

Q.1) Construct Regular Expression (RegEx)

a) $r = (00+1)^*$

b) $r = [(0+1)(0+1)]^*$

c) $r = 110(1+0)^*$

d) $r = 0^*10^*10^*10^*$

e) $r = (0+1)^*0$

f) $r = (0+1)^*1(0+1)(0+1)$

g) $r = (a+b)^*ab(a+b)^*$

h) $r = [1(0+1)^*0]$

i) $r = (0+1)^*011(0+1)^*$

j) $r = [(0+1)^*010(0+1)^*101(0+1)^*] + [(0+1)^*101(0+1)^*010(0+1)^*] + [(0+1)^*0101(0+1)^*]$

k) $r = [0^*(11)^*0^*(11)^*0^*]^+$

l) $r = (a+b+c)(a+b+c)(a+b+c)[(a+b+c)^*]$

m) $r = (b + ab^*ab^*)^*$

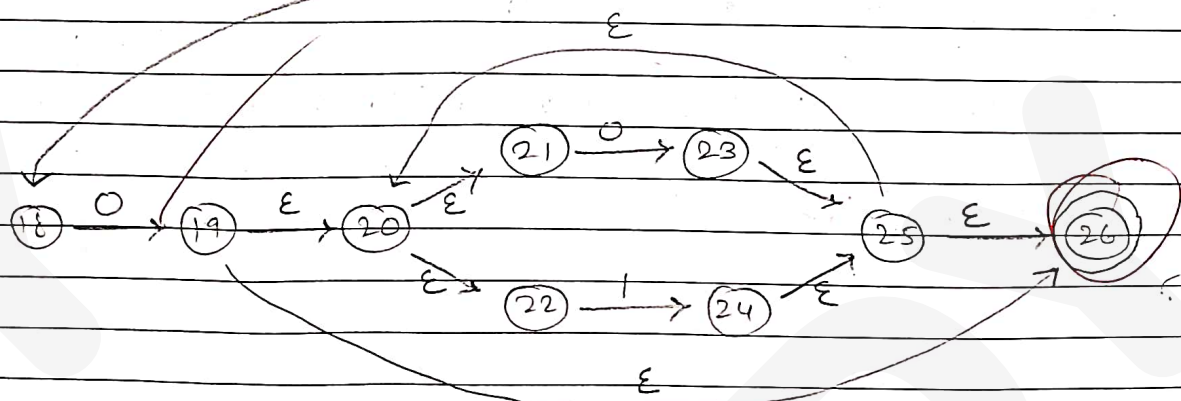
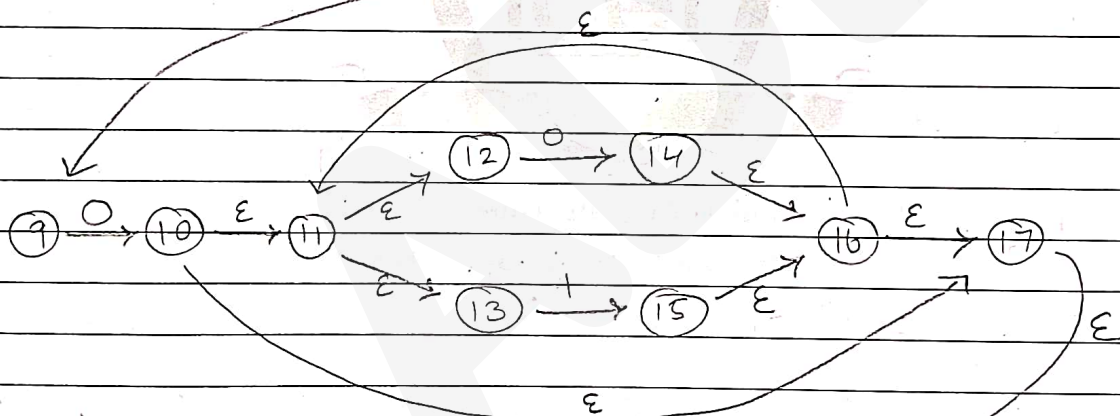
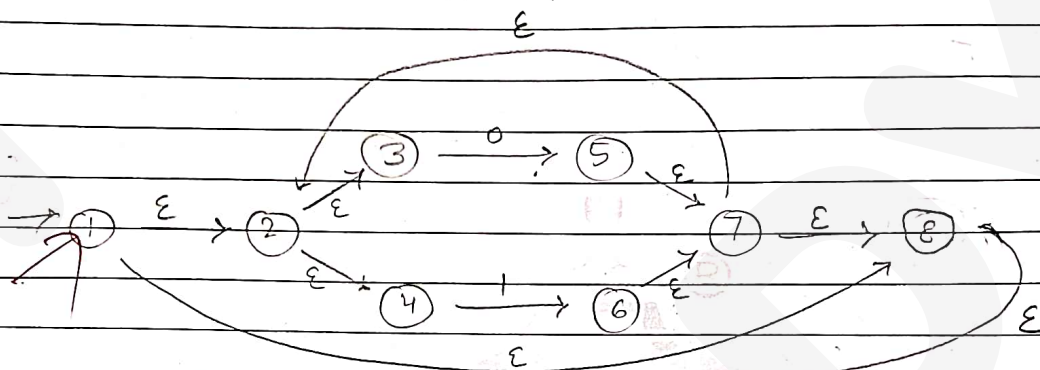
n) $r = b^*ab^*ab^*ab^*$

