Mid + Terminal Exam
Object Oriented Programming

Note: Question 1 is of 30 marks, Question No 2 and 3 are of 20 marks each.

Question No 1: Fill in the box to the left of the correct options. More than 1 may be correct.

* Which of the following english alphabet is a vowel

[■] a	[■] e	[■] i	[ ] w

1. Which of the following types is not primitive (✗)

[ ] boolean	[■] Array	[ ] String	[ ] float

2. If access level is not specified for a data member than it is (✗)

[ ] default	[■] public	[ ] private	[ ] protected

3. Which access modifier should be used to make data members accessible in sub class (✗)

[ ] private	[ ] protected	[■] public	[ ] none

4. A method whose name is exactly the same as that of the class (✓)

[■] constructor	[ ] getter	[ ] setter	[ ] destructor

5. Default constructor takes how many arguments (✓)

[■] 0	[ ] 1	[ ] 2	[ ] 3

6. To make a private data member accessible outside class which of the following is provided (✗)

[ ] constructor	[ ] getter	[ ] setter	[■] Both getter & setter

7. Which keyword is used to inherit a class from another class (✓)

[ ] inherit	[ ] abstract	[ ] super	[■] extend

8. Objects are created in a special memory area called (✓)

[ ] stack	[ ] array	[■] heap	[ ] RAM

9. Objects are passed by (✓)

[✓] value	[■] reference	[ ] pointer	[ ] address

10. Two methods with the same name but different signatures are said to be (✓)

[ ] Over ridden	[✓] Over loaded	[ ] Over burdened	[ ] None of them

11. When calling constructor of the base class which keyword is used (✗)

[ ] toString	[✓] extend	[ ] super	[ ] base

12. Which of the following is the base class of all classes (✗)

[ ] Base	[■] JDK	[ ] Object	[ ] Class

13. Which package is available by default to all classes (✗)

[ ] java.util	[■] java.main	[ ] java.lang	[ ] java.default

14. Abstract class doesnot provide implementation of at least how many methods (✗)

[ ] 0	[ ] 1	[ ] 2	[✓] 3

15. A collection of methods with no implementation is called (✗)

[✓] Abstract class	[ ] Data hiding	[ ] Interface	[ ] Exception

16. The value 14.5 is by default treated as (✗)

[■] float	[ ] single	[✓] double	[ ] both float & double

17. Person class has a method toString(), if the same method is defined in sub class Student it is (✗)

[ ] Over ridden	[ ] Over loaded	[ ] Over burdened	[✓] None of them

18 Ability to perform same action in many different ways is called

Abstraction	Encapsulation	Generalization	✓ Polymorphism

19 Which of the following block is used to contain statements that can cause an error

✓ throw	catch	try	finally

20 Which of the following block of code is executed when an exception occurs

throw	✓ catch	try	finally

21 Which of the following block of code executes whether an exception occurs or not

throw	catch	try	✓ finally

22 5 / 0 will through which type of exception

div / 0	div / zero	ArithmeticException	✓ Arithmetic Exception

23 Which of the following concept is similar to the words template, blueprint

object	✓ class	constructor	API

24 Which of the following are the advantages df object oriented programming

✓ Modularity	Code reuse	✓ Information hiding	✓ Easy debugging

25 An object stores its state in

✓ Variables	fields	methods	All of them

26 An object exposes its behavior through

fields	methods	✓ functions	All of them

27 PI is needed in calculation of area of a circle which of the following provides most accurate value

✓ 3.14	22/7	✓ Math.PI	Math.pi

28 Which of the following keyword is used to refer to the current object in a method or constructor

✓ void	which	this	return

29 Exception class is the subclass of which of the following

Object	✓ Throwable	Serializable	lang

30 Which statement is used to create a custom error message

throw	✓ catch	try	finally

Subjective Questions

Question No 2: Create a class **Person**, with two string data members **first_name** and **last_name**, a default constructor which initialize them with empty strings " ", and a two argument constructor. Provide getter and setter methods for both first_name and last_name. Override the toString() method so that it prints first_name and last_name on separate lines.
(20 marks)

Question No 3: Create a class **Student** which inherits from the **Person** class. Create a new data member **grade** which can store one of the letters {A, B, C, D}. Define a default constructor which initializes grade with empty character ' ', and a 3 argument constructor. Provide getter and setters for grade. Override the toString() method so that it prints first_name, last_name and grade of the student on separate lines.
(20 marks)