

Total No. of Questions : 10]

SEAT No. :

P3983

[4959]-1024

[Total No. of Pages :2

B.E.(Civil)

PLUMBING ENGINEERING

(2012 Course)(Semester-II)(Elective-IV)(Open Elective)

Time :2½Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Solve Q1 or Q2,Q3or Q4, Q5 or Q6 , Q 7 orQ 8, Q 9 or Q10.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

Q1) a) Explain norms for water quality as per CPCB and also explain plumbing for public health engineering. **[6]**

b) Write a note on Green Plumbing Code Supplement India(GPCS-I) **[4]**

OR

Q2) a) Describe the role of Plumbing consultant while executing plumbing work in the building industry. **[6]**

b) Explain local laws laid down by municipal corporation for plumbing regarding rain water harvesting **[4]**

Q3) a) Comment on workmanship and minimum standards in plumbing. **[5]**

b) Explain how hot water is distributed considering safety, and energy conservation. **[5]**

OR

Q4) a) State velocity, pressure, temperature limitations in plumbing and Explain its importance in plumbing design. **[6]**

b) How backflow is prevented in water supply and what is its importance in plumbing **[4]**

Q5) a) Explain horizontal wet vent and vertical wet vent with neat sketch. **[8]**

b) Comment on “plumbing system needs to breathe”. State maximum value of pneumatic pressure difference in Pascal’s so that the seal is protected, State vent terminals as per code. **[10]**

OR

P.T.O.

- Q6)** a) How does grease trap works explain with neat sketch also explain its maintenance? [8]
b) State the trap requirements as per uniform plumbing code for [10]
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 Closets & Hopper Closets with neat sketch. [8]
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 neat sketch. [8]

OR

- Q10)** a) Explain design of plumbing systems for multi-storey buildings [8]
b) Explain drainage system considerations for multi-storey buildings. [8]

