Total No. of Questions: 10)]	SEAT No. :
P3983	[4959]-1024	[Total No. of Pages :2
	B.E.(Civil)	
]	PLUMBING ENGINEERIN	IG
(2012 Course)	(Semester-II)(Elective-IV)	(Open Elective)
Time :2½Hours]		[Max. Marks : 70

Instructions to the candidates:

- Solve Q1 or Q2,Q3or Q4, Q5 or Q6, Q 7 or Q8, Q 9 or Q10.
- *2*) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- Assume suitable data if necessary.
- Explain norms for water quality as per CPCB and also explain plumbing **Q1)** a) for public health engineering. [6]
 - b) Write a note on Green Plumbing Code Supplement India(GPCS-I) [4]

OR

- Describe the role of Plumbing consultant while executing plumbing work **Q2)** a) in the building industry. [6]
 - Explain local laws laid down by municipal corporation for plumbing b) regarding rain water harvesting [4]
- Comment on workmanship and minimum standards in plumbing. **Q3)** a) [5]
 - b) Explain how hot water is distributed considering safety, and energy conservation. [5]

OR

- State velocity, pressure, temperature limitations in plumbing and Explain **Q4**) a) its importance in plumbing design. [6]
 - How backflow is prevented in water supply and what is its importance in b) plumbing [4]
- Explain horizontal wet vent and vertical wet vent with neat sketch. **Q5**) a) [8]
 - Comment on "plumbing system needs to breathe". State maximum value b) of pneumatic pressure difference in Pascal's so that the seal is protected, State vent terminals as per code. [10]

OR

Q6) a) b)		How does grease trap works explain with neat sketch also explain maintenance?		
		State the trap requirements as per uniform plumbing code for [1]		
		i) Design of trap		
		ii) Trap seal and trap seal protection		
		iii) Trap setting and protection		
Q7)	a)	State requirements of a sanitary closet. Explain Washout Water C. & Hopper Closets with neat sketch.		
	b)	Explain drainage air test & drainage water test procedures.	[8]	
		OR		
Q8)	a)	Explain sizing of house drain & sizing its vent pipe.	[8]	
	b)	Explain basic guide to calculate falls and gradients for drainage.	[8]	
Q9)	a)	Explain RCC, PVC, Nu-Drain, and Stoneware for building sewers.	[8]	
	b)	Explain requirements for brick built manholes for sewer line with resketch.	neat [8]	
		OR		
Q10) a)	Explain design of plumbing systems for multi-storey buildings	[8]	
	b)	Explain drainage system considerations for multi-storey buildings.	[8]	

