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No. of Printed Pages—4

IT-501/CS-703

B. TECH.

FIFTH/SEVENTH SEMESTER EXAMINATION, 2003-2004

INTRODUCTION TO WEB TECHNOLOGY

Time : 3 Hours

Total Marks : 100

Note : (1) Attempt **ALL** questions.

(2) All questions carry equal marks.

1. Attempt any **FOUR** of the following :— (5×4=20)

- (a) Explain the interrelation of Web with Internet. What are the backbone governing bodies of Internet? How have they come into existence?
- (b) What are Cyber Laws? Who is responsible for the generation and hosting of these Laws? Name some Indian and International Cyber Laws.
- (c) What are the various assessment techniques used to comprise a Web Team? Explain the team dynamics followed by these teams.
- (d) What are Web Projects? What are the different techniques handled to write down a Web Project?
- (e) What led to the generation of Individual and Corporate web sites? Differentiate between both of them.
- (f) Explain some of the latest Web Application Developing Strategies.

2. Attempt any **FOUR** of the following :— (5×4=20)

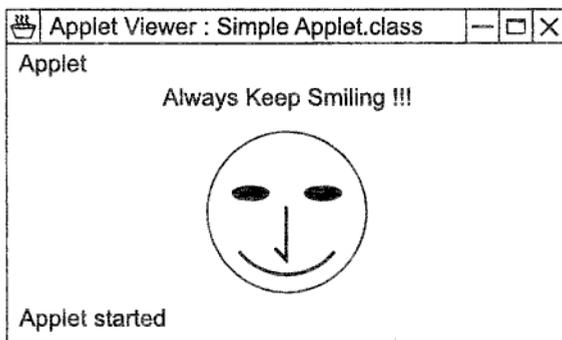
- (a) Name the different communication techniques used with their advantages and disadvantages.

- (b) Discuss the main issues considered while developing a multi-departmental and large-scale sites.
 - (c) Explain the terms Quality Assurance and Testing with example in connection with Web Development.
 - (d) Name the different designing strategies being considered for the development of an E-Commerce side. What factors led to the basic foundation of an E-Commerce System?
 - (e) Explain the different techniques used for creating forms and managing databases on Web.
 - (f) Explain the different technological advances considered and their impact on the working Web teams.
3. Attempt any FOUR of the following :— (5×4=20)
- (a) Discuss the factors that played an important role in modelling Java Language.
 - (b) What is the difference between Process-based and Thread-based Multitasking? Give the two ways by which a thread can be created in Java. Write a short program for the creation of a new thread by extending the thread class.
 - (c) Differentiate between an Application and an Applet. Write a simple Applet Skeleton to demonstrate the main methods present in Applet Class which are overridden to execute the methods in a given class.
 - (d) Attempt any TWO of the following :— (2½×2=5)
 - (i) What are Wrapper Classes? What is their use?
 - (ii) What is a Literal? What are different types of Literals?

- (iii) Differentiate between a Class and Instance variables. How can a class variable be accessed ?
- (e) Attempt any TWO of the following :— (2½×2=5)
- (i) What are the various levels of access controls ? Give the difference between them.
- (ii) Explain the use of “this” keyword with an example.
- (iii) Explain Inner Class with an example.
- (f) Write short notes on any TWO of the following :— (2½×2=5)
- (i) Constructors and Finalizers
- (ii) Method Overloading and Overriding
- (iii) “Super” keyword and “final” modifier
4. Attempt any TWO of the following :— (10×2=20)
- (a) Write a program in Java to demonstrate communication using TCP/IP i.e. using Sockets.
- Write separate code for a Server and Client program. The program should display the contents of a file specified in the Server onto the Client.
- (b) Attempt any TWO of the following :— (5×2=10)
- (i) What is a String Buffer ? How does it differ from String ? Give the three different ways of creating a String Object.
- (ii) Show the various streams found in the java io package by using a diagram. Write a program to show how to use a Stream Tokenizer to count the number of words in a file.
- (iii) What is the main difference between Readers/Writers and Input/Output

Streams ? Give a few subclasses of the Reader Class.

- (c) Write an Applet to display the following output :—



5. Attempt any TWO of the following :— (10×2=20)

- (a) Write the various characteristics of JDBC. What are the various steps for using JDBC ? Write a program to demonstrate these steps.
- (b) Attempt any TWO of the following :—
- (i) Explain briefly the Life Cycle of a Servlet. What are the basic steps for creating a Servlet ?
- (ii) What does a Dynamic Billboard Applet do ? What are the three main classes that the Applet contain ?
- (iii) What are the major reasons for migrating from C++ to Java ?
- (c) What is a Java Bean ? What are their advantages ? What are the various Introspection Mechanisms to infer information about a Bean ? Explain with a suitable example.