

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

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) : 02	

Instructions: Please **support your answers with suitable clean sketches**, wherever necessary.

SECTION A

S. No.		Marks	CO
Q 1	What is the concept of Layering and what are its applications / benefits in AutoCAD?	05	CO1
Q 2	Discuss the differentiating parameters between Plastering and Pointing.	05	CO2
Q 3	Explain a residential building is different from a go-down building in terms of functional and architectural requirements?	05	CO3
Q 4	Explain the process of extension of columns from foundation to the roof of a residential building from the perspective of steel reinforcements.	05	CO4

SECTION B

Q 5	List down at least five editing tools of AutoCAD and briefly explain them.	10	CO1
Q 6	What do you understand by dimensioning in AutoCAD? Explain basic principles of Dimensioning by giving proper examples.	10	CO1
Q 7	Which important characteristics of building construction is measured by plumb bob and spirit level in civil engineering construction? Sketch them along with their importance.	10	CO4
Q 8	<p>What is the function of staircase and how it is erected from the floor of house at plinth level. Explain the process of construction of a staircase from structural perspective.</p> <p style="text-align: center;">OR</p> <p>Draw clear sketches of the following components along with the distribution of reinforcements also specifying the nomenclature.</p> <p style="margin-left: 40px;">A. Rectangular Footing B. Columns C. Lintel beam with Chajja emerging from it.</p>	10	CO4

SECTION-C

Q 9	Briefly explain the various components of residential building construction? Sketch the plan, elevation and typical section from foundation to roof slab of a single storey building clearly indicating all the components and their nomenclature.	20	CO3
Q 10	<p>Explain the purpose of a footing in civil engineering buildings? How many types of footings are commonly found? Draw a clear sketch of the plan, elevation and isometric view of a trapezoidal footing.</p> <p style="text-align: center;"><u>OR</u></p> <p>Why monolithic RCC column beams joints are important in civil construction and how it is ensured at site? What is the purpose of column pedestal in foundation? Sketch the shapes of the main reinforcement and stirrups in columns and the bars in the foundation mat.</p>	20	CO2