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Reg No :

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
07 THRISSUR CLUSTER

SECOND SEMESTER M.TECH. DEGREE EXAMINATION APRIL 2018

Civil Engineering

Water resources and Hydroinformatics

07CE6418

FLUVIAL HYDRAULICS

Time : 3 hours

Max.Marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

| Q.no. | Module 1 | Marks |
|-------|---|-------|
| 1a | Describe the following: (a)Transitions (b)Cut-offs | 4 |
| | Answer b or c | |
| b | What are the physical characteristics of river | 5 |
| c | Explain the formation of braiding river and bends | 5 |
| Q.no. | Module 2 | Marks |
| 2a | Discuss about the importance of bank erodability. | 4 |
| | Answer b or c | |
| b | What are the different hydrologic models used in river engineering? | 5 |
| c | Describe the relationship between stream profile and bed material | 5 |
| Q.no. | Module 3 | Marks |
| 3a | Compare Kennedy's and Lacey's theory of channel design. | 4 |
| | Answer b or c | |
| b | Explain the Blench's method of design of stable channel. | 5 |
| c | Explain the Tractive force method of design of stable channels carrying sediment load | 5 |

| Q.no. | Module 4 | Marks |
|--------------|---|--------------|
| 4a | Discuss the origin and formation of sediment particles. | 4 |
| | Answer b or c | |
| b | What are the Bulk properties of sediment particles | 5 |
| c | Discuss the importance of Regimes of flow | 5 |
| | | |
| Q.no. | Module 5 | Marks |
| 5a | Explain about various bed load samplers. | 5 |
| | Answer b or c | |
| b | Discuss the conditions for the incipient motion of the sediment particles | 7 |
| c | Explain the Shield's analysis for the problem of incipient motion | 7 |
| | | |
| Q.no. | Module 6 | Marks |
| 6a | Explain the Du Boy's equation of bed load transport | 5 |
| | Answer b or c | |
| b | Describe the mechanism of suspension and method of integrating curves. | 7 |
| c | Discuss the Einstein's concept of bed load transport. | 7 |