

**Web Design and Programming II**  
**Mid-term Exam CS Part**  
Feb. 28, 2001

1. Consider the Web Server:
  - (a) What is a Web server, a Web client? What is the protocol that the Web server and client use to communicate?
  - (b) Name and describe at least three ways to perform server-side programming to generate pages dynamically.
  - (c) Name three ways Web servers handle concurrent client requests.
  
2. Consider PHP:
  - (a) What is the relation between the PHP program and the Web server?
  - (b) How does one include PHP code in HTML?
  - (c) Name two important differences between using PHP and using CGI.
  - (d) How does one set variables in PHP? How does one access POST and GET variables in PHP?
  
3. Consider PHP support for MySQL:
  - (a) In MySQL, what is an index, a primary key?
  - (b) How does PHP allow you to open a connection to a MySQL server? name a database to work with? issue a query? obtain results from the query?
  - (c) How do you check if a PHP-MySQL operation has failed or not?
  - (d) How do you prevent MySQL error messages from getting into the Web page you are generating?
  
4. Consider Apache:
  - (a) What is Apache? Name some Apache components.
  - (b) Where is Apache run-time configuration controlled? Name six aspects controlled by run-time configuration.
  - (c) Describe two different ways to enable SSI: through file naming and through XBitHack.
  - (d) Write some SSI code to check the document name and generate either an active or inactive link to the page.  
(Hint: Recall the hands-on experiments for SSI)