

COMPUTER

CHAPTER – 4

VALUES AND DATA TYPES

QUESTIONS & ANSWERS

Q1. What is escape sequence in java? Give three examples.

Ans: An escape sequence is a set of characters that has a special meaning for the java compiler, in an escape sequence, a character is preceded by a backslash (\). Some examples of escape sequence \n, \f & \t

Q2. What is the result of evaluating the following expression?

$(1+2*2)/2+2 = 4.5$

Q3. What is a token in java? Name the tokens available in java.

Ans: All characters in a java program are grouped into symbols called tokens, as you know, a computer program consists of a set of instructions called statement. A statement is composed of various components. Each individual component of a programming statement is referred to as a token. Keywords, identifiers, and literals are three tokens in java.

Q4. Why can't you use a keywords as a variable name?

Ans: keywords are reserved words because the java compiler reserved these words for its own use and therefore are not available as names for variables or methods. These words have a special meaning to the java compiler. For example, void and public

Q5. Which of the following are java keywords?

Input, class, public, int, x, y, radius

Q6. What are identifiers in java? List three identifier formation rules.

Ans: Identifiers are used to name different parts of a program such as variables, methods, classes, objects, etc.

Q7: Explain the following statement – “In Java, total, Total, ToTal, and TOTAL are all different identifiers.

Ans: java is case sensitive, which means that two identifier names that differ only in upper and lower case characters are considered to be

different identifiers. Therefore, total, Total, ToTal and TOTAL are all different identifiers.

Example of some valid identifiers:

Students_name \$M1English file3 _Age TOTAL
this_is_a_very_long_identifier

Exampel of some invalid identifiers

this Total amount 1M_Eng total-Marks

How would you print characters like \, ', a

```
public class First{  
  
    public static void main(String []args){  
        System.out.println("Output = \\");  
    }  
}  
public class Second{  
  
    public static void main(String []args){  
        System.out.println("Output = \");  
    }  
}  
public class Third{  
  
    public static void main(String []args){  
        System.out.println("Output = '");  
    }  
}
```

Q12: Explain the term, encapsulation using appropriate examples

Ans: encapsulation is a mechanism that binds together code and the data it manipulates. It keeps them bot safe from the outside would, preventing any unauthorised access or misuse. Only member methods, which are wrapped inside the class, can access the data and other methods.

Ex.

class Account {

```

private int account_number;
private int account_balance;

        public void show Data() {
            //code to show data
        }

public void deposit(int a) {
    if (a < 0) {
        //show error
    } else
        account_balance = account_balance + a;
    }
}

```

Q13 Provide real-life examples to explain the terms inheritance.

Ans: As can be seen in (Figure 1.17 - Page No 11), inheritance is not just limited to one level. You can have sub classes of flying birds as parrot or owl, thus a derived class can be a base class of other classes forming an inheritance hierarchy

Q14 Polymorphism means different forms. Explain polymorphism in java and proved examples to support you answer.

Ans: Polymorphism is the ability of a function or an object to take on multiple forms. In OOP, polymorphism allows an operation to exhibit different behaviour in different instances, the behaviour depends upon the type of data used in the operation. For example, consider the operation of additions, for two numbers, the operation will generate the sum and if the operands are strings, than the operation would produce a third string by concatenation.