

University of Mumbai

Examination 2020

Program: **Information Technology**

Curriculum Scheme: Rev-2019 'C' Scheme

Examination: SE Semester - III

Course Code: ITC305 Course Name: Paradigms & Computer Programming Fundamentals

Time: 2 hour

Max. Marks: 80

Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks	2 marks each
1.	What is Programming Paradigm?	
Option A:	Paradigm is termed as method to solve some problem or do some task.	
Option B:	Paradigm is termed as steps to do programming.	
Option C:	Paradigm can be steps to solve errors in programming.	
Option D:	Paradigm can be steps to compile and interpret programs.	
2.	Which among the following is a type of Imperative Programming Paradigm?	
Option A:	Procedural Programming Paradigm	
Option B:	Object Oriented Programming	
Option C:	Parallel Processing Approach	
Option D:	Functional Programming	
3.	In simple Prolog implementation, which type refers to a symbol which represents a value like "a" or "b".	
Option A:	Boolean	
Option B:	Variables	
Option C:	Atom	
Option D:	Real	
4.	Which type of Prolog implementation refers to the whole number which can be positive, negative, or zero. For example, 9, -25, and 5,148.	
Option A:	Integer	
Option B:	Variable	
Option C:	Composition	
Option D:	Atom	
5.	Which one of the following is not a variable?	
Option A:	X_yz	
Option B:	g_23A	
Option C:	'_Xyz'	
Option D:	B & C both	
6.	Data Type is shifted from Short Type to Long Type when ____	
Option A:	Value range decreases	
Option B:	Value range increases	
Option C:	Value range becomes Zero	

Option D:	Value range becomes infinite.
7.	what is the use of '=' in prolog programming?
Option A:	unification
Option B:	arithmetic evaluation
Option C:	reduction
Option D:	None of above
8.	Variable Declared outside of a Function block is called :
Option A:	Instance Variable
Option B:	Local Variable
Option C:	Global Variable
Option D:	Reference Variable
9.	A programming paradigm based on the concept of "objects", which may contain attributes and code in the form of procedures is called as _____.
Option A:	Object Oriented Programming.
Option B:	Machine Language
Option C:	Interpretation Language
Option D:	Assembly Language
10.	A classification of data which tells the compiler or interpreter how the programmer intends to use the data is called??
Option A:	Data Declaration
Option B:	Data Type
Option C:	Data Initialization
Option D:	Data Optimization
11.	Which of the following exceptions is thrown by the sleep method?
Option A:	InterruptedException
Option B:	ThreadException
Option C:	NullPointerException
Option D:	IOException
12.	Which of the following methods is used to create multiple threads?
Option A:	kill()
Option B:	start()
Option C:	stop()
Option D:	begin()
13.	Which of the following is a Thread class method?
Option A:	wait()
Option B:	run()
Option C:	notify()
Option D:	notifyall()
14.	Which of the following are features of Thread?
Option A:	Lighweight
Option B:	Can run Independently
Option C:	Threads of a process share the same memory location

Option D:	All of the above
15.	Which of the following are advantages of Concurrency?
Option A:	Runs multiple applications at the same time.
Option B:	Unused resources can be used for other applications by one application.
Option C:	Without concurrency, every application runs completely before the next one can start running.
Option D:	All of the above.
16.	Which option reduces the demand on the server by allowing web pages to load faster?
Option A:	Client
Option B:	Server
Option C:	Scripting Language
Option D:	Programmer
17.	If same message is passed to objects of several different classes and all of those can respond in a different way, what is this feature called?
Option A:	Inheritance
Option B:	Overloading
Option C:	Polymorphism
Option D:	Overriding
18.	A scripting language is an _____ programming language in which it translates code into the machine.
Option A:	Interpreted
Option B:	Compiled
Option C:	Translated
Option D:	None of the above
19.	_____ programming language accept all commands from the keyboard.
Option A:	Shell
Option B:	Script
Option C:	Compiled
Option D:	Interpreted
20.	Which of the following properties of Haskell ensures Haskell does not evaluate any express without a reason?
Option A:	Statically Typed
Option B:	Lazy
Option C:	Purely Functional
Option D:	Concurrent

Q2	Solve any Four out of Six	5 marks each
A	Explain the difference between a declaration and a definition. Why is the distinction important?	
B	What is the difference between type equivalence and type compatibility?	
C	What is the role of catch block in exception handling? How do you declare a catch block that can accept any kind of exceptions thrown by try block?	
D	What is inheritance? Explain the types of inheritance.	
E	Explain functional programming and its goals.	
F	Describe various methods to create a thread.	

Q3.		
A	Solve any Two	5 marks each
i.	Explain the basic data types in Haskell.	
ii.	Explain the Prolog deficiencies.	
iii.	Discuss the innovative features of scripting languages.	
B	Solve any One	10 marks each
i.	Explain various Programming Paradigms.	
ii.	Discuss the thread life cycle.	