Academic Year (2020-21)

Department of Information Technology (Under Graduate Course) B.Sc.IT

Question Bank

Semester – IV

Core Java(USIT401)

Advanced Learners

1. What will be the output of the following Java code?

```
class increment {
  public static void main(String args[])
    {
       int g = 3;
        System.out.print(++g * 8);
    }
  }
```

a) 25
b) 24
c) 32
d) 33

2. What is the numerical range of a char data type in Java?

a) -128 to 127
b) 0 to 256
c) 0 to 32767
d) 0 to 65535

3. Which one is a valid declaration of a boolean?

a) boolean b1 = 1;
b) boolean b2 = 'false';
c) boolean b3 = false;
d) boolean b4 = 'true'

4. What will be the output of the following Java code?

```
class booloperators {
   public static void main(String args[])
    {
       boolean var1 = true;
     boolean var2 = false;
     System.out.println((var1 & var2));
    }
}
```

a) 0
b) 1
c) true
d) false

5. Which of these can not be used for a variable name in Java?

a) identifier
b) keyword

c) identifier & keyword
d) constant

6. What will be the output of the following Java program?

```
class c
{
   public void main( String[] args )
   {
      System.out.println( "Hello" + args[0] );
   }
}
```

a) Hello c
b) Hello
c) Hello world
d) Runtime Error

7. Which of the following can be operands of arithmetic operators?

a) Numeric
b) Boolean
c) Characters
d) Numeric & Characters

8. With x = 0, which of the following are legal lines of Java code for changing the value of x to 1?

1. x++;
2. x = x + 1;
3. x += 1;
4. x =+ 1;

a) 1, 2 & 3
b) 1 & 4
c) 1, 2, 3 & 4
d) 3 & 2

9. Decrement operator, −−, decreases the value of variable by what number?

a) 1
b) 2
c) 3
d) 4

10. What will be the output of the following Java program?

```
class increment
{
   public static void main(String args[])
   {
      int g = 3;
      System.out.print(++g * 8);
   }
}
```

a) 25
b) 24

c) 32
d) 33

Slow Learners

1. _____ can be defined as a template/blueprint that describes the behaviors/states that object of its type support.
   - **a. Class**
   - b. Objects
   - c. Methods
   - d. Variables

2. Names used for classes, variables and methods are called _____.
   - **a. Identifiers**
   - b. Variables
   - c. Data Types
   - d. Methods

3. For general-purpose use on desktop PCs, servers and similar devices _____ edition is used.
   - **a. Standard**
   - b. Enterprise
   - c. Mobile
   - d. Java Card

4. _____ provides a clear and concise way to represent one method interface using an expression.
   - **a. Lambda Expression**
   - b. Interface
   - c. Abstract Class
   - d. Class

5. _____ is used to refer to a method of functional interface.
   - a. Lambda Expression
   - **b. Method Reference**
   - c. Interface
   - d. Abstract class

6. ContainingClass::staticMethodName is the syntax of _____
   - **a. Reference to a static method.**
   - b. Reference to an instance method of a particular object.
   - c. Reference to a constructor.
   - d. Reference to a class.

7. containingObject::instanceMethodName is the syntax of _____
   - a. Reference to a static method.
   - **b. Reference to an instance method of a particular object.**
   - **c.** Reference to a constructor.
   - **d.** Reference to a class.

8. ClassName::new is the syntax of _____

a. Reference to a static method.
e. Reference to an instance method of a particular object.
f. Reference to a constructor.
g. Reference to a class.

