

Student:	Test #1 Closed Book
Date: 17 Oct 2003	Reactor materials, reactor types, Thermal-hydraulics.

Scope:	<p>1. List and explain the following for the materials for reactor coolants, moderators and fuel sheet:</p> <ul style="list-style-type: none"><li>□ Requirements,</li><li>□ Alternative materials, and</li><li>□ How each of the alternative materials meets the requirements.</li></ul> <p>[25 points]</p> <p>-----</p> <p>2. List and explain important design features of the PWR and BWR reactor designs, and compare them to the CANDU design. Focus on the following design parameters:</p> <ul style="list-style-type: none"><li>a. High impact on the plant performance indicators.</li><li>b. High impact on the cost of the plant</li><li>c. High impact on the safety of the plant</li></ul> <p>[25 points]</p> <p>-----</p> <p>3. Explain the important aspects of steam generator design. Use diagrams or flow charts to explain and support your discussion.</p> <p>[25 points]</p> <p>-----</p> <p>4. Explain the key design issues in the pump design and operation in the primary and secondary side of the reactor cooling system. Use diagrams and plots to support your discussion.</p> <p>[25 points]</p>
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