

Total No. of Questions – [3]

Total No. of Printed Pages: 02

G.R. No.	
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PAPER CODE	
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**MAY 2022 (ENDSEM) EXAM**  
**T.Y. INFORMATION TECHNOLOGY (SEMESTER - II)**  
**COURSE NAME: DESIGN AND ANALYSIS OF**  
**ALGORITHMS**  
**COURSE CODE: ITUA32183**  
**(PATTERN 2018)**  
**Marking Scheme**

Time: [1Hr]

[Max. Marks: 30]

**(\*) Instructions to candidates:**

- 1) **Figures to the right indicate full marks.**
- 2) **Use of scientific calculator is allowed**
- 3) **Use suitable data where ever required**

Question No.	Question Description	Marks
Q1	a)	[4]
	Solution [2 Marks]	
	State Space Tree [2 Marks]	[6]
	b)	
	Solution [4 Marks]	
	State Space Tree [2 Marks]	[6]
OR		
b)		
Solution [4 Marks]		
State Space Tree [2 Marks]		
Q2	a)	[4]
	Basic concept [1 Marks]	
	State space tree [1 Marks]	
	Role of bounding function [2 Marks]	

	b) Solution [4 Marks] State Space Tree [2 Marks]	OR	[6]
	b) Solution [4 Marks] State Space Tree [2 Marks]		[6]
Q3	a) 2 Basic Difference [1 Mark] 2 with help clique problem 1 ½ marks for each [3 Mark]		[4]
	b) Definition of Clique Problem [1 Mark] Proof using SAT [4 Mark] Graph [1 Mark]	OR	[6]
	b) 2 Basic Difference [2 Mark] Difference by pseudo code of Linear search algorithm [4 Mark]		[6]

- 1) Please to the right indicate full marks.
- 2) Use of scientific calculator is allowed.
- 3) Use suitable data where ever required.

Question No.	Question Description	Marks
Q2	a) Solution [4 Marks] State Space Tree [2 Marks]	[6]
	OR	
	b) Solution [4 Marks] State Space Tree [2 Marks]	[6]
Q4	a) Basic concept [1 Mark] State space tree [1 Mark] Mark of heuristics function [2 Marks]	[4]