9. _____ is a source code representation of a fixed value.
a. Variables
b. Literals
c. Class
d. Object

10. _____ is a sequence of characters.
a. Strings
b. Variables
c. Literals
d. Data types

Assignments

1. What is the value stored in x in the following lines of Java code?

```
int x, y, z;
 x = 0;
 y = 1;
 x = y = z = 8;
```

a) 0
b) 1
c) 9
d) 8

2. What is the value stored in x in the following lines of Java code?

```
int x, y, z;
 x = 0;
 y = 1;
 x = y = z = 8;
```

a) 0
b) 1
c) 9
d) 8

3. Which of these access specifiers can be used for a class so that its members can be accessed by a different class in the different package?

a) Public
b) Protected
c) Private
d) Friendly

4. Which of these selection statements test only for equality?

a) if
b) switch
c) if & switch
d) if-else

5. Which of these are selection statements in Java?

a) if()
b) for()
c) continue
d) break

Introduction to Embedded System(USIT402)

Questions: Advanced Learner

1. EDO, SD, DDR are types of _____
A. RAM
B. ROM
C. Flash
D. Cache

2. _____ is a system that automatically controls the speed of a motor vehicle.
A. Drive by wire
B. Lane assist
C. ECS
D. Cruise control

3. _____ has to be refreshed after each read operation
A. RAM
B. SRAM
C. DRAM
D. MRAM

4. When _____ Flash memories are to be read, the contents must first be paged into memory-mapped RAM
A. NOR
B. NAND
C. OR
D. XOR

5. 8031 has _____ ROM.
A. 0K
B. 4K
C. 8K
D. 16K

6. 8052 has _____ interrupt sources.
A. 6
B. 8
C. 4
D. 2

7. For 8051, _____ datatype is most appropriate.
A. Int
B. Char
C. Boolean
D. Sbit

8. 8051 microcontrollers have a _____ bit addressing bus.
A. 16
B. 32
C. 64
D. 128

9. If EA=_____, the microcontroller completely ignores internal program memory and executes only the program stored in external memory.
A. 0
B. 1
C. 2
D. 3

10. A compiler which produces the executable code to be run on a different platform is called a _____.
A. Compiler
B. cross-compiler
C. Linker
D. Cross Linker

Questions: Slow Learner

1. A technique that allows for simultaneous execution of parts, or stages, of instructions to more efficiently process instructions is called as
A. Embedded system
B. instruction pipelining
C. Orthogonal Instruction set
D. Non-orthogonal Instruction set

2. An embedded system can do _____ task
A. multi task at a time
B. two task
C. specific task
D. sometime multitask sometime single tas

3. An embedded system must have
A. hard disk
B. processor and memory
C. operating system
D. processor and input-output unit

4. Which of the following is not an example of a 'Small scale embedded System'?
A. Electronic Barbie doll
B. simple calculator
C. Cell phone
D. Electronic toy car

5. The _____ circuit brings the internal registers and the different hardware systems of the
A. processor/controller to a known state and starts the firmware execution from the reset vector.
B. Brownout protection

C. Watchdog
D. Reset

6. _____ prevents the processor/controller from unexpected program execution behaviour when the supply voltage to the processor/controller falls below a specified voltage.
A. Brownout protection
B. Watchdog
C. Reset
D. Oscillator

7. _____is a hardware timer for monitoring the firmware execution. Depending on the internal implementation, the timer increments or decrements a free running counter with each clock pulse and generates a reset signal to reset the processor
A. Brownout protection
B. Watchdog
C. Reset
D. Oscillator

8. _____ is a ISO defined serial communication bus originally developed for the automotive industry.
A. CAN
B. LAN
C. WAN
D. MAN

9. The two kind of main memory are
A. primary and secondary
B. direct and sequential
C. floppy disk and hard disk
D. Primary and hybrid

10. PROM is also called as _____
A. EPROM
B. OTP NVM
C. EEPROM
D. OCP NVM

Assignments

1. The job of the _____is to combine multiple object files and resolve the unresolved symbols.
A. Compiler
B. Cross compiler
C. Linker
D. Cross Linker

2. A _____ contains a hardware interface between the host computer and the target embedded system.
A. Remote Debugger
B. Remote control
C. Simulator
D. Emulator

3. Communication between the GDB frontend and debug monitor is _____-oriented and designed for transmission over a serial connection.
A. Byte
B. Char
C. Bit
D. Stream

