OLLSCOIL NA hÉIREANN
THE NATIONAL UNIVERSITY OF IRELAND
COLÁISTE NA hOLLSCOILE, CORCAIGH
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Summer Examinations 2011

Computer Science
CS2510: Web Servers

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Answer *all* questions

Paper Total: 80 Marks

Time: 1.5 Hours

1. **Internet Infrastructure & Protocols**

   (a)   Specify the essential principles of the TCP/IP protocol.   *[5 Marks]*

   (b)   "TCP/IP is essentially a broadcasting protocol". Explain what this means and what the consequences are.   *[5 Marks]*

   (c)   Why is TCP/IP unsuitable for applications such as video streaming?   What is the alternative?   *[5 Marks]*

   (d)   What are *ports* in modern computer systems, and how are they implemented?   *[5 Marks]*

2. **Installing Apache**

   (a)   What methods of installation can be employed for the Apache webserver? What benefits does each method have?   *[5 Marks]*

   (b)   If you wished to install an experimental Apache webserver alongside a fully functioning version, how would you go about it?   *[5 Marks]*

   (c)   How would you check that an installed Apache webserver is properly running?   *[5 Marks]*

(d)   What function do the *httpd.conf* and *.htaccess* files serve? How do they differ? Why do some webserver administrators frown on the use of *.htaccess* files?   *[5 Marks]*

3.   Configuring Apache

(a)   What different strategies exist for supporting multiple hosts?   .   *[5 Marks]*

(b)   Suppose an enterprise wished to have a publically-available website on the internet, a set of intranet pages available only from within that enterprise, and a set of department pages available only to members of that department. How might this be achieved?   *[5 Mark]*

(c)   How can web robots be excluded from a site using the webserver configuration?   *[5 Marks]*

(d)   Specify any three important security tips for a webserver administrator   *[5 Marks]*

4.   Installing from Source

(a)   What are the primary steps involved in installing Apache from source?   *.[5 Marks]*

(b)   What Apache modules would you consider to be necessary in a webserver?   *[5 Marks]*

(c)   Features such as PHP and MySQL can be provided via loadable modules or a CGI interface. Why would one be used over the other ?   *[5 Marks]*

(d)   What Apache modules would you consider to be necessary in a webserver?   *[5 Marks]*