>
</tr>
<tr>
<td>Moderate work</td>
<td>90 – 110 beats(^{-1})</td>
</tr>
<tr>
<td>Heavy work</td>
<td>110 – 130 beats(^{-1})</td>
</tr>
<tr>
<td>Very heavy work</td>
<td>130 – 150 beats(^{-1})</td>
</tr>
<tr>
<td>Extremely heavy work</td>
<td>150 – 170 beats(^{-1})</td>
</tr>
</tbody>
</table>

Source: Astrand and Rodahl, (1986)

The range of increase recorded for the samples performing all the activities is presented in the table 49 with the computation estimated on Box based for comprehending the severity of the prolonged physical work for the concerned sample.

Procedure for Absolute and Relative Assessment of Cardiac Cost

To give an estimation of the subject exertion, it is recommended to use the relative index. Thus, Heart Rate has to be expressed in relation with the subject's maximal Heart Rate and/or resting Heart Rate. Several Heart Rate indices have been developed and used in the estimation of the physiological strain. The index implemented in this proposed system is briefly presented.

Absolute heart rate at work was found out by calculating the mean working heart rate into time and Relative heart rate by calculating the mean incremental value into time for different activities.

\[
\text{Absolute cardiac cost} = \text{Mean Working Heart rate (WHR)} \times \text{Time}
\]

\[
\text{Relative cardiac cost} = \text{Mean Incremental Value (IHR)} \times \text{Time}
\]

Where:

- **WHR** is the HR recorded while the subject was working. WHR is an average value calculated during a certain amount of time. According to the necessity to ensure timely decision for the proposed system, the time step used was 1 minute (one minute recording of HR, thrice at regular intervals).

- **Heart rate at rest** was measured after 5 min of rest in the supine position as suggested by Perkiö-Mäkelä & Hentilä (2005).

- **IHR** is the incremental value which was calculated by subtracting resting heart rate from working heart rate.

The details are presented under Table 50.
### APPENDIX – IV

CHECKLIST TO ELICIT INFORMATION ON KNOWLEDGE OF ERGONOMICS IN DAILY LIFE

<table>
<thead>
<tr>
<th>Statements</th>
<th>Agree</th>
<th>Not agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended other ergonomic program/safety training program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge on ergonomics?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergonomics is the interaction between workers and their work environment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergonomics fit the demands of work to the capability of a person (to reduce stress).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergonomics helps to design the task to enable it to accomplish efficiently, accurately and safely.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergonomics helps to design workplace proportions to ensure correct body-posture.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergonomics - prime purpose is to take care of human needs in the work environment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The object of ergonomics is to achieve the best mutual adjustment of man and his work for the improvement of human efficiency and well being.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The purpose of ergonomics is occupational injury and illness reduction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The purpose of ergonomics is workers’ compensation costs containment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The purpose of ergonomics is productivity improvement.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The purpose of ergonomics is work quality improvement.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The purpose of ergonomics is absenteeism reduction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The purpose of ergonomics is Government regulation compliance.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Principles of ergonomics:
- Work in neutral posture
- Reduce excessive force
- Keep everything in easy reach
- Work at proper heights
- Reduce excessive motions
- Minimize fatigue and static load
- Minimize pressure points
- Provide clearance
- Move, exercise and stretch
- Maintain a comfortable environment

#### Type of exertion causes musculoskeletal disorders?

Musculoskeletal disorders occur in backs and upper and lower extremities.

Musculoskeletal disorders occur gradually over a relatively long period of time of exposure to the corresponding contributing factors.

Musculoskeletal disorders are a condition where a part of musculoskeletal system is injured over time.

Work-related musculoskeletal disorders (WMSDs) are the leading cause of disability for people in their working years.

Work-related musculoskeletal disorders (WMSDs) caused by frequently working in a way that puts stress on the body as such: Working in awkward positions, twisting, bending, carrying
overhead, repeating movements and over-reaching.  

