

Seat No. : _____

N13-105

November-2014

B.Arch./ID/BCT, Sem.-V

AR – 505 : Building Services – II

(New Syllabus)

Time : 2 Hours]

[Max. Marks : 50

1. (a) Enlist points to be consider for selection of Intake works in water supply. **3**
- (b) Give water requirement standards given by IS for any **five** : **5**
 - (1) Hospital with 80 beds
 - (2) Hostel
 - (3) Cinema
 - (4) Factories with bathroom
 - (5) Day school
 - (6) Garden
- (c) Draw neat sketch of Ferrule and Saddle connection.. **2**
2. (a) Explain Water demand and discuss factors affecting water demand. **3**
- (b) Enlist Plumbing fixtures with diameter of pipes required. **2**
- (c) Calculate dimensions of Underground and Overhead water tank for 600 students residing in a hostel building. Consider height of overhead tank and depth of underground tank as 2.00 m. Also, consider shape of underground water tank as square and shape of overhead water tank as circular. **5**
3. (a) Explain water supply distribution systems with neat sketch. **4**
- (b) Draw neat sketch of water treatment plant and explain functions of each unit. **3**
- (c) Draw neat sketch of overhead water tank with all pipes. **3**
4. (a) Define any **four** : **4**
 - (1) Waste pipe
 - (2) Soil pipe
 - (3) Sullage
 - (4) Rubbish
 - (5) Night soil

- (b) Design a septic tank for the following data : **6**
- (1) No. of people = 60
 - (2) Sewage/capita/day = 120 litres
 - (3) De-sludging period = 1 year
 - (4) Length to width ratio = 3 : 1

What would be the size of its soak well if the effluent from this septic tank is to be discharged in it ?

5. (a) Explain different types of Traps with neat sketch. **5**
- (b) Discuss in brief essentials of rural sanitation. Explain in brief various Bore hole privy and Aqua privy. **5**

OR

Enlist principal systems of plumbing for drainage of building and explain any two in detail. **5**
