

**Government College of Engineering, Aurangabad**  
(An Autonomous Institute of Government of Maharashtra)

**TE(IT) FT Rev Examination**  
End semester Examination Nov 2016

**IT-344: PROGRAMMING IN JAVA**

Time: Three Hours

**19 NOV 2016**

Max. Marks. 60

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*"Verify the course code and check whether you have got the correct question paper"*

**N.B:-**

1. All questions are compulsory
2. Figures to the right indicates full marks
3. Assume suitable data if necessary and state it clearly
4. Use of non-programmable calculator is allowed

**Q1.** i) The sum of the squares of the first  $n$  natural numbers is given by the formula [6]  
$$\text{sum} = n(n+1)(2n+1)/6$$

Write a java program to print the sum of the squares of the first  $n$  natural numbers.

ii) Describe all the primitive data types supported by Java with appropriate examples. Also specify their storage capacity/range. [6]

**Q2. Attempt any two**

i) Distinguish between Abstract Class & Interface. [6]

ii) What is an Exception? Is Exception handling used for debugging? [6]

Justify your answer.

iii) Can the catch block be overloaded? Justify your answer. [6]

Give two examples of checked exceptions.

**Q3. Attempt any two**

i) How are Strings different from StringBuffer? Explain. [6]

ii) Explain the concept of serialization & deserialization with example. [6]

iii) What is meant by multi-threading? What are the 2 ways of creating a thread? [6]

Which is the best way and why?

**Q4. Attempt any two**

i) Write the Model-View-Controller Model. [6]

ii) Distinguish between Swing and AWT. [6]

iii) Explain life cycle of an applet. [6]

**Q5.** i) Write a java program, [12]

a) Which establishes a connection with the database having a table "STUDENT" with structure – rollno, name, class, Date of Birth.

b) Accept rollno from command line and display the details.

c) Display all the records from table with proper formatting.