4. Frontend remote debugger runs on the _____.
A. host computer
B. guest computer
C. target host
D. target processor

5. _____ can have multiple inputs (up to 100 even), each capable of detecting whether the electrical signal it is attached to is currently at logic level 1 or 0.
A. Logic Analyzers
B. Logic Simulator
C. UART
D. Buffer

Computer Oriented Statistical Techniques(USIT403)

Software Engineering(USIT404)

Questions for Advanced Learners

1. What is a Software ?
a) Software is set of programs
b) Software is documentation and configuration of data
c) Software is set of programs, documentation & configuration of data
d) Software is set of system application
2. What are attributes of good software ?
a) Software maintainability
b) Software functionality
c) Software development
d) Software maintainability & functionality
3. Which of these software engineering activities are not a part of software processes ?
a) Software dependence
b) Software development
c) Software validation
d) Software specification
4. Which of these is incorrect ?
a) Software engineering belongs to Computer science
b) Software engineering is a part of more general form of System Engineering
c) Computer science belongs to Software engineering
d) Software engineering is concerned with the practicalities of developing and delivering useful software
5. RAD stands for
a) Relative Application Development

b) Rapid Application Development
c) Rapid Application Document
d) Rapid Application Design

6. Which one of the following is not functional requirement ?
a) Maintainability
b) Portability
c) Robustness
d) dependability

7. _____ and _____ are the two issues of Requirement Analysis.
a) Performance, Design
b) Stakeholder, Developer
c) Functional, Non-Functional
d) System and its attributes

8. Which of the following property does not correspond to a good Software Requirements Specification (SRS) ?
a) Verifiable
b) Ambiguous
c) Complete
d) Traceable

9. Why is Requirements Management Important? It is due to the changes _____
a) to the environment
b) in method
c) in customer
d) in fiscal policies

10. The UML supports event-based modeling using _____ diagrams.
a) Deployment
b) Collaboration
c) State chart
d) Class

Questions for Slow Learners

1.Some systems failure can result in significant economic losses, physical damage or threats to human life and such systems are called _____.
a.critical systems
b.simple
c.difficult to understand
d.maintainable

2.Which one is not a type of safety critical system?
a.Software Critical System
b.Safety Critical System
c.Mission Critical System
d.Business Critical System

3._____ is defined as the chance of letdown-free operation over a quantified time in a given situation for a particular resolution.
a.Dependability
b.Affordability
c.Reliability
d.Availability

4._____ is defined as the chance that a system, at certain point of time, will be effective and able to carry the demanded services.
a.Reliability

b.Availability
c.Affordability
d.Dependability
5._____ is defined as an incorrect system state that can lead to system performance that is unpredicted by system consumers.
a.System Failure
b.System Error
c.System Fault
d.System Crash
6._____ is defined as an incident that happens at some point in time when the system does not bring a out as predictable by its customers
a.System Error
b.System Crash
c.System Failure
d.System Fault
7._____ is an instance of a fault-detection method.
a.Software System
b.Processing System
c.File System
d.Debugging
8.Safety critical software is classified into _____ classes.
a.One
b.Two
c.Three
d.Four
9._____ is a system characteristic that imitates the capability of the system to safeguard itself from outside outbreaks that may be unintentional or deliberate.
a.Transparency
b.Costing
c.Security
d.Maintenance
10.Which of the term is not related to Security?
a.Safeguarding
b.Threats
c.Vulnerability
d.Exposure

Assignments

1.Which subsystem implements the requirements Defined by the application?
a)UI
b)DBMS
c)Application subsystem
d)Main system
2.What is a specific instance of a baseline or configuration item?
a)Software
b)Configuration
c)Version
d)Status accounting
3.What is validating the completeness of a product?
a)Identification
b)Software

c)Auditing and reviewing
d)Status accounting
4.What is group with the responsibility for reviewing and approving changes to baselines?
a)Software configuration item
b)Baseline
c)Configuration
d)Configuration control board
5.What is a collection of software elements treated as a unit for the purposes of SCM?
a)Software configuration item
b)Baseline
c)Configuration
d)Configuration control board

