

**SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA**  
**SEMESTER END EXAMINATIONS (REGULAR) APRIL – MAY - 2017**

**M.PLANNING (EPM) - I YEAR II SEMESTER**

**INFRASTRUCTURE FOR ENVIRONMENTAL PLANNING & MANAGEMENT (MPEP206)**

**Maximum Marks – 50**

**Time – 2.00 Hours**

- a) Answer any Two questions out of 1 to 4 questions.*  
*b) Question No.5 is compulsory and answer any four out of six sub-questions.*  
*c) Scientific Calculators are allowed.*

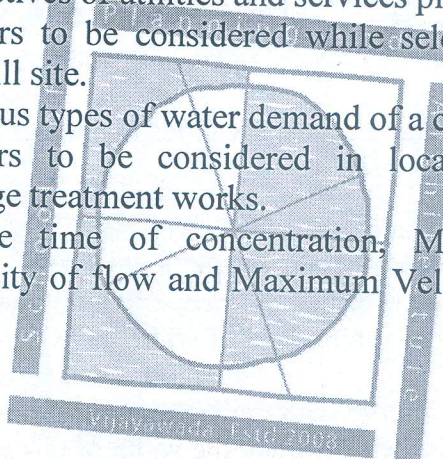
- Q1. Explain in detail the various layouts of water distribution system with its merits and demerits. (15M)
- Q2. a) Design a septic tank for a hostel housing for 125 persons. Make suitable assumptions wherever necessary. (10M)  
b) Write down the merits and demerits of septic tank. (5M)
- Q3. Discuss in detail about the various methods available for solid waste disposal. (15M)
- Q4. The surface water from airport road is drained to the longitudinal side drain from across one half of a bituminous pavement, surface of total width 7.0m, shoulder and adjoining land of width 8.0m on one side of the drain. On the other side of the drain, water flows across from reserve land with average turf and 2% cross slope towards the side drain, the width of this strip of land being 25m. The inlet time may be assumed to be 10 min for these conditions. The runoff coefficients of the pavement, shoulder and reserve land with turf are 0.8, 0.25 and 0.35 respectively. The length of stretch of land parallel to the road from where water is expected to flow to the side drain is 400m. Estimate the quantity of runoff flowing in the drain assuming 10 year frequency. (15M)

The side drain will pass through clayey soil with allowable velocity of flow as 1.33 m/s. Intensity – duration chart for 10 year frequency is,

Duration (mins)	5	10	15	20	30
Intensity (mm/hr)	160	150	125	110	95

Q5. Write short notes on any FOUR of the following: (4x5 = 20M)

- a) Role of physical planner in planning of utilities and services.
- b) Objectives of utilities and services planning
- c) Factors to be considered while selecting a landfill site.
- d) Various types of water demand of a city
- e) Factors to be considered in location of sewage treatment works.
- f) Define time of concentration, Minimum Velocity of flow and Maximum Velocity of flow.



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