Chapter 1 – Answers (Presentable Format)

# 1.1

**a)** programs

**b)** input unit, output unit, memory unit, arithmetic and logic unit (ALU), control unit, secondary storage

**c)** machine language, assembly language, high-level language

**d)** compilers

**e)** Android

**f)** Stable release

**g)** accelerometer

# 1.2

**a)** java

**b)** javac

**c)** .java

**d)** .class

**e)** bytecodes

# 1.3

**a)** encapsulation

**b)** classes

**c)** object-oriented analysis and design (OOAD)

**d)** inheritance

**e)** UML (Unified Modeling Language)

**f)** attributes

# 1.4

**a)** Input unit

**b)** Programming

**c)** Assembly language

**d)** Output unit

**e)** Memory unit and Secondary storage

**f)** Arithmetic unit

**g)** Logic unit

**h)** High-level languages

**i)** Machine language

**j)** Control unit

# 1.5

**a)** Java

**b)** C

**c)** Transmission Control Protocol (TCP)

**d)** C++

# 1.6

**a)** Edit, Compile, Load, Verify, Execute

**b)** Integrated Development Environment (IDE)

**c)** Java Virtual Machine (JVM)

**d)** Virtual machine

**e)** Class loader

**f)** Bytecode verifier

# 1.7

• Compilation Phase: The 'javac' compiler translates source code (.java) into bytecode (.class).

• Execution Phase: The JVM loads and executes the bytecode.

# 1.8

Object: The watch.  
Attributes: Color, size, brand, strap.  
Behaviors: Tells time, ticks, alarm.  
Class: Blueprint of watches.  
Inheritance: Alarm clock extends watch.  
Modeling: Representation before building.  
Messages: User button inputs.  
Encapsulation: Internal mechanism hidden.  
Interface: Buttons and display.  
Information hiding: Internal parts hidden.