Computer Graphics and Animation (USIT405)

Questions: Advanced Learner

1.Which of the following is not a type of Polygon Clipping:
- A. Sutherland-Hodgeman polygon clipping algorithm
- B. line polygon clipping algorithm
- C. Vatti clipping algorithm
- D. Weiler-Atherton polygon clipping algorithm

2.Midpoint circle drawing algorithm is used to _____ the points for a circle.
- A. rasterizing
- B. pixel
- C. initialize
- D. octants

3. In a homogeneous coordinate system, 2D coordinate positions (x, y) are represented by _____ coordinates.
- A. 2
- B. 3
- C. 4
- D. 5

4. In Computer Graphics, _____ are the points at which lines appear to converge.
- A. Appearing points
- B. Disappearing points
- C. Vanishing points
- D. Advanced points

5. A viewing frustum is a _____ in a scene positioned relative to the viewport's camera
- A. 3-D volume
- B. 2-D image
- C. 2-D area
- D. 1-D point

6. For RGB 24-bit color system, each color coordinate can range from 0 to _____
- A. 15
- B. 255
- C. 127
- D. 63

7. _____ is a technique in which hidden surfaces are not removed but displayed with effects such as intensity, color or shadow.
- A. Depth Search
- B. Upward search
- C. Downward Cueing

D. Depth Cueing

8. In the parametric equation of a horizontal hyperbola, the x co-ordinate is given as _____
   A. x = b sec t
   B. x = a cosec t
   C. x = a sec t
   D. x = b cosec t
9. An animation, an autonomous character determines its own actions, at least to a certain extent.
   A. Keyframing
   B. Procedural
   C. Behavioural
   D. Designing
10. GIF89a can also be specified for_____presentation.
   A. interlaced GIF
   B. raster
   C. vector
   D. scalar

Questions:Slow Learner

1. The Graphics cannot be
   A. Drawing
   B. scalar
   C. Simulation
   D. Movies
2. Types of Computer graphics are
   A. Random and Raster
   B. Scalar and Raster
   C. Only Raster
   D. Only Random
3. Translation vector (Tx, Ty) is used in _____
   A. Scaling
   B. Rotation
   C. Reflection
   D. Translation
4. _____ is a technique to change the shape of an object in a 2D plane.
   A. Scaling
   B. Rotation
   C. Reflection
   D. Shearing
5. A point light emits light from a fixed point in space, called its _____
   A. Light
   B. Rays
   C. Position
   D. Channel
6. Which describes the visible light on the human eye?
   A. Radiometry
   B. Photometry
   C. Colorimetric
   D. Channel
7. If the normal vector is pointing away from the COP then it is on which face?
   A. Front
   B. Top

C. Back
D. Side

8.Back-Face detection, also known as _____ method**.**

A. Plane eequation
B. Visibility
C. Normal
D. Vector

9. A person who creates animations is called_____-.

A. designer
B. inventor
C. software developer
D. animator

10. The animator specifies critical or key positions for the objects in the process of?

A. Simulation
B. frame by frame
C. Keyframing
D. Morphing

Assignments

1. In a graphics defined system the primary output device is_____.

A. Scanner
B. Video monitor
C. Web Camera
D. Printer

2. How can we achieve shearing with respect to X axis in shearing.

A. Xnew = Xold + Shx x Yold
B. Xnew = Xold + Shx x Xold
C. Xnew = Xold + Shy x Yold
D. Xnew = Yold + Shx x Yold

3. 3D graphical projections constructed by mapping points in 3-dimensional space to points on a 2-dimensional projection plane is _____

A. Lateral Projection
B. Planar Projection
C. Horizontal Projection
D. Vertical Projection

4. In Beizer Curve, the curve follows _____

A. the shape of the defining polygon
B. the defining points
C. the starting point
D. the control points

5. _____ refers to the number of frames for a given action, which transforms to the speed of the action on film.

A. Image Processing
B. Pose to pose
C. Timing
D. Anticipation