

A. C. Patil College of Engineering Kharghar Navi-Mumbai Maharashtra

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**Subject : Analysis of Algorithms (AOA)
Assignment-05**

Assignment No-05

Q-1) write Algorithm @queen (n)

→ Algorithm queen (n)

|| problem Description: This Algorithm is for queen Algorithm,
i.e. queen problem

|| I/P: Total No. of queen is n

for column $\leftarrow 1$ to n do

{

board [row] column

if (row = n) then {

print (board)

} else {

queen (row + 1, n)

}

Algorithm Place (row, column)

for i $\leftarrow 1$ to row - 1 do

{

if check for col & diagonal conflict

if (board[i] = column) then

S = 2 return 0;

else if (abs (Board[i] - column)

= row [i - row] then

2 0

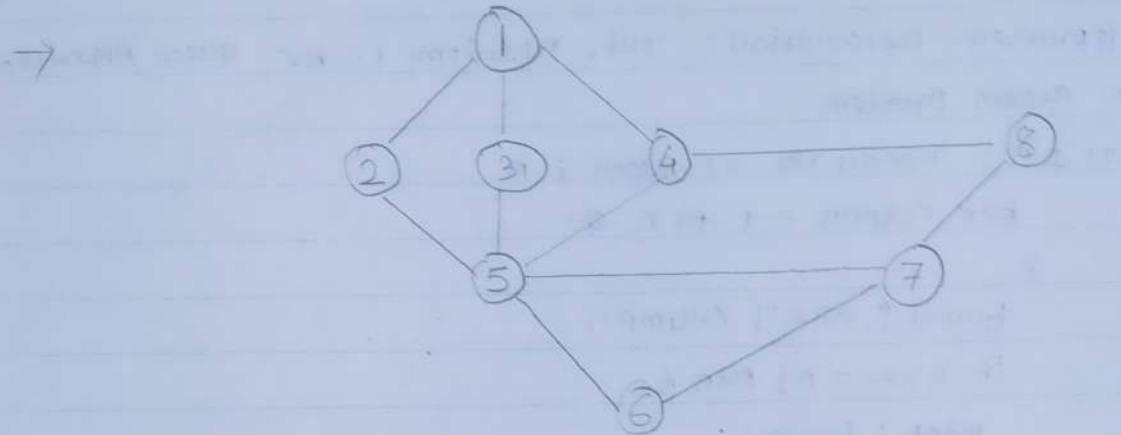
return 0

}

[match found]

~~Hence return index~~

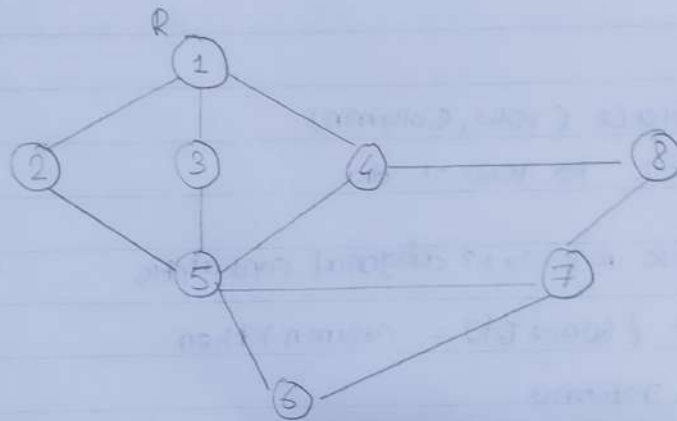
Q.2} Solve the following graph coloring problem
 $n=3$



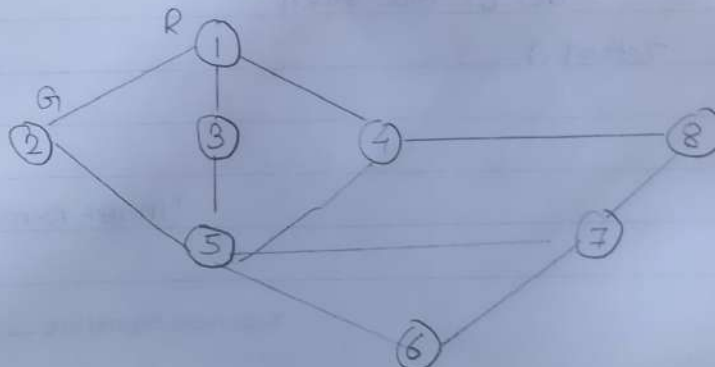
Solⁿ

$m=3 \Rightarrow \{R, G, B\}$

