UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

Program: M.Tech (DM)	**Semester – III**
Subject (Course): Shelter & Settlement in Disaster	**Max. Marks : 100**
Course Code : MDMT835	**Duration : 3 Hrs**
No. of page/s:2	

Note:-Attempt all the questions from section A and B any two questions from section C.

Section A Part-1 (10×2=20 Marks)

1. Fill in the blanks with best possible answer: **(5*2=10 Marks)**

   a. There are ……..number of Red Cross society in DREF.
   b. A Chlorinator of certain capacity if 3 Kg of Bleaching powder is mixed …… Kg of sand should mix to get it optimum efficiency.
   c. International organization for migration was established in ……(Year).
   d. In a disaster effected area according to standard ….. times of cloth must be available than available population.
   e. There are ……no of components present in the checklist of Early Warning System.

2. Expand the following: **(10*1=10 Marks)**
   a. UNHCR
   b. EWR
   c. DREF
   d. IOM
   e. IHL
   f. SEIAA
   g. IFRC
   h. RCS
   i. CASWANAME
   j. UNH

PART-B (4×10=40 Marks) : Answer all the question.

3. Disposal in refugee camp is important to maintain Health and safety of the population, Draw a decision diagram (flowchart) for proper disposal system in refugee camp.

4. Calculate the velocity of flow and corresponding discharge in a sewer of a disaster effected area of circular section having radius 2m, laid at a gradient of 1 in 1000. The sewer runs at 0.6 depth. Use Manning's formula taking N=0.012.
   a) If the sewer is running full
   b) If the sewer is running partially full

5. A pyramid shelter is likely your lightest effective shelter, unless the weather forecast is for constant, pouring-down rain or there are going to be a bunch of bugs. Design a pyramid shelter of C class which can accompany 20 people during a disaster effected area.

6. Calculate the velocity of flow and corresponding discharge in a sewer of circular section having radius equal to 1 m , laid at a gradient of 1 in 500.The sewer runs at 0.6 depth. Use Manning's formula taking N=0.012.

PART-B (2×20=40 Marks): Answer 2 question ,Question no 7**** is mandatory.

7. A main combined sewer is to be designed to serve an flood effected area of 1482.63 acres with a population density of 250 Person/hectare. The average rate of sewage flow is 250 lit/capita/day. The maximum flow is 100% in excess of average together with the rainfall equivalent of 15 mm in 24 hrs, all of which are runoff. Determine the capacity of sewer. Taking the maximum velocity of flow as 3 m/s, determine the size of circular sewer.

(20 marks)

8. Differentiate following   **(4 *5= 20marks)**
   a. Warning and early warning system
   b. Transitional & Progressive shelter
   c. Linear Central system & Central System of settlement
   d. Strategic planning and Settlement Planning

9. Explain in detail   **(4*5=20 marks)**
   a) Functional area of UNHCR
   b) Funding procedure of DERF
   c) Criteria for Settlement selection
   d) Schematic diagram for linear-central model during settlement

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Section A Part-1 (10×2=20 Marks)

1. Fill in the blanks with best possible answer: **(5*2=10 Marks)**

   a. International organization for migration was established in ……(Year).
   b. In a disaster effected area according to standard ….. times of cloth must be available than available population.
   c. There are ……no of components present in the checklist of Early Warning System.
   d. There are ……..number of Red Cross society in DREF.
   e. A Chlorinator of certain capacity if 3 Kg of Bleaching powder is mixed …… Kg of sand should mix to get it optimum efficiency.

2. Expand the following: **(10*1=10 Marks)**
   a. SEIAA
   b. IFRC
   c. RCS
   d. CASWANAME
   e. UNH
   f. UNHCR
   g. EWR
   h. DREF
   i. IOM
   j. IHL

PART-B (4×10=40 Marks) :Answer all the question.

3. A pyramid shelter is likely your lightest effective shelter, unless the weather forecast is for constant, pouring-down rain or there are going to be a bunch of bugs. Design a pyramid shelter of C class which can accompany 20 people during a disaster effected area.

4. Calculate the velocity of flow and corresponding discharge in a sewer of circular section having radius equal to 1 m , laid at a gradient of 1 in 500.The sewer runs at 0.6 depth. Use Manning's formula taking N=0.012.

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   c) If the sewer is running full
   d) If the sewer is running partially full

PART-B (2×20=40 Marks): Answer 2 question ,Question no 9** is mandatory.**

7. Differentiate following   **(4 *5= 20marks)**
   e. Warning and early warning system
   f. Transitional & Progressive shelter
   g. Linear Central system & Central System of settlement
   h. Strategic planning and Settlement Planning

8. Explain in detail   **(4*5=20 marks)**
   e) Functional area of UNHCR
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9. A main combined sewer is to be designed to serve an flood effected area of 1482.63 acres with a population density of 250 Person/hectare. The average rate of sewage flow is 250 lit/capita/day. The maximum flow is 100% in excess of average together with the rainfall equivalent of 15 mm in 24 hrs, all of which are runoff. Determine the capacity of sewer. Taking the maximum velocity of flow as 3 m/s, determine the size of circular sewer.
                                                                        (20 marks)