

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: BE
BRANCH: CSE**

**SEMESTER : VII/ADD
SESSION : MO/18**

SUBJECT: CS7101 PRINCIPLES OF PROGRAMMING LANGUAGES

TIME: 3 HOURS

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) What do you mean by high level language. [2]
Q.1(b) Define Syntax, semantics and pragmatics of a programming language. [4]
Q.1(c) Explain six different paradigms of programming with suitable example. [6]
- Q.2(a) What is cardinality of a type. [2]
Q.2(b) Explain the different difficulties of a package with public type component. [4]
Q.2(c) Briefly explain the use of ADA limited private type. [6]
- Q.3(a) What is abstract class. [2]
Q.3(b) Explain the differences between method overloading and method overriding. [4]
Q.3(c) Write a java program to find out the area of a circle and area of a square using constructor overloading. [6]
- Q.4(a) What is inclusion polymorphism. [2]
Q.4(b) Explain the concept of context dependent and context independent overloading with a suitable example. [4]
Q.4(c) Write a C++ program to swap values of two variables using function template. [6]
- Q.5(a) What is sequencer. [2]
Q.5(b) State the various problems of concurrency. [4]
Q.5(c) How does semaphore help to resolve the shared buffer problem? [6]
- Q.6(a) What are characteristics of functional programming. [2]
Q.6(b) What is Lazy evaluation in functional programming. [4]
Q.6(c) Explain Haskell pattern matching with a suitable example. [6]
- Q.7(a) What is the difference between a scripting language and a programming language. [2]
Q.7(b) Explain the various features of PYTHON language. [4]
Q.7(c) Explain the key features of logic programming. [6]

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