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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SET A**

**SCHOOL OF ENGINEERING  
END TERM EXAMINATION - JAN 2024**

**Semester :** Semester V - 2021

**Course Code :** CIV2043

**Course Name :** Urban Sanitation and Hygiene

**Program :** B.Tech.

**Date :** 11-JAN-2024

**Time :** 9:30AM - 12:30 PM

**Max Marks :** 100

**Weightage :** 50%

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**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.
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**PART A**

**ANSWER ALL THE QUESTIONS**

**4 X 5M = 20M**

1. Drainage system is a necessary component of house. List any four aims of the house drainage system.  
(CO2) [Knowledge]
2. The flush tanks/flushing cistern are provided along with water closets to discharge water for easy flow of human excreta. Brief the working principle of cistern with figure.  
(CO2) [Knowledge]
3. Food hygiene reduces the risk of consumers becoming sick from the food-borne disease. Write any four importance of food hygiene as per CDC.  
(CO3) [Knowledge]
4. Infrastructure that supports water, sanitation, hygiene (WASH) helps to prevent the spread of diseases within the healthcare facility and to the surrounding community. Write the scope of WASH in healthcare facilities.  
(CO3) [Knowledge]

**PART B**

**ANSWER ALL THE QUESTIONS**

**5 X 10M = 50M**

5. A well-designed drainage system in buildings offers several benefits in terms of sanitation and health. Discuss elaborately the benefits of building drainage system.  
(CO2) [Comprehension]

6. Imagine starting the day with leaking pipes and puddles of water at home. These problems are not only unpleasant, but also cause one to lose their peace of mind. Besides, the amount of time spent on these chores is immeasurable. It's then that plumbers become your best option. The plumbing industry is essential because it provides services which we cannot live without. Sketch the plumbing plan and explain any two parts of plumbing system.

(CO2) [Comprehension]

7. Food hygiene is a crucial aspect of ensuring food safety and preventing foodborne illnesses. Whether producing food at a factory, working in a catering service, or a restaurant, maintaining food hygiene is critical in keeping harmful contamination in control, thus protecting your consumers and your reputation. Why food hygiene is important? Give appropriate reasons as per CDC report.

(CO3) [Comprehension]

8. When basement is subjected to low *ground water* table then it requires less precaution regarding *construction* works. But when there is high *water* table, it must. Explain the prevention of subsoil water to building basement as per IS code.

(CO3) [Comprehension]

9. All sanitary fixtures generates waste water. The system of pipes which is laid and connected to the sanitary fixtures and discharge is taken to the public sewer by gravity is called as a building drainage system. Explain general principles for the design of building drainage.

(CO2) [Comprehension]

### PART C

#### ANSWER ALL THE QUESTIONS

2 X 15M = 30M

10. Household water treatment is treatment of water that happens at home or at a point of use or collection locations within communities and can make water safe to use and reduce diarrheal and other waterborne diseases. Suggest the suitable methods of household water treatment and discuss any three of it.

(CO2) [Application]

11. Storm water runoff from adjoining area and roads may enter into the basement down the ramp. Suggest the minimum needs to be considered for draining off such water, while planning the basement.

(CO3) [Application]