

# PES2UG20CS209\_Naman

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**Submission date:** 05-Dec-2022 09:01PM (UTC+0530)

**Submission ID:** 1972094083

**File name:** PES2UG20CS209\_Naman.pdf (118.72K)

**Word count:** 642

**Character count:** 3429

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Question #	Answer
1	The goal of ITS was to be trustful and act as a strategic resource for Universities, while incorporating technology to advance the mission of the universities, which goes hand in hand with what UVA believes in, because, it focuses on developing future leaders, who will shape the future, as trustworthiness is key in being a leader.
2	Cyberattacks are targeted at universities because they have significant research intellectual property, financial information(like payment information of student accounts, the tax information of college and employees) and PII's.
3	<p>There are many ways attacks can happen on college systems:</p> <ol style="list-style-type: none"><li>1. <b>Spear phishing attacks</b> – sending tailored phishing to targeted employees of an organization, making it hard for spam filters to auto-detect such emails.</li><li>2. <b>Unpatched systems</b> – Systems that had known vulnerabilities, left unresolved due to not updating to the latest security update.</li><li>3. <b>Zero-day exploits</b> – Exploits which are rare and unknown to an organization</li></ol> <p>Mitigating the attacks:</p> <ul style="list-style-type: none"><li>• Using the 'defence in depth' approach, wherein a multilayered system is used, where most sensitive data(Layer 0) is was accessible by only a few people and services. Servers that employees and students could access using their login credentials(Layer 1) surrounded Layer 0. Finally, all employees and students could access servers with no sensitive information (Layer 2) was the final layer. This system is used to detect and neutralize unauthorized access to resources.</li><li>• Training the staff to detect and report any spear phishing attack attempts</li><li>• Update all the systems with the latest security patch regularly</li></ul>
4	<p>The objectives were:</p> <ol style="list-style-type: none"><li>1. Perform a more in-depth assessment to determine the extent of the intrusion</li><li>2. Develop a detailed plan for remediation, and plan out when to bring down all the UVA systems</li><li>3. Execute the plans devised for remediation</li><li>4. Increase UVA's security to block any further malicious activity</li><li>5. Restore the services by bringing up the systems which were brought down during the remediation plans</li></ol>
5	<p>Internal Stakeholders:</p> <ul style="list-style-type: none"><li>• BOV : Highest administrative authority, address the complete issue</li><li>• Vice Presidents : High authority, address the issue in guidance with BOV</li><li>• Deans : Address the issue</li><li>• Governor's office : Address the issue</li><li>• Faculty : Brief about the issue and guide to avoid panic</li><li>• Staff : Brief about the issue and guide to avoid panic</li></ul>

	<ul style="list-style-type: none"> <li>• Students : Brief about the issue and guide to avoid panic</li> <li>• University Community : Brief about the issue</li> </ul> <p>External Stakeholders:</p> <ul style="list-style-type: none"> <li>• Retirees : Notify about the issue</li> <li>• Alumni : Notify about the issue</li> <li>• General Public : Press release about the issue after the problem is mitigated</li> <li>• Press : Address the issue without sensitive information</li> </ul>
6	<ul style="list-style-type: none"> <li>• The information of the attack going public – This risk can be managed by including only trustworthy members with highest level of experience and work ethics.</li> <li>• Conflicting schedules with UVA events and programs – This risk means that, the team needs to prioritize services which will be needed first according to how the college's calendar of events rolls out</li> <li>• Recovery of lost information – This risk can probably be solved by informing the staff and students about the attack, immediately after it has been neutralised, and recover data from backup servers.</li> <li>• Another attack – Since UVA was attacked, there is a possibility that another attack might be waiting for them as they are vulnerable, to avoid this, any connection to or from the internet must be temporarily blocked</li> </ul>
7	<ul style="list-style-type: none"> <li>• The success should be evaluated in a step wise manner</li> <li>• Firstly, the team members that were chosen should be right for the required skillset</li> <li>• Then, the progress and planning and the layout of the teams should be noted, of it being structured and managed well</li> <li>• The quickness of the response to the attack should be assessed</li> <li>• How fast the servers were up and running, and how financially damaging it was needs to be looked at</li> <li>• A conclusion with the inclusion of all these factors will determine how successful Phoenix Project was</li> </ul>

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