

Name :

Roll No. :

Invigilator's Signature :

CS/B.TECH(CSE)/SEM-6/CS-605/2010

2010

OBJECT TECHNOLOGY & UML

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

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

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

i) What is the illegal identifier ?

- a) ☒ int :a; b) in_b;
c) int \$c; d) int calc_data;

ii) Which is not a JAVA keyword ?

- a) ☒ strictfp strictfp is keyword b) synchronized
c) transient d) all of these.

iii) Which will be compilable abstract class ?

- a) public abstract class Car { public Bark speak (); }
b) ☒ public abstract class Car { public Bark speak () { } }
c) public class Car { public abstract Bark speak (); }
d) public class Car abstract { public abstract Bark speak (); }

iv) Which is true ?

- a) "X extends Y" is correct if and only if X is a class and Y is an interface.
- b) "X extends Y" is correct if and only if X is an interface and Y is a class.
- ☒ c) "X extends Y" is correct if X and Y are either both classes and both interfaces.
- d) "X extends Y" is correct for all combinations of X and Y being classes and / or interfaces.

v) Which is legal declaration ?

- a) short x [];
- b) short [] y;
- ☒ c) short [] z [] [];
- d) All of these.

vi) From any non-sub-class class outside the package, which access is possible ?

- ☒ a) Public
- b) Protected
- c) Default
- d) All of these.

vii) Which is a primitive type variable declarations ?

- a) char
- b) byte
- c) double
- ☒ d) All of these.

viii) Which is the exact waterfall of any software development process ?

- a) What — How — Do it — Use — Test
- b) How — What — Do it — Test — Use
- ☒ c) What — How — Do it — Test — Use
- d) How — What — Do it — Use — Test.

choose between a and c

ix) Using class declaration, the "final" key-word means

- a) the methods in that class will be overridden
- ☒ b) the class can't be sub-classed
- c) the class would be a super class
- d) all of these.

x) In JAVA, Applet is a

- ☒ a) Super Class
- b) Interface
- c) Package
- d) Object.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Explain different *access specifiers* in Java.
3. Explain the *static* keyword with a suitable Java code.
4. a) What do you mean by *final*, *finalize* and *finally* ?
b) What do you mean by *garbage collection* in Java ? $3 + 2$
5. Explain *Inner class* in Java with a simple code.
6. Explain the advantage of *multithread* over *single thread*.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. a) Explain "Use Case" diagram. What are the essential criteria for ideal use case diagram ? What are the "extends" and "includes" constructs in use case diagram ? Draw a use case diagram Nursing Home functionality where example of actors are Patient, Doctor, Reception Staff, Billing Staff and Administrator etc. $1 + 2 + 2 + 5$
- b) Explain State chart and Activity diagram with example. 5