

Q2:)  $F = \Theta(g)$

i)  $F = \Theta(g)$

ii)  $F = O(g)$

iv)  $f = O(n)$

v) None

there is no constant  $c$  and integer  $N$   
such that  $f(n) \leq cg(n)$  and  $f(n) \geq cg(n)$

so since neither are true it  
can't fit any definition. since  
 $n^{1+\cos(n)}$  varies between  $1$  and  $n^2$   
which are strictly less than and  
greater than  $n$  respectively