Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from both the Groups as directed.

Group - A

(Objective-type Questions)

Answer all questions of the following.

1. Select the answer from the following:

   \[ 2 \times 10 = 20 \]

   (a) Which of the following keywords in Java?

   (i) Friend
   (ii) Gnome
   (iii) Hello
   (iv) Java

   Select the two correct answers:
(ii) NULL
(iii) Implement
(iv) Synchronized
(v) Throws

(b) Which of the following are Java keywords? Select the two correct answers:
(i) Supers
(ii) Strictly
(iii) Integer
(iv) Synchronize
(v) Instance of

(c) How many bytes are used to represent the primitive data type `int` in Java? Select one correct answer:
(i) 2
(ii) 4
(iii) 8
(iv) 1
(v) The number of bytes to represent an int is compiler dependent

(d) Which of the following statements are correct. Select the four correct answers:
(i) A Java program must have a package statement
(ii) A package statement if present must be the first statement of the program (barring any comments)
(iii) If a Java program defines both a package and import statement, then the import statement must come before the package statement
(iv) An empty file is a valid source file
(v) A Java file without any class or interface definitions can also be compiled
(vi) If an import statement is present, it must appear before any class or interface definitions

(e) Which of these are valid declarations for the main method? Select the one correct answer:
(i) Public void main ()
(ii) Public static void main (String args [])

(iii) Static public void main (String)

(iv) Public static void main (String)

(v) Public static int main (String args [])

(f) Which of the following are valid declarations for the main method? Select the two correct answers:

(i) Public static void main (String args [])

(ii) Public static void main (String [] args)

(iii) Public static int main (String args [])

(g) What is the name of the method used to start a thread execution?

(i) init ()

(ii) start ()

(iii) run ()

(iv) resume ()

(h) Which is a not characteristic of java programming language?

(i) Robust

(ii) Procedural

(iii) Distributed

(iv) Multithreaded

(i) Which of them is a not command line tool?

(i) Java

(ii) Javaw

(iii) Javadoc

(iv) javapath

(j) Which of the following is correct about main method in java?

(i) Must be declared as public

(ii) It must not return any value

(iii) Must be declared as static

(iv) Must accept string as a parameter

(v) Above all are compulsory

(vi) All are optional
Group – B

(Long-answer Type Questions)

Answer any four questions of the following:

15 \times 4 = 60

2. What do you mean by super keyword? Where it is used? What is the use of super() function?

3. What is Abstract Class? Why it is needed? Differentiate between abstract class and interface.

4. Write a java program that reads a number from console and checks whether the number is prime or not.

5. Explain life cycle of thread. Write a program that creates two threads and each thread prints number from 1 to 10.


7. Write short notes on the following:
   (a) Final
   (b) Exception Handling
   (c) Package
   (d) Inner Class

8. What are the access modifier available in java class? Explain them with example.