Total No. of Questions : 10]

SEAT No. :

P3983

[Total No. of Pages :2

[4959]-1024
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]**