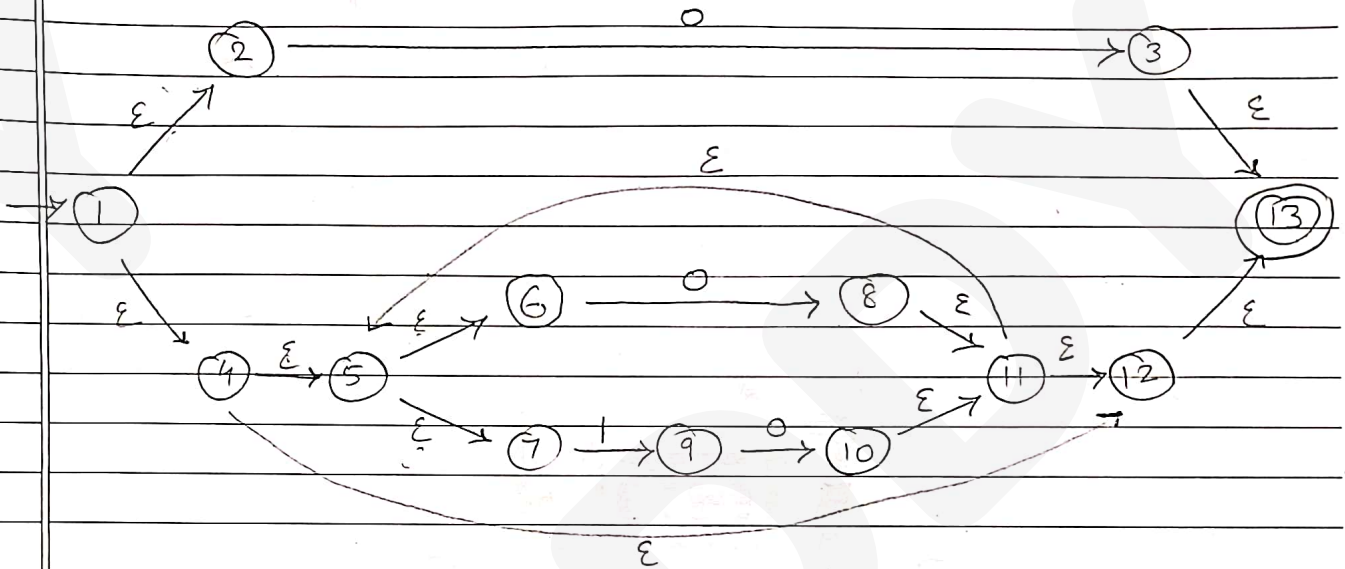
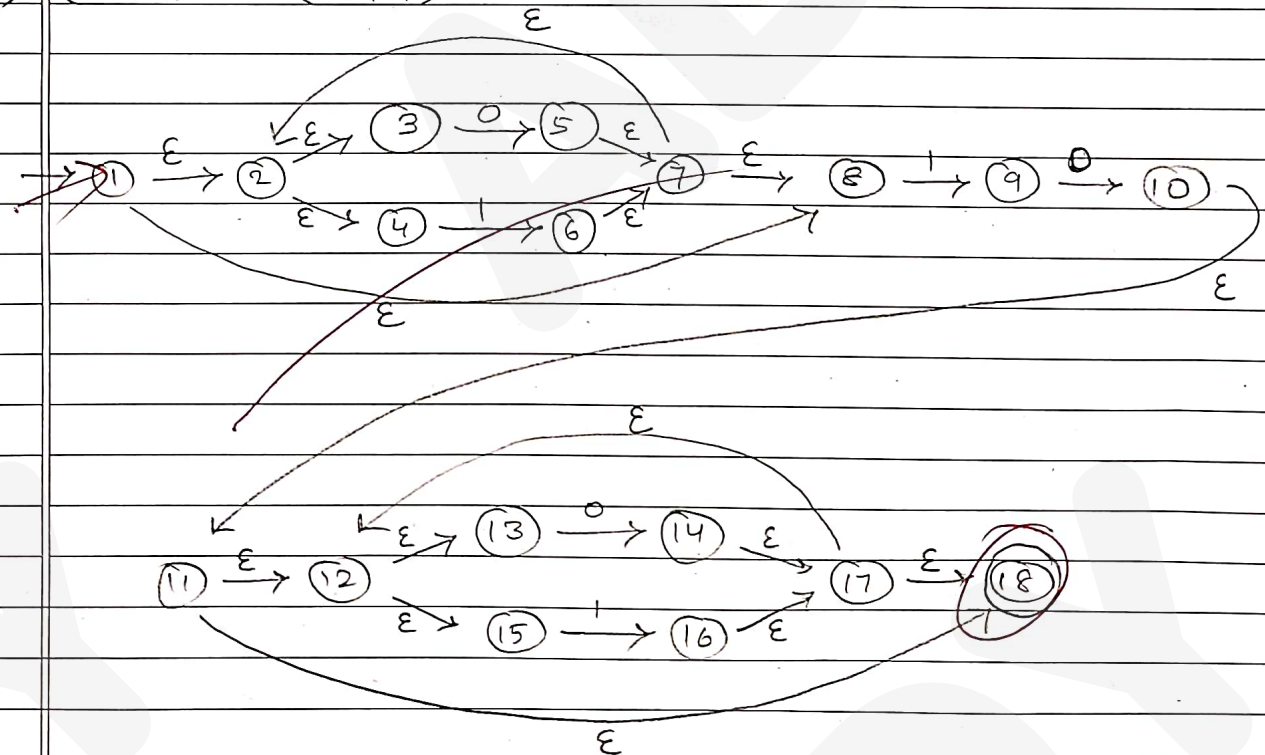
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