UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

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

SECTION A   (Attempt all the question, 5*4=20 Marks)

1. Explain   following:
   [CO3]
   a. UNHCR
   b. Emergency shelter design and its type

2. Demonstrate the different parameter for determination of complexity of disaster.
   [CO1]

3. How will you develop different type of shelter based on the duration of settlement? Explain them with neat Diagram also outline the factors for successful shelter design. [CO1]

4. Emergency disinfection of water is one of the critical step before we provide drinking water to the disaster-affected population, what ratios of alum and chlorine are used based on the area of disaster.   [CO4]

SECTION B   (Attempt only four question, 4*10=40 Marks)

5. Hazard maps are used to identify potential causes of any hazard such that precautionary principles can be developed against that and these principles must be based on risk assessment and vulnerability, whose identifications are given according to different zonal division of areas according to their ranking of probability of hazards. Classify Natural Hazardous area maps based on usages and natural disaster   .
   [CO5]

OR

6. How will you decide the model for shelter design based on population? Explain all models.   [CO2]

7. Compare family tent, frame tent and refugee tent and write one case study on any of these three.
   [CO2]

8. Find the time varying shelter demand to create shelter in a disaster affected area where the average wind velocity is 3 m/s and average temperature of the area is 25^0C.Given,

[CO3]

    a. Population of the area is 10000

    b. Proportion of evacuees is 10% of total population

    c. Proportion of completely damaged population is 12% and remaining are unaffected

    d. Corresponding population is 2000, 3000 and 50000 respectively.

    e. Time to complete the shelter demand is given as 12 days.

6. Describe different types of water management techniques used post disaster. [CO4]

SECTION-C   **(Attempt only two question, 2*20=40 Marks)**

9. Water and sanitation, along with food and shelter, are the most important human needs in an emergency. Humanitarian response should be based on assessment and we should adopt different approach for it. Enumerate the following   [CO4]

    i. Phased approach

    ii. Planning out a humanitarian programme

    iii. Water supply in emergency –ladder of options

    iv. Excreta Control and Management: Sanitation Ladder

OR

10. The policy objective of anticipating and reducing risk is called disaster risk reduction (DRR). Although often used interchangeably with DRR, disaster risk management (DRM) can be thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk. Establish relationship between Emergency Response Stage (ERS) and Recovery Stage (RS) with a neat diagram describing the Disaster Risk Management Cycle (DRMC). [CO5]

11. Differentiate following   [CO1,2]

    a. Warning and early warning system
    b. Transitional & Progressive shelter
    c. Linear Central system & Central System of settlement
    d. Strategic planning and Settlement Planning

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| SECTION A | (Attempt all the question, 5*4=20 Marks) |

1. How will you develop different type of shelter based on the duration of settlement? Explain them with neat Diagram also outline the factors for successful shelter design [CO1]

2. Emergency disinfection of water is one of the critical step before we provide drinking water to the disaster-affected population, what ratios of alum and chlorine are used based on the area of disaster. [CO4]

3. Explain following: [CO3]
   a. UNHCR
   b. Emergency shelter design and its type

4. Demonstrate the different parameter for determination of complexity of disaster. [CO1]

| SECTION B | (Attempt only four question, 4*10=40 Marks) |

7. Compare family tent, frame tent and refugee tent and write one case study on any of these three. [CO2]

8. Find the time varying shelter demand to create shelter in a disaster affected area where the average wind velocity is 3 m/s and average temperature of the area is 25^0 C. Given, [CO3]

   a. Population of the area is 10000

   b. Proportion of evacuees is 10% of total population

   c. Proportion of completely damaged population is 12% and remaining are unaffected

d. Corresponding population is 2000, 3000 and 50000 respectively.

e. Time to complete the shelter demand is given as 12 days.

9. Conclude different types of water management techniques after disaster. [CO4]

10. Hazard maps are used to identify potential causes of any hazard such that precautionary principles can be developed against that and these principles must be based on risk assessment and vulnerability, whose identifications are given according to different zonal division of areas according to their ranking of probability of hazards. Classify Natural Hazardous area maps based on usages and natural disaster. [CO5]

OR

11. How will you decide the model for shelter design based on population? Explain all models. [CO2]

SECTION-C   **(Attempt only two question, 2*20=40 Marks)**

11. Differentiate following [CO1,2]
    a. Warning and early warning system
    b. Transitional & Progressive shelter
    c. Linear Central system & Central System of settlement
    d. Strategic planning and Settlement Planning

12. Water and sanitation, along with food and shelter, are the most important human needs in an emergency. Humanitarian response should be based on assessment and we should adopt different approach for it. Enumerate the following [CO4]

    i. Phased approach

    ii. Planning out a humanitarian programme

    iii. Water supply in emergency –ladder of options

    iv. Excreta Control and Management: Sanitation Ladder

OR

13. The policy objective of anticipating and reducing risk is called disaster risk reduction (DRR). Although often used interchangeably with DRR, disaster risk management (DRM) can be thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk. Establish relationship between Emergency Response Stage (ERS) and Recovery Stage (RS) with a neat diagram describing the Disaster Risk Management Cycle (DRMC). [CO5]