



12. (a) What are packages? Explain how will you import a package in Java. Give example. (16)

Or

- (b) Explain the string handling features of Java in detail. (16)
13. (a) Write a program to create interface named customer. In this keep the methods called information ( ) show ( ) and also maintain the tax rate. Implement this interface in employee class and calculate the tax of the employee based on their income. (16)

Income	Tax Percentage	
	Male	Female
>= 1,90,000	Nil	Nil
>= 2,00,000	10%	Nil
>= 5,00,000	20%	10%
>= 5,00,000	25%	20%

Or

- (b) (i) How will you display an image on the frame in a window using java. (8)
- (ii) What is meant by stream? What are the types of streams and classes. Explain in detail. (8)
14. (a) (i) Rotate a compass needle on the screen about a fixed point in response to the mouse being moved around the screen. (8)
- (ii) Write an exception class for a time of day that can accept only 24 hour representation of clock hours (example: 15:35). Write a Java program to input various formats of timings and throw suitable error messages. (8)

Or

- (b) Design and write a Java program to display the buttons from a digital telephone. As a number is dialed, play the respective tone. After a six-digit number is input, the program should play a ringing tone. The termination of this call should be initiated after playing this tone for 20 seconds.
15. (a) Explain in detail about inheritance generics and reflection.

Or

- (b) What are interrupting threads? Explain thread states and synchronization.