

**Department of Chemical Engineering**  
**Sant Longowal Institute of Engineering & Technology**

**Exercise in Lieu of Industrial Training of ICD Second Year (DCT-CPT/2019) – 4 Weeks duration**

Due to the present Covid-19 situation, maximum number of students are at their respective home places. As per course requirement, the students must complete their respective In-House training, Industrial training and Project work, which is the mandatory course requirement in order to get certificate and Diploma. For this, the department has planned certain topics in the areas Chemical Engineering ( specially focussed on paper technology) and topics related to present Covid-19 scenario. The students have to write report in the prescribed format. The report in the document and pdf format has to be submitted to the concerned faculty coordinator in a time bound manner as per notified institute academic calendar available on institute website.

**Objectives:** The student must be able to

1. To understand the working of a paper and paper board industry
2. To understand scope and opportunities in paper and paper board industry
3. To know basic working steps of important equipments of paper industry
4. To understand and evaluate skills required by a diploma engineer – Hard skills and soft skills
5. To understand and visualize a pulp and paper based process industry in term of manufacturing process, flow diagrams, materials handling, functioning of various sections of industry.
6. To be able to understand the safety, environment and energy issues in a paper and other allied industry
7. To understand & analyze COVID19 situation and lifestyles & measures after lockdown period w.r.t. campus living like academics, hostel etc.
8. Any innovative product development process for handling new challenges due to COVID-19.

| S. No. | Topic of Activity  | Max Marks | Report Submission                        | Days of activity | Report Submission day |
|--------|--|-----------|--|------------------|-----------------------|
| 1      | Online course on Soft/Life Skills for engineers titled ' <b>Career Edge – Knockdown the Lockdown</b> ' by TCSiON – Digital Learning Hub. Login upon <a href="https://learning.tcsionhub.in/courses/career-edge/">https://learning.tcsionhub.in/courses/career-edge/</a>  | 15        | 1 page summary report of each day module | Day 1-14         | Day 15                |
| 2      | Enlist the Testing Equipments of Paper Testing Lab. How will you properly run and maintain Pulp and Paper Quality Control Laboratory for different grades of paper? Prepare a detailed report.   | 12        | 8-10 pages report                        | Day 4-12         | Day 13                |
|        | How can you set up a <b>agro waste based pulping and bleaching</b> plant for the production of<br>i) copier paper<br>ii) packaging grade paper<br>iii) Filter paper<br>The daily production capacity of plant is 300 metric tons. Draw the plant layout and details of different processing units accordingly along with economic considerations. Prepare a detailed report.   | 24        | 5-6 pages report                         | Day 8-22         | Day 23                |
|        | List the name of equipments and explain all the equipments, which can be used in carrying out work in <b>stock preparation and paper machine sections</b> . Write the operating instructions of all the equipments. How a Plant can be used for different grades of paper production. Also give summary of paper finishing equipments.   | 22        | 3-4 pages report                         | Day 18-28        | Day 29                |
|        | Prepare detailed report for material balance of different ingredients (fiber, fillers, chemicals, water) used in a pulp and paper industry manufacturing 500 tons of O.D. writing and printing paper.  | 12        | 3-4 pages report                         | Day 18-21        | Day 22                |
| 3      | Give your suggestions and ideas in maintaining physical distance in hostel rooms. Identify physical contact points in room, corridor, mess, common places like TV room, reading room, sports room, main gate of hostel etc. Suggest methods to minimize the touch in all these places and preventive measures, which could be taken to prevent the spread of infection. Recommend the means to sanitize these touch points on daily basis. Suggest some innovative product or process to handle the problem of COVID-19? | 15        | 4-6 pages report                         | Day 7-8          | Day 9                 |

**Note : S.No. 2 is corresponding to Pulp and Paper Industry. The student may opt for any other important Chemical Industry of their choice after discussion with Faculty Mentor/ Supervisor and duly approved by Faculty Coordinator in advance.**

Students are advised to refer various websites from the internet for the exercises. Online links and study materials would be shared time to time through Google Classroom. All students would be required to register on the Google Classroom for In-house Summer Training and will submit objective-wise report into it after getting approved from concerned Faculty mentor/ supervisor (communication with concerned faculty mentor/ supervisor may be made through phone/whatsapp/e-mail). Late submission will not be accepted for evaluation and zero marks will be awarded for that. Faculty mentors/ supervisors will evaluate the work/ reports and the final award sheet in prescribed Performa would be submitted to Faculty Coordinator (Summer Training for degree program) at the end of training program. Following will be distribution of the marks to be awarded:

60% of total marks – To be awarded by concerned Faculty mentor/ supervisor (continuous assessment)

20% of total marks – To be awarded by Faculty Coordinator (Continuous assessment)

20% of total marks – To be awarded on the basis of final report submission and Viva-voce exam.

### **GUIDELINES FOR SECTIONWISE REPORTS (Soft copy only)**

**Front page** : Task Name, Student Name, Course, Registration No, Institute Logo, Department Name, Institute Name and address, Dates etc.  
Body of text of report  
References used

### **GUIDELINES FOR FINAL REPORT (Soft/ Hard copy)**

**Front page** : Task Name, Student Name, Course, Registration No, Institute Logo, Department Name, Institute Name and address, Dates etc.

**Second Page**: Certificate

**Third Page onwards**:

Dedication/Acknowledgement

Contents

Body of Report (sectionwise), each section to start with New page

References and Appendix (if Required).

**(Format** : Font-12 Pt. Arial, 1.5 line spacing, Both Sides printing, Main Heading 14 Bold, Sub Heading 12 Bold)