

Model Question Paper-1 with effect from 2019-20 (CBCS Scheme)

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Fourth Semester B.ARCH Degree Examination
18ARC43 – BUILDING SERVICES – I (Water Supply and Sanitation)

TIME: 03 Hours**Max. Marks: 100**

- Note: 01. Answer **FIVE** full questions, choosing **ONE** question from each **MODULE**.
 02. Draw a neat sketch wherever necessary
 03. Assume suitable data wherever necessary

MODULE -1			*Bloom's Taxonomy Level	Marks
Q.01	a	What do we understand by the term per capita demand of water? How is it Determined?	L1	4
	b	Explain the factors affecting water demand?	L2	12
	c	Explain the various expressions used to determine "Fire demand" of water.	L2	4
OR				
Q.02	a	Mention different methods of layout of water distribution network, and explain any 2 methods with neat sketch	L3	10
	b	What is meant by water treatment process? Discuss various stages involved in water treatment process.	L2	10
MODULE-2				
Q.03	a	Draw a neat sketch of both Septic tank and manhole and mention the parts.	L2, L5	10
	b	With a neat sketch explain Combined system, separate system and partially separate system and mention advantages and disadvantages?	L2	10
OR				
Q.04	a	Explain different methods of rain water harvesting in a building.	L2, L3	10
	b	Describe in your own words how to reuse water in a building for non-drinking purpose	L2, L3	10
MODULE-3				
Q.05	a	What is a TRAP, explain the requirement of good trap?	L1	4
	b	Sketch types of traps according to shape?	L2	6
	c	What is a VALVE? Mention different types of valves With neat sketch explain any two types of valves?	L1, L2, L5	10
OR				

Q.06	a	With the help of neat single line plan show the external and internal drainage system for a 2BHK independent residence, Draw drainage plan with a site boundary	L1, L2, L6	20
MODULE-4				
Q.07	a	Draw a typical toilet layout plan with Sanitary Fixtures, Fittings and Wellness.	L1, L2, L6	12
	b	Draw a neat sketch of wash basin with dimensions and water closet with dimensions.	L2	8
OR				
Q.08	a	Define the term Solid waste management and explain the various steps involved in Solid waste management process.	L1, L2	12
	b	Describe in your own words waste to wealth concept, with an example.	L2	8
MODULE-5				
Q.09	a	Mention different classification of fire based on NBC	L1	4
	b	Mention the parameters to design a fire escape stair/ staircase.	L2	6
	c	What is Smoke detectors? Explain the working of optical smoke detector.	L1, L2	10
OR				
Q.10	a	What are the advantages and disadvantages of solar water heating system	L1, L2, L6	10
	b	Explain with neat sketch working of central LPG supply system	L1, L2, L6	10

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.

L1- Remembering,

L2 - Understanding,

L3-Applying,

L4-Analyzing,

L5-Evaluating,

L6-Creating