

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, April/May 2018**

**Programme:** B. Tech Civil Engg. spz Infra Dev.  
**Course Name:** Building Design & Town Planning  
**Course Code:** CIVL 3013  
**No. of page/s:** 2

**Semester – VI**  
**Max. Marks : 100**  
**Duration : 3 Hrs**

**SECTION A**

Attempt All questions. All question carries 4 marks.

Answer in maximum 60 words for each question. [20 Marks]

S. No.	Statement of question	Marks	CO
Q. 1	List various type of Buildings.	4	CO2
Q. 2	What are Fire Zones? Discuss its demarcation.	4	CO4
Q. 3	What do you understand by term Building Services?	4	CO3
Q. 4	Draw diagram of two-pipe system of plumbing.	4	CO4
Q. 5	Write short notes on: Air Change Landuse	4	CO4 CO3

**SECTION B**

**4 Questions of 10 marks each**, out of which 4 Questions shall be compulsory and 1 Question have internal choice to attempt any one.

(Answer in max 200 words for each question). [40 Marks]

Q. 6	List the various plans/drawings in the Municipal Drawing. Highlight the content of the Area Schedule regarding Permissible & Achieved limits of construction.	10	CO1
Q. 7	“Building byelaws is an important tool for controlling the development” Support the statement by sketches.	10	CO2
Q. 8	Draw the typical arrangement of Down Comer for building above 15 m but not exceeding 30 M.	10	CO4
<b>Or</b>			
	Draw typical arrangement of wet riser and total sprinkler system of Building other than Apartment exceeding 30 M in Height.		
Q. 9	What do you understand by UDPFI? Discuss its relevance in the Town Planning.	10	CO3

**SECTION-C**

**2 Questions of 20 marks each**, out of which 1 Question shall be compulsory and 1 Question have internal choice to attempt any one.

(Each Answer shall be of maximum 500 words). [**40 Marks**]

Q. 10	<p>Discuss the content of a Masterplan/Development Plan as per any Town &amp; Country Planning Act. Elaborate upon its subject matter with a suitable example.</p> <p style="text-align: center;"><b>Or</b></p> <p>Design a house for a plot Area of 10 M X 20 M situated on a 9 M wide Road along shorter side of plot.</p> <ul style="list-style-type: none"><li>• Front Setback - 3 M</li><li>• Rear Setback – 2 M</li><li>• Side 1 – 1.5 M</li><li>• Side 2 – 1.5 M</li><li>• F.A.R.-1.5</li><li>• Ground Coverage - 60 %</li><li>• Height - 12 M</li></ul> <p>Requirements are as follow:</p> <p><b>Ground Floor:</b> 1 Drawing Room, 1 Dining Area, 1 Kitchen, 1 Bedroom, 2 Toilets, Staircase</p> <p><b>First Floor:</b> 1 Living Area, 2 Bedrooms 2 Toilets</p> <p><b>Submit the following:</b></p> <ul style="list-style-type: none"><li>• Draw- Ground Floor Plan, First Floor Plan &amp; Terrace Plan</li><li>• Area Schedule</li></ul>	<b>20</b>	
Q. 11	<p>A residential project is proposed on a site of 10 Hectare in Paunda Village of Dehradun.</p> <p>F.A.R. - 3.0</p> <p>Ground Coverage - 35%</p> <p>Height – 30 M</p> <p>Dwelling Unit Density – 300</p>	<b>20</b>	<b>CO2/ CO4</b>

Calculate the following:

- Total Covered Area of the Project.
- Covered area on various floors (In case of typical floor plan, mention typical floor area).
- Total No. of Dwelling Units (2 BHK + 3 BHK).
- Total Daily Water Requirement of the Project.
- Power Requirement of Project.

Draw three options for the buildings.

Draw most suitable Fire Fighting System for the building.