

Name:  
Enrolment No:



## UPES, Dehradun

### Supplementary Examination, December 2023

Programme Name: B Tech Civil Engineering

Semester : III

Course Name : Computer-Aided Civil Engineering Design

Time : 3 hrs

Course Code : CIVL 2013

Max. Marks: 100

Nos. of page(s) : 2

Instructions: Any missing data may be suitable assumed.

#### SECTION A

S. No.		Marks	CO
Q 1	Outline the steps involved in setting up units and drawing limits in AutoCAD.	4	CO1
Q 2	Explain the concept of 'layers' in AutoCAD	4	CO1
Q 3	What is the command for 'offset' in AutoCAD and what is its use?	4	CO1
Q 4	With the help of a neat sketch, show header and stretcher course in brick masonry	4	CO2
Q 5	Explain the terms, footing, lintel, chajja and roof.	4	CO2

#### SECTION B

Q 6	Explain brick masonry. With the help of neat sketch, show different types of bonds in brick masonry.  <b>OR</b>  Describe stone masonry. How can you draw the stone masonry using AutoCAD.	3+7	CO2
Q 7	With the help of neat diagrams, explain orthographic and isometric projection.	10	CO4
Q 8	Sloped footing is used in a residential buildings Draw the sectional view of a column of the building showing the footing and label each component.	10	CO3

Q 9	<p>Draw the plan of single flight of a R.C.C. staircase using the following data:</p> <p>Number of risers- 12 of 180 mm height</p> <p>Number of treads – 11 of 280 mm width</p> <p>Width of staircase is 1200 mm</p> <p>Landing at top is 1200 x 1200 mm</p>	<b>10</b>	<b>CO4</b>
<b>SECTION-C</b>			
Q 10	<p>Draw the ground floor plans of the ‘Hubble block’ and ‘Block-1’ of your institution (UPES) to the suitable scale and label each component of the block.</p> <p style="text-align: center;"><b>OR</b></p> <p>Provide a list of at least 10 drawing tools that you may use for drawing in AutoCAD. Also, provide a description of each of the tools.</p>	<b>20</b>	<b>CO4</b>
Q 11	<p>(a) With the help of neat sketches, show different types of footing. Also, explain under which circumstances each of the footings is preferred over others.</p> <p>(b) Outline various stages of construction of a residential building starting from excavation of earthwork to concreting of roof slab.</p>	<b>10+10</b>	<b>CO3</b>