

S.B. Roll No.....

**WATER SUPPLY AND WASTE WATER ENGINEERING**  
**4<sup>th</sup> Exam/0514/Civil/May'18**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Fill in the blanks.**

**10x1.5=15**

- a. Water demand in city includes.....
- b. Wholesome water is.....
- c. The temperature of water should be between.....
- d. Osmoscope is used to test.....
- e. Jackson's turbid meter is used for.....
- f. Drainage pipe should be made of.....
- g. Pipe for ventilation purpose is called.....
- h. In P-trap, the legs of trap are at angle.....
- i. Grease pipes should use in.....
- j. R of trap depends on.....

**SECTION-B**

**Q2. Attempt any five questions.**

**5x6=30**

- i. Define the following
  - a. Sewage
  - b. Vent pipe
- ii. What are the methods of Population forecasting? Explain any one
- iii. Differentiate between conservancy and water carriageway system
- iv. Compare combined and separate sewer systems
- v. Explain manhole and catch basin with sketches
- vi. Write short note on sanitary engineering.
- vii. Write down different types of pipes used for conveyance of water. Explain material and uses.

**SECTION-C**

**Q3. Attempt any three questions.**

**3x10=30**

- a. Explain the process of laying out pipes including excavation handling, handling, lowering, bedding, etc?
- b. Write down the advantages and disadvantages of various layouts of water distribution. Draw sketches also.
- c. Explain disposal of sewage by dilution and land treatment methods.
- d. Distinguish between colloidal, suspended and dissolved impurities.