

Name :  
Reg. No

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**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
**07 THRISSUR CLUSTER**

**FIRST SEMESTER M.TECH. DEGREE EXAMINATION DEC 2017**

**Civil Engineering Department**

**Water Resources and Hydroinformatics**

**07CE 6411 WATERSHED CONSERVATION AND MANAGEMENT**

**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

<b>Module 1</b>		<b>Marks</b>
<b>1a</b>	Briefly describe the geomorphological processes	<b>4</b>
<b>Answer b or c</b>		
<b>1b</b>	What is meant by stream order? Find out the elongation ratio, circularity and form factor of a watershed of area 300000 hectare, perimeter 10km and basin length 6 km.	<b>5</b>
<b>1c</b>	Write briefly about the land suitability classification? What is its application in watershed management?	<b>5</b>
<b>Module 2</b>		<b>Marks</b>
<b>2a</b>	What are the forms of wind erosion?	<b>4</b>
<b>Answer b or c</b>		
<b>2b</b>	What are the soil and water conservation measures in agricultural lands?	<b>5</b>
<b>2c</b>	Raindrops of 2.0mm diameter are falling on an erodible soil surface. Compute the impacting energy of the raindrop. Assume standard atmospheric pressure and 20°C as the air temperature.	<b>5</b>
<b>Module 3</b>		<b>Marks</b>
<b>3a</b>	How to find the yield of a catchment?	<b>4</b>
<b>Answer b or c</b>		
<b>3b</b>	Describe the components of roof top water harvesting system	<b>5</b>
<b>3c</b>	Explain the land development techniques to enhance recharge and mitigate soil erosion	<b>5</b>

	<b>Module 4</b>	<b>Marks</b>
<b>4a</b>	What is meant by watershed management? How do you work out its strategies?	<b>4</b>

**Answer b or c**

<b>4b</b>	What are the different perspectives of watershed management? explain	<b>5</b>
<b>4c</b>	How do you plan an organisational set-up for watershed management	<b>5</b>

	<b>Module 5</b>	<b>Marks</b>
<b>5a</b>	What is the significance of people's participation in watershed management?	<b>5</b>

**Answer b or c**

<b>5b</b>	What are the government approaches in watershed conservation and management?	<b>7</b>
<b>5c</b>	How can we evaluate the watershed management practices	<b>7</b>

	<b>Module 6</b>	<b>Marks</b>
<b>6a</b>	Describe in detail about the SWAT model	<b>5</b>

**Answer b or c**

<b>6b</b>	What is the significance of BASIN in watershed management?	<b>7</b>
<b>6c</b>	Explain in detail about CREAMS	<b>7</b>