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Question Paper Code: 60760

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2016.

Fifth Semester

Information Technology

IT 2301/IT 51/10144 IT 501 — JAVA PROGRAMMING

(Regulations 2008/2010)

Time: Three hours

Maximum: 100 marks

Answer ALL questions.

$$PART A - (10 \times 2 = 20 \text{ marks})$$

- 1. Demonstrate Java overloaded constructor.
- 2. State the difference between static and non static class members.
- 3. What is abstract class?
- 4. What is dynamic binding?
- 5. How can you prevent the overwriting of a displayed text in a TextField of a Java program?
- 6. How does a radio button in Java differ from a check box?
- 7. What is the relationship between an event-listener interface and an event-adapter class?
- 8. Why are swing components called lightweight component?
- 9. Define multithreaded Programming.
- 10. What are the two ways for creating a thread?

PART B —
$$(5 \times 16 = 80 \text{ marks})$$

11. (a) Write Java code having class-objects-constructors-methods that reads five integers and determines the largest and the smallest in the group and displays them. (16)

Or

(b) Explain the various inheritance options available in Java with sample code. (16)

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.