

Roll No



**PRESIDENCY UNIVERSITY  
BENGALURU**

**SET - A**

**SCHOOL OF ENGINEERING  
END TERM EXAMINATION – MAY/JUNE 2024**

**Semester :** Semester VIII - 2020

**Course Code :** CIV3018

**Course Name :** Pre-fabricated Structures

**Program :** B. Tech.

**Date :** June 03, 2024

**Time :** 1.00pm to 4.00pm

**Max Marks :** 100

**Weightage :** 50%

**Instructions:**

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

**PART A**

**Answer any 10 questions**

**10\*2M=20M**

1. Define standardization in prefabrication. (CO1) [Knowledge]
2. List down the required skilled personnel for crane operation. (CO1) [Knowledge]
3. Define modular co-ordination in prefabrication. (CO1) [Knowledge]
4. List the benefits of prefabrication in construction field. (CO1) [Knowledge]
5. What is galvalume. (CO1) [Knowledge]
6. List 2 types of prefabrication based on place of production. (CO2) [Knowledge]
7. List 2 different types of preassembly. (CO2) [Knowledge]
8. List the importance of bridges. (CO3) [Knowledge]
9. List the types of prefab concrete slabs. (CO3) [Knowledge]
10. Define wet joints and dry joints. (CO3) [Knowledge]
11. Define one way and two way slab. (CO3) [Knowledge]

12. What is a Vacuum lifting pad? (CO3) [Knowledge]
13. Write the advantages of large panel construction. (CO3) [Knowledge]
14. List the types of large panel construction. (CO3) [Knowledge]

## PART B

**Answer any 10 question**

**10\*4M=40M**

15. Standardization can refer to the establishment of guidelines for global marketing. Explain different types of standardization in prefabricated structures. (CO1) [Comprehension]
16. Quality control in construction is the process of monitoring, regulating, and correcting issues in materials, methods, and the final product. The goal of QC is to ensure that the project meets quality standards, design specifications, and regulatory requirements. Write a note on the QC factors involved in erection of prefabricated structure. (CO1) [Comprehension]
17. Technology helps connect people, generate new ideas, and solve problems. List the advantages of prefabrication technology in construction industry. (CO1) [Comprehension]
18. Production quality is manufacturing quality, is a way to measure how well a manufacturing process creates products that match their initial design specifications. Write a note on production of pre-cast members in construction industry. (CO1) [Comprehension]
19. Precast concrete is made by pouring concrete into a reusable mould, called a "form", and then curing it in a controlled environment. Draw the schematic representation of production system of prefabricated members. (CO2) [Comprehension]
20. In LPS construction, walls are the main structural members that carry the load, rather than columns. List out the advantages of large panel constructions. (CO2) [Comprehension]
21. Preassembly is the manufacture and assembly of buildings or parts of a construction ahead of the time that they would traditionally be constructed on site. Explain its types in detail. (CO2) [Comprehension]
22. Shear walls are designed to transfer lateral loads to the foundation of a building, Define shear wall and list the types. (CO3) [Comprehension]
23. A lattice girder is a truss girder where the load is carried by a web of latticed metal. Write a note on Lattice girder. (CO3) [Comprehension]
24. The large panel system building is a building constructed of large, [prefabricated concrete slabs](#). Such buildings are often found in housing development areas. What are the challenges in large panel construction. (CO3) [Comprehension]
25. A new prefabrication factory is required to be set up in a semi urban region, List complete Planning involved to set up plant layout. (CO3) [Comprehension]
26. Purlins are usually installed parallel to the building's eave and supported by walls or rafters. Write a note on Purlins. (CO3) [Comprehension]

27. A structure is an arrangement and organization of interrelated elements in a material object or system. Write the difference between load bearing and framed structures. (CO3) [Comprehension]
28. A bungalow is a one-story house, cottage, or cabin. Describe Single storey buildings. (CO3) [Comprehension]

### PART C

Answer any 4 questions

4\*10M=40M

29. Checkpoints can refer to points or items in a procedure for notation, inspection, or confirmation. List out the checkpoints to be followed while Hoisting, Rigging and Installation the precast units. (CO1) [Application]
30. Controlled environment of a factory helps to protect building materials from external factors, while standardization reduces the risk of defects and errors. The type of construction also allows the use of high quality materials, favoring and guaranteeing the quality of the finished product. Explain any 2 types of prefabrication in detail. (CO1) [Application]
31. The process effectiveness of a structure is a degree of feasibility of its manufacture, transportation and erection with minimum consumption of materials, labor and other resources. Explain the process of production, transportation and erection of precast units in construction. (CO1) [Application]
32. A small precast factory has produced 38 numbers of solid wall panels with a size 3000 x 2500x 230mm, these panels are required to be stored in the factory itself for another 4weeks, due to uncertain lockdown imposed in the state, so explain the storage method of precast elements that must be followed in the factory. (CO2) [Application]
33. There is a variation in the size of member that has been produced in a prefab factory which is to be used in the construction of residential building, what is the term that accept this variation within the limits? Explain it in detail with an example. (CO2) [Application]
34. A car parking area of 50 x 100 feet is required to be constructed for an industry, It is already been planned to cover up the same with aluminum sheets by erecting steel compression members, hence with the help of neat diagram, provide the complete roof installation procedure to build the same by following pre-engineered construction (Assume all different roofing members to be provided to build the roof). (CO3) [Application]