

Name :
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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
07 THRISSUR CLUSTER

SECOND SEMESTER M.TECH. DEGREE EXAMINATION APRIL 2018

Civil Engineering Department

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

(add any other instruction specific to course here like the use of IS codes/design tables etc.)

Q.no.	Module 1	Marks
1a	Describe the following: (a)Cut-offs (b) Deltas	4

Answer b or c

- | | | |
|---|---|---|
| b | Explain how the meandering channels are formed. | 5 |
| c | What are the physical characteristics of river? | 5 |

Q.no.	Module 2	Marks
2a	What are the prototype data required for the design of models?	4

Answer b or c

- | | | |
|---|--|---|
| b | What are the different types of hydrological models used in river engineering? | 5 |
| c | Describe about the stabilization and rectification of rivers. | 5 |

Q.no.	Module 3	Marks
3a	Explain Lacey's theory of channel design.	4

Answer b or c

- | | | |
|---|---|---|
| b | Explain the Blench method of design of stable channels. | 5 |
| c | A channel section has to be designed for the following data | 5 |

Discharge= 30cumecs

Silt factor= 1

Side slope=1/2:1

Find also the longitudinal slope

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