Total No. of Questions : 8]

SEAT No : ____

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[5333]-3006
M.Sc. - II
COMPUTER SCIENCE
CS - 307 : Functional Programming
(2013 Pattern) (Semester-III) (Elective)

Time : 3 Hours] ***[Max. Marks : 50***

Instructions to the candidates:

1) ***Neat diagrams must be drawn wherever necessary.***
2) ***Figures to the right indicate full marks.***
3) ***All questions carry equal marks.***
4) ***You are advised to attempt not more than 5 questions.***
5) ***Assume suitable data, if necessary.***

Q1) Attempt ALL: **[4+4+2]**

a) Give relevance of functional programming.

b) Explain β (beta) reduction.

c) What is function ducktyping?

Q2) Attempt ALL: **[4+4+2]**

a) Describe various types of functional languages.

b) What is Lambda equality?

c) How to test type of a file in Python?

Q3) Attempt ALL: **[4+4+2]**

a) Explain 2 types of reduction rules.

b) How command line arguments work in Python.

c) What is first and higher order functions?

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Q4) Attempt ALL: **[4+4+2]**

a) Discuss overloading in Python.

b) How dictionary elements are updated and deleted in Python?

c) What is Eta conversion?

Q5) Attempt ALL: **[4+4+2]**

a) What do you mean by anonymous functions?

b) Explain double underscore prefix in Python.

c) What is the use of triple quotes in Python strings.

Q6) Attempt ALL: **[4+4+2]**

a) How directory tree is traversed in Python?

b) What is the difference between raw string and Unicode string in Python?

c) Explain subclass implementation in Python.

Q7) Attempt ALL: **[5+5]**

a) Explain function 'Apply to All' in detail.

b) How can a non-tail recursive function be converted to tail recursive one?

Q8) Attempt ALL: **[5+5]**

a) What are the benefits of lambda notation?

b) Explain 2 types of reduction rules.

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