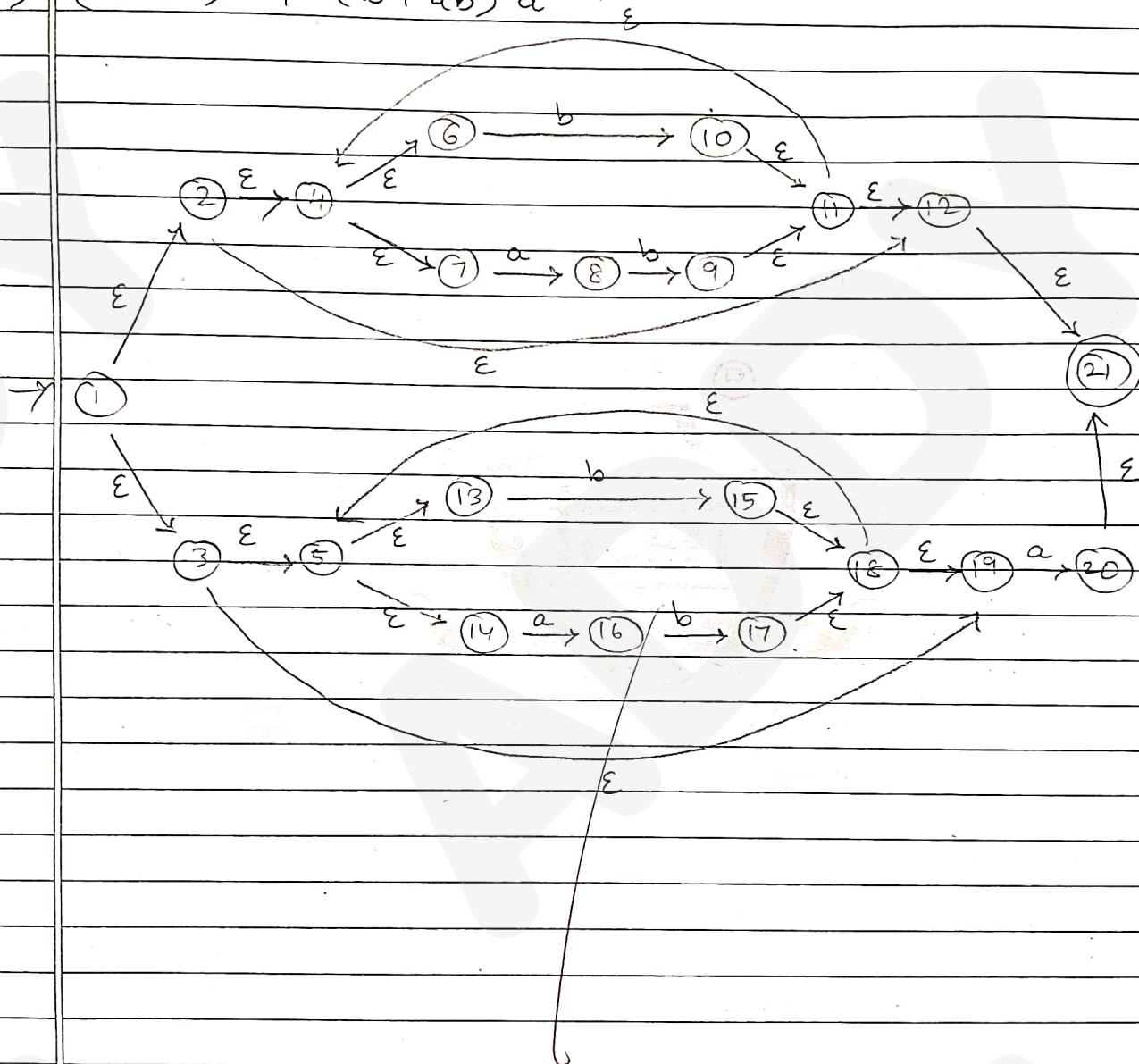
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Q.2) Construct NFA for foll. RegEx :

a) $(0+1)^* 0 (0+1)^* 0 (0+1)^*$



b) $0 + (0 + 10)^*$ c) $(0 + 1)^* 10 (0 + 1)^*$ 

d) $(b+ab)^* + (b+ab)^*a$ 

e) a. $(b+ba)^* + (b+ba)^*$ 