

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, Dec 2022
B. Tech. (All Branches), Semester V

Roll No.....

Course Code and Name : CE1215
Urban and Regional Planning

Time: 2.5 hours

Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
 2. Assume suitable data wherever required and mention it clearly.
 3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
 4. **Write your answers in detail and it should be appropriate to the marks assigned for that question.**
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1. India is the second most populated country of world. In the last few years number of cities or towns in India increases rapidly and large number of villagers migrated to urban areas. However, this will create a lot of pressure on the urban facilities. Describe in detail the challenges faced by Indian cities in detail. (Minimum 4). (4)

Propose few major solutions to overcome these challenges. (Minimum 2) (2)

{CO 1}

2. Recently Government of India announce National Logistic Policy. The aim of this policy is to reduce the overall transportation cost of goods. For this government of India work on two major projects (i) Network of expressways and (ii) Dedicated freight corridor. Write a detailed note on these two which includes the location of these projects, benefit of the project and major hurdle in these projects. (3+3)

{CO 3}

3. What are the major sources of water to supply municipal water in the urban areas? (2.5)

Write the advantages and disadvantages of each source. (2.5)

Name the major source of water supply in the following cities: (i) Jaipur (ii) Ajmer (iii) Kota (iv) Jodhpur (v) Udaipur (vi) Hyderabad (vii) Bhopal (1)

{CO 3, 5}

4. Kanpur is the second largest city in Uttar Pradesh with 46 Lac residents in the urban area. As per the demographic data it is expected that for next 20 years it will increase with the rate of 2.5% per year and then for next 20 years with the rate of 2.0 % per year. It is also observed that per day around 140 Liters water is supplied for per person. Also 5% additional water is supplied for public use. Find out the total water requirement of Kanpur city after 40 years. Also assume 10% losses due to leakage and theft.

(6)

{CO 3,5}

5. Ajmer is one of the famous cities in the central Rajasthan? Under the “Swaccha Bharat and Smart City Project” it is required to laid sewer pipeline. Due to the slope and land acquisition constraint the limited diameter of pipeline is 900 mm (0.9 m). Assume half full flow condition in the sewer line and find that for how many people this line can carry the sewer without any problem. Use Manning’s roughness coefficient for calculating the discharge in the sewer. Following data can be used for the design:

(a) Manning’s roughness coefficient: 0.018

(b) Slope: 0.0007

(c) Per day per person sewer generation: 100 Lit. (0.1 m^3)

(6)

{CO 3,5}