

M.A. Examination, 2017
Semester-IV
Geography
Course – XXI (Special)
(Fluvial Geomorphology)

Time: 3 Hours

Full Marks: 40

Questions are of value as indicated in the margin.

Answer **any three** questions, selecting **one** from each unit.

Unit-I

(Hydrological Characteristics of River Basin)

1. Bring out the present trend of Fluvio-geomorphological studies. What are the major factors responsible for the development of different types of channel flow? 6+8=14
2. What do you mean by *competency* and *capacity* of a stream? Explain the different stages of meander channel development. What are the major characteristics of a braided stream? 4+5+5=14

Unit-II

(Morphometric Properties of River Basin)

3. Make a critical appreciation of the 'Cross Grading Model' and 'Random Walk Model' of channel initiation. How do the drainage pattern evolve on the domal structure? 6+7=13
4. Enumerate and discuss the major criteria to delineate the graded stream. Narrate the areal properties of a channel system. 5+8=13

Unit-III

(River Basin Management Issues)

5. Examine the impacts of dam construction on river channel morphology with suitable examples. Specify the probable morphological effects after decommissioning of a dam. 8+5=13
 6. What are the factors responsible for bank erosion? Discuss the geohydrological consequences of the abatement strategies along the Ganga-Bhagirathi River flowing through West Bengal. 5+8=13
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