

**BCA 3<sup>rd</sup> YEAR**

**INTERNAL ASSIGNMENT**

**SESSION : 2020-23**

PAPER : XVII

**SOFTWARE ENGINEERING**

[MAX MARKS : 20]

The question paper is in consists two sections A & B. **Section - A** consists of 10 objective type questions. Attempt all questions. **Section - B** consists of 02 descriptive type question. Each question is of **05** marks (word limit 300 words). Attempt all questions. Use graphs, charts and diagrams to explain your answer if necessary .

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**Section : A**

**1. Objective type questions. Attempt all questions. [01 x 10 = 10]**

- 1> What is the first step in the software development lifecycle?
  1. System Design
  2. Coding
  3. System Testing
  4. Preliminary Investigation and Analysis
- 2> What does the study of an existing system refer to?
  1. Details of DFD
  2. Feasibility Study
  3. System Analysis
  4. System Planning
- 3> Which of the following is involved in the system planning and designing phase of the Software Development Life Cycle (SDLC)?
  1. Sizing
  2. Parallel run
  3. Specification freeze
  4. All of the above
- 4> Which of the following does not relate to Evolutionary Process Model?
  1. Incremental Model
  2. Concurrent Development Model

3. WINWIN Spiral Model
  4. All of the above
- 5> What is the major drawback of the Spiral Model?
1. Higher amount of risk analysis
  2. Doesn't work well for smaller projects
  3. Additional functionalities are added later on
  4. Strong approval and documentation control
- 6> Model selection is based on \_\_\_\_\_.
1. Requirements
  2. Development team & users
  3. Project type & associated risk
  4. All of the above
- 7> Which of the following is an example of Black Box and Functional Processing?
1. First Generation Language
  2. Second Generation Language
  3. Third Generation Language
  4. Fourth Generation Language
- 8> Software maintenance costs are expensive in contrast to software development.
1. True
  2. False
- 9> The \_\_\_\_\_ model helps in representing the system's dynamic behavior.
1. Object Model
  2. Context Model
  3. Behavioral Model
  4. Data Model
- 10> Which of the following word correctly summarized the importance of software design?
1. Quality
  2. Complexity
  3. Efficiency
  4. Accuracy

### **Section : B**

#### **2. Descriptive type questions (maximum limit 250 - 300 words). Attempt all questions. [05 x 2 = 10]**

1. What are the main shortcomings of data flow diagram (DFD) as a tool for performing structured analysis?
2. What do you mean by SDLC? Describe the different phase of SDLC in detail?

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**INTERNAL ASSIGNMENT**

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PAPER : XVIII

**Computer Graphics**

[MAX MARKS : 20]

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**Section : A**

1. **Objective type questions. Attempt all questions. [01 x 10 = 10]**

1. A vector can be defined as
  - (a) Intersection b/w two point position
  - (b) Different b/w two point position
  - (c) Comparison b/w two point position
  - (d) None of these
  
2. A pixel may be defined as
  - (a) Smallest size Object
  - (b) Larger size Object
  - (c) Medium size Object
  - (d) None of these
  
3. A Line can be represented by
  - (a) One Point
  - (b) Two Points
  - (c) Three Points
  - (d) Four Point
  
4. Graphics can be -
  - (a) Simulation
  - (b) Drawing
  - (c) Movies, photographs
  - (d) All of the above
  - (e)

5. What is a pixel mask?
  - (a) string containing only 0's
  - (b) a string containing only 1's
  - (c) a string containing two 0's
  - (d) a string containing both 1's and 0's
  
6. Which of the following is not the pattern of line?
  - (a) Dotted line
  - (b) Dashed line
  - (c) Dark line
  - (d) All of the above
  
7. DDA stands for -
  - (a) Direct differential analyzer
  - (b) Data differential analyzer
  - (c) Direct difference analyzer
  - (d) Digital differential analyzer
  
8. The process of repositioning an object along a circular path is called -
  - (a) Translation
  - (b) Rotation
  - (c) Scaling
  - (d) None of the above
  
9. A positive value of the rotation angle -
  - (a) rotates an object in the clockwise direction
  - (b) rotates an object in the counter-clockwise direction
  - (c) Both of the above
  - (d) None of the above
  
10. Which of the following transformation is used for altering the object's size?
  - (a) Translation
  - (b) Scaling
  - (c) Rotation
  - (d) None of the above

**Section : B**

**2. Descriptive type questions (maximum limit 250 - 300 words). Attempt all questions.**

**[05 x 2 = 10]**

1. What is computer graphics and what does it entails?
2. Write a short note on :
  - a. Keyboard
  - b. Mouse
  - c. Joystick
  - d. Trackball
  - e. Digitizer
  - f. Light pen
  - g. Touch panels
  - h. Scanner

**BCA 3<sup>rd</sup> YEAR**

**INTERNAL ASSIGNMENT**

**SESSION : 2020-23**

PAPER : XIX

JAVA PROGRAMMING

[MAX MARKS : 20]

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**Section : A**

**1. Objective type questions. Attempt all questions. [01 x 10 = 10]**

1. Which of the following is not a Java features?
  - (a) Dynamic
  - (b) Architecture Neutral
  - (c) Use of pointers
  - (d) Object-oriented
  
2. \_\_\_\_\_ is used to find and fix bugs in the Java programs.
  - (a) JVM
  - (b) JRE
  - (c) JDK
  - (d) JDB
  
3. Which of the following is a valid declaration of a char?
  - (a) char ch = '\utea';
  - (b) char ca = 'tea';
  - (c) char cr = \u0223;
  - (d) char cc = '\itea';
  
4. What is the return type of the hashCode() method in the Object class?
  - (a) Object
  - (b) Int
  - (c) Long

- (d) Void
5. Evaluate the following Java expression, if x=3, y=5, and z=10:  
++z + y - y + z + x++  
(a) 24  
(b) 23  
(c) 20  
(d) 25
6. Which of the following tool is used to generate API documentation in HTML format from doc comments in source code?  
(a) javap tool  
(b) javaw command  
(c) Javadoc tool  
(d) javah command
7. Which of the following creates a List of 3 visible items and multiple selections abled?  
(a) new List(false, 3)  
(b) new List(3, true)  
(c) new List(true, 3)  
(d) new List(3, false)
8. In which process, a local variable has the same name as one of the instance variables?  
(a) Serialization  
(b) Variable Shadowing  
(c) Abstraction  
(d) Multi-threading
9. Which of the following is true about the anonymous inner class?  
(a) It has only methods  
(b) Objects can't be created  
(c) It has a fixed class name  
(d) It has no class name
10. What do you mean by nameless objects?  
(a) An object created by using the new keyword.  
(b) An object of a superclass created in the subclass.  
(c) An object without having any name but having a reference.  
(d) An object that has no reference.

### **Section : B**

**2. Descriptive type questions (maximum limit 250 - 300 words). Attempt all questions.**  
**[05 x 2 = 10]**

1. Explain the important features of Java.
2. Describe different forms of inheritance with examples.

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**INTERNAL ASSIGNMENT**

**SESSION : 2020-23**

PAPER: XXI                      ARTIFICIAL INTELLIGENCE

[MAX MARKS : 20]

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**Section : A**

**1. Objective type questions. Attempt all questions. [01 x 10 = 10]**

1. Artificial Intelligence is about\_\_\_\_\_.
  - (a) Playing a game on Computer
  - (b) Making a machine Intelligent
  - (c) Programming on Machine with your Own Intelligence
  - (d) Putting your intelligence in Machine
2. Who is known as the -Father of AI"?.
  - (a) Fisher Ada
  - (b) Alan Turing
  - (c) John McCarthy
  - (d) Allen Newell
3. Select the most appropriate situation for that a blind search can be used.
  - (a) Real-life situation
  - (b) Small Search Space
  - (c) Complex game
  - (d) All of the above
4. Among the given options, which search algorithm requires less memory?.
  - (a) Optimal Search
  - (b) Depth First Search
  - (c) Breadth-First Search
  - (d) Linear Search

5. If a robot is able to change its own trajectory as per the external conditions, then the robot is considered as the\_\_
- (a) Mobile
  - (b) Non-Servo
  - (c) Open Loop
  - (d) Intelligent
6. The available ways to solve a problem of state-space-search.
- (a) 1
  - (b) 2
  - (c) 3
  - (d) 4
7. Among the given options, which is not the required property of Knowledge representation?
- (a) Inferential Efficiency
  - (b) Inferential Adequacy
  - (c) Representational Verification
  - (d) Representational Adequacy
8. An AI agent perceives and acts upon the environment using\_\_\_\_.
- (a) Sensors
  - (b) Perceiver
  - (c) Actuators
  - (d) Both a and c
9. Which rule is applied for the Simple reflex agent?
- (a) Simple-action rule
  - (b) Simple &Condition-action rule
  - (c) Condition-action rule
  - (d) None of the above
10. Rational agent always does the right things.
- (a) True
  - (b) False

## **Section : B**

**2. Descriptive type questions (maximum limit 250 - 300 words). Attempt all questions.**

**[05 x 2 = 10]**

1. Differentiate between Natural (Human) Intelligence & Artificial Intelligence.
2. Mention the differences between breath first search and best first search in artificial intelligence?



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PAPER :XXII

COMPILER

[MAX MARKS : 20]

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**Section : A**

**1. Objective type questions. Attempt all questions. [01 x 10 = 10]**

1. Users write the programs in which language?
  - (a) Low-level Language
  - (b) High-Level Language
  - (c) Decimal-Format
  - (d) Middle-Level Language
2. Which computer program accepts the high-level language and converts it into assembly language?
  - (a) Interpreter
  - (b) Linker
  - (c) Assembler
  - (d) Compiler
3. Does the compiler program translate the whole source code in one step?
  - (a) No
  - (b) Depends on the Compiler
  - (c) Don't Know
  - (d) Yes
4. Which tool is used for grouping of characters in tokens in the compiler?
  - (a) Parser
  - (b) Code optimizer
  - (c) Code generator
  - (d) Scanner
5. What is the linker?
  - (a) It is always used before the program execution.

- (b) It is required to create the load module.
  - (c) It is the same as the loader
  - (d) None of the above
6. Parsing is categorized into how many types?
- (a) three types
  - (b) four types
  - (c) two types
  - (d) five types
7. In which parsing, the parser constructs the parse tree from the start symbol and transforms it into the input symbol.
- (a) Bottom-up parsing
  - (b) Top-down parsing
  - (c) None of the above
  - (d) Both a and b
8. Which derivation is generated by the top-down parser?
- (a) Right-most derivation in reverse
  - (b) Left-most derivation in reverse
  - (c) Right-most derivation
  - (d) Left-most derivation
9. Which parser is most powerful in the following parsers?
- (a) Operator Precedence
  - (b) SLR
  - (c) Canonical LR
  - (d) LALR
10. The output of the lexical analyzer is \_\_\_\_\_
- (a) string character
  - (b) a syntax tree
  - (c) a set of RE
  - (d) a set of tokens

### **Section : B**

**2. Descriptive type questions (maximum limit 250 - 300 words). Attempt all questions.** **[05 x 2 = 10]**

1. Write a short notes on compiler construction tools.
2. Define the following
  - a. Preprocessor
  - b. Assembler
  - c. Loader and Linker