Question 1) Asymptotic notions are used to Nos. (2.1 check the time et complexity of algorithme and to find out which agorithm is the most time efficient. when input size is large enough.

2) Big O -> This is used to represent the worst case of the time complexity This suggests the mase time that an algorithm con take for completion rar sho otb e in on w In the above graph (g(n) and f(n) are functions and we can say that cg(n) = O(f(n)) if and only if  $cg(n) \ge f(n)$  and  $n \ge n_0$ .

	3	
Question Nos.		Marks Awarded
	2) Big W to This is used to represent	
	the best of time complexity of an	
	algorithm. This suggests the minimum	
	the best of time complexity of an algorithm. This suggests the minimum time algorithm can can to take for its.	
	completion.	
	fen)	
	- ((9(n)	-
	((901)	
(gan)=	from the above graph we can say that  credit = w(f(n)) if and only if  the > c(g(n)) and & > no.  3) Big 0 -> This is used to represent  the average of time complexity of  an augorithm This suggests the  average time an augorithm can take  for its completion.  (,g(n))	fin) = w(egen)
	ho	
	From above graph we can say that	
	From above graph we can say that $\frac{c(g(n)) = f(n) = O(c(g(n))) - c(g(n)) = O(f(n))}{c(g(n)) = O(f(n))}$ $c(g(n)) = O(f(n)) + o(f(n))$	

- 1	- Euring honan Inaver	
4	•	
	4	
Question		Mad
Nos.		Marks Awarded
2		
	(19(n) <= f(n) <= 1(2 (9(n)) and	
	n > hos prisolet with to be in the	
	Control of the company of the control of the	
	- 1 is sometimes and the second of the	
	the terms of the second of the	
(		
t		+
h		
<del>C</del>		
-		
c <del></del>		
t <sup>*</sup>		
14 . 11 . 53	e e	
	Continue of the second	
)_		
		-
-		
-		
	The structure with the opposite the	
i	Cr - Fraggio ann. The contract will	
	A COMPANY OF THE PROPERTY OF T	,
	The state of the s	
	- 31 Stelly 19 19 19 19 19 19 19 19 19 19 19 19 19	
_		
_		
•		