B.E.(with Credits)-Regular-Semester 2012-Computer Technology Sem V

CT505 - Design Principles of Programming Language

P. Pages : 2 **GUG/W/16/3711**

Time : Three Hours * 3 9 5 6 * Max. Marks : 80

Notes : 1. All questions carry equal marks.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.

1. a) What are the attributes of good programming language? **7**

b) Why to study programming languages? **6**

c) Write note on virtual computer. **3**

OR

2. a) List and explain the stages of translation with proper diagram. **7**

b) Explain different language paradigms with examples. **6**

c) What is binding? Explain binding times. **3**

3. a) Write short notes on scalar data types & composite data types. **6**

b) What are the operations that can be performed over character strings? **7**

c) Write a note on type conversion and type coersion. **3**

OR

4. a) What are the important attributes and bindings of data objects? **7**

b) State the attributes of integer and boolean data types. Add a note on their implementation. **6**

c) Define the following terms, **3**
I) Data Object.
II) Variable.
III) Constant.

5. a) Explain the concept of inheritance and polymorphism with the help of example. **7**

b) What is sequential file? Give its specification and implementation. **6**

c) Give implementation of variant record. **3**

OR

6. a) Explain Data abstraction, Information hiding and encapsulation in detail. **7**

	b)	List attributes of vector and write about operations and implementation of vectors.	**6**
	c)	What is generic subprogram?	**3**
7.	a)	What are actual and formal parameters? Explain the different methods for transmitting parameter.	**7**
	b)	What is implicit and explicit sequence control? Explain sequencing with arithmetic expression.	**6**
	c)	Write short note on simple call-return subprogram.	**3**

OR

8.	a)	Explain sequencing with non-arithmetic expression.	**7**
	b)	What is static scope and dynamic scope?	**6**
	c)	Write short note on block structure.	**3**
9.	a)	What are different subprogram scheduling techniques? Explain in detail.	**7**
	b)	Explain static storage management.	**6**
	c)	Explain briefly the terms exception and exception handlers.	**3**

OR

10.	a)	Explain synchronization of tasks with different mechanisms.	**7**
	b)	What are the principles of parallel programming languages?	**6**
	c)	Explain co-routine in detail.	**3**

****