Total No. of Questions : 6]

SEAT No. :

P539

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TE/Insem/APR-139
T.E. (Computer) (Semester - II)
DESIGN & ANALYSIS OF ALGORITHMS
(2015 Pattern)

Time :1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Answer the following questions.***
2) ***Figures to the right indicate full marks.***
3) ***Assume suitable data, if necessary.***

Q1) a) Explain different means of improving efficiency of Algorithm. **[5]**

b) Explain characteristics of good algorithm? List out the problems solved by the Algorithm? **[5]**

OR

Q2) a) How to confirm the correctness of Algorithm? Explain with example. **[5]**

b) Write a short note on algorithm as a technology with example. **[5]**

Q3) a) How does fractional greedy algorithm solves the following knapsack problem with capacity 8, Items (I1,I2, I3, I4), profit P=(25,24,15,40) and weight w=(3,2,2,5). **[5]**

b) Explain the concept of PMI and prove the correctness of an algorithm to find factorial of a number using PMI. **[5]**

OR

Q4) a) Write and explain Huffman Code Generation Algorithm. **[5]**

b) Explain Tail recursion with suitable example? **[5]**

Q5) a) Find the correct sequence for jobs using following instances, **[5]**

Job	J1	J2	J3	J4	J5
Profit	20	15	10	5	1
Deadline	2	2	1	3	3

b) Write a short note on Artificial Neural Network. **[5]**

OR

Q6) a) Explain dynamic programming strategy? Enlist few applications which can be solved by using dynamic programming. **[5]**

b) Explain basic steps of genetic algorithm. **[5]**

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