**Ergonomics tries to come up with solutions to make sure workers stay safe, comfortable, and productive.**

Ergonomics can be applied to your work while carrying load, sieving sand, shoveling, passing bricks manually, digging mud and sweeping.

**Job rotation can be applied to your work.**

Excessive weight of the materials to be carried can be reduced.

**Ergonomics can be applied in your daily living**

Taking medicine everyday to get relief from pain is not good for health.  

**Exercise is good for health than to take medicine**

To get relieve from work related pain exercise play an important role.

Breathing exercise helps to get relief and peace of mind from work environment stress.

**Should practice healthy habits in daily living:**
✓ Waking early in the morning  
✓ Avoiding chewing tobacco  
✓ Avoiding watching unnecessarily TV serials  
✓ Doing exercise, meditation and Yoga  

**WHO definition of Health is:** Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

**Health is wealth**

**Should practice Personal hygiene:**
✓ Washing hand before food  
✓ Brushing teeth everyday  
✓ Taking bath everyday  
✓ Washing hand with soap after coming from toilet  
✓ Trimming nails every week  
✓ Proper sanitation  
✓ Cleanliness is next to godliness  

Healthy diet is very important for the type of work you do.

Knowledge about nutrition and the nutrients content in different food is very important for healthy diets.

**Nutrition is the science of nourishing the body.**

Nutrients are small chemical components of food capable of performing functions related to body’s ability to work, grow, develop and maintain good health.

**Good physical strength can be made possible by good eating.**

**Sources of Proteins are meat, pulses, milk, fish and egg**

**Sources of Carbohydrates are sugar, jiggery, potato, cereals, rajmah, wheat, rice and some dry fruits.**

**Sources of Fats are ghee, butter, oil, cod liver oils, peanuts, coconut, cashew nut almond and soyabean etc.**

**Sources of Vitamins A are carrots, spinach, cabbage, papaya, liver and egg yolk.**

**Sources of Thiamine are yeast, soyabean, green leafy vegetables and dry fruit nuts.**
Sources of Riboflavin are milk, egg, liver, yeast, cheese, green vegetables and meat.

Sources of Niacin are yeast, groundnut, whole cereal and pulses.

Sources of Vitamin C are citrus fruits, amla and guava.

Sources of Vitamin D are cod liver oil, butter, ghee, egg, milk and sunlight.

Sources of Calcium are milk and milk products, spinach, leafy green vegetables, soyabean, dates, egg, fish etc.

Sources of Iron are cereals, soyabean, almond, nuts, banana, meat, egg etc.

Sources of Iodine are water, green leafy vegetable, fish, salt etc.

Nutritive food can also be achieved through locally available food.

Knowledge about correct methods of cooking food without much loss of nutrients is very important.

Do you know about social security schemes?

- The Building and other construction workers (Regulation of Employment and conditions of service) Act, 1996.
- The Factories Act, 1948
- Maternity benefits Act, 1961
- Sexual harassment of women at their workplace

Registration to construction trade union office is beneficial for lifetime.

To get registered ration card and photo is needed.

Personal protective equipment is very important for safety and heath.

Safety equipment such as hard hats, safety boots, gloves, goggles and other prescribed safety gear should be provided.

The lack of appropriate Personal Protective Clothing (PPC) and Personal Protective Equipment (PPE) can cause serious safety and health risks for women. Having inadequate or ill-fitting clothing, boots, gloves, or safety equipment presents a safety hazard for any worker.

Clothing or equipment that is not sized, or does not fit, properly can compromise personal safety. It also may not function effectively in the manner for which it was designed.

Personal protective equipment intended for use by women workers should be based upon female anthropometric (body measurement) data.

While doing all construction activities wearing personal protective equipment is good for safety.

Work gloves must fit properly.

Overly large gloves impair the transfer of sensory information from the hand, resulting in excessive force being applied.

Tight gloves can restrict blood flow.

Wearing gloves prevents contact dermatitis of hand.

Safety needs to be seen as an integral part of every lesson.