

Mid-West University  
**Examinations Management Office**

Chance Examinations 2081

Bachelor level/ B.E. Hydropower/ 7<sup>th</sup> Semester

Time: 3 hours

**Subject: Modelling of water resources (HE475/HE402)**

Full Marks: 50

Pass Marks: 25

- *Attempt all the questions*
- *Figures in the margin indicate full marks.*
- *Assume suitable values, with a stipulation, if necessary.*
- *Candidates are required to answer the questions in their own words as far as possible.*

1. Contrast the steps for steady flow analysis in HECRAS? (5)
2. Enumerate IWRM approach and Dublin Principle in water resources management? (6)
3. Write the steps for modelling in ARCSWAT for obtaining rainfall-runoff sediment relations. (5)
4. Differentiate between VIC model and WEPP model? (5)
5. Compare between Physical modelling and Numerical modelling in water resource management? (4)
6. Differentiate between FESWMS and DELFT 3D model? (6)
7. Explain model simulation, calibration and validation in water resource management? (6)
8. What are the causes of river bank erosion? Explain the methods for controlling river bank erosion. (5)
9. Write the steps for HECGEOHMS and HECHMS for modelling in basin for establishing rainfall runoff relations? (8)

**The End**