University of Mumbai
Examination June 2021
Examinations Commencing from 1st June 2021

Program: Information Technology Engineering
Curriculum Scheme: Rev2016
Examination: Third Year Semester VI
Course Code: ITDLO6022 and Course Name: Software Architecture
Time: 2 hours Max. Marks: 80

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All the Questions are compulsory and carry equal marks

Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
1.	Which one of the following words does not describe best the software design operators
Option A:	Decomposition
Option B:	Connecting elements
Option C:	Replication
Option D:	Compression
2.	Which features listed below are not the common architectural styles
Option A:	Data flow systems
Option B:	Call and return system
Option C:	Software maintenance
Option D:	Virtual machine
3.	Which one among the following does Seeheim reference model contain
Option A:	Data flow systems
Option B:	Application
Option C:	Call and return system
Option D:	Virtual machine
4.	Which one among the following does Arch/Slinky model contain
Option A:	Dialog control
Option B:	Call and return system
Option C:	Abstraction
Option D:	Data flow systems
5.	Which one among the following is not applicable to 4+1 view model
Option A:	Logical view
Option B:	Process view
Option C:	Abstraction
Option D:	Physical view
6.	Which one among the following is not applicable to benefits of DevOps
Option A:	Speed

Option B:	Reliability
Option C:	Security
Option D:	Complexity
7.	Which one among the following words do not describe the Vitruvian Triad
Option A:	Function and product planning
Option B:	Requirements analysis
Option C:	Fabrication
Option D:	Form and interaction design
8.	Which one of the following statements describe best the term complexity in software design
Option A:	is an approximation of selected aspects of a system such as its structure, behaviour, operation or characteristic
Option B:	can be thought of being composed of private hidden information and some visible information
Option C:	requires a long description describing the relationship between the structures within the system
Option D:	Implementation, testing and maintenance post deployment
9.	Which one of the following statements describe best the term modularity in software design
Option A:	requires a long description describing the relationship between the structures within the system
Option B:	can be thought of being composed of private hidden information and some visible information
Option C:	is an approximation of selected aspects of a system such as its structure, behaviour, operation or characteristic
Option D:	Implementation, testing and maintenance post deployment
10.	Which one of the following statements describe best the term Model in software design
Option A:	requires a long description describing the relationship between the structures within the system
Option B:	can be thought of being composed of private hidden information and some visible information
Option C:	Implementation, testing and maintenance post deployment
Option D:	is an approximation of selected aspects of a system such as its structure, behaviour, operation or characteristic
11.	After 1970 software program was written using
Option A:	Binary language
Option B:	High level language
Option C:	Assembly language
Option D:	Mnemonics

12.	Which statement written below best represents a connector
Option A:	is an indication that there is a mechanism that relates one component to another usually through relationships such as data flow or control flow.
Option B:	defines the hardware and software building blocks that make up the overall information system of an organization
Option C:	strategy, governance, organization and key business process
Option D:	Is a low level language
13.	Which statement written below best represents an architectural description
Option A:	is an indication that there is a mechanism that relates one component to another usually through relationships such as data flow or control flow.
Option B:	defines the hardware and software building blocks that make up the overall information system of an organization
Option C:	Is a low level language
Option D:	strategy, governance, organization and key business process
Q14.	Which statement written below best represents a business architecture
Option A:	is an indication that there is a mechanism that relates one component to another usually through relationships such as data flow or control flow.
Option B:	defines the hardware and software building blocks that make up the overall information system of an organization
Option C:	strategy, governance, organization and key business process
Option D:	Is a low level language
15.	Which statement written below is best applicable to abstraction thinking in the General methodology of design
Option A:	requires systematic thinking
Option B:	reduces the complexity of the problem
Option C:	the decomposition of complex systems into elements and their interrelationships, identifying essential distinctions, and discarding accidental distinctions
Option D:	is the combining of individual modules to produce a new entity
16.	Which statement written below is best applicable to design in software engineering view
Option A:	is the activity of gathering, identifying, and formalizing requirements in order to understand the actual problems for which a solution is sought
Option B:	is the activity of transforming requirement specifications into a technically feasible solution

Option C:	the design is transformed into source code
Option D:	fixing defects in the system and adding minor function enhancements
17.	Which statement written below is best applicable to implementation and testing in software engineering view
Option A:	the design is transformed into source code
Option B:	is the activity of transforming requirement specifications into a technically feasible solution
Option C:	is the activity of gathering, identifying, and formalizing requirements in order to understand the actual problems for which a solution is sought
Option D:	fixing defects in the system and adding minor function enhancements
18.	Which statement written below is best applicable to deployment and maintenance in software engineering view
Option A:	fixing defects in the system and adding minor function enhancements
Option B:	is the activity of transforming requirement specifications into a technically feasible solution
Option C:	the design is transformed into source code
Option D:	is the activity of gathering, identifying, and formalizing requirements in order to understand the actual problems for which a solution is sought
19.	Which words written below are best applicable to inception phase in the management view of software architecture
Option A:	development planning
Option B:	Problem definition
Option C:	implementation and testing
Option D:	delivering, installation training, support and documentation
20.	Which words written below are best applicable to elaboration phase in the management view of software architecture
Option A:	Problem definition
Option B:	delivering, installation training, support and documentation
Option C:	implementation and testing
Option D:	development planning

Q2 (20 Marks)	Solve any Two Questions out of Three 10 marks each
A	Explain with suitable examples elements of software architecture
B	List with suitable examples the problems faced in software architectural design
C	Write a short note on models with regards to software architecture

Q3. (20 Marks)	Solve any Two Questions out of Three 10 marks each
A	Explain in brief the goals of Software architecture
B	Describe in detail common architecture styles in software architecture
C	Write a short note on 4+1 view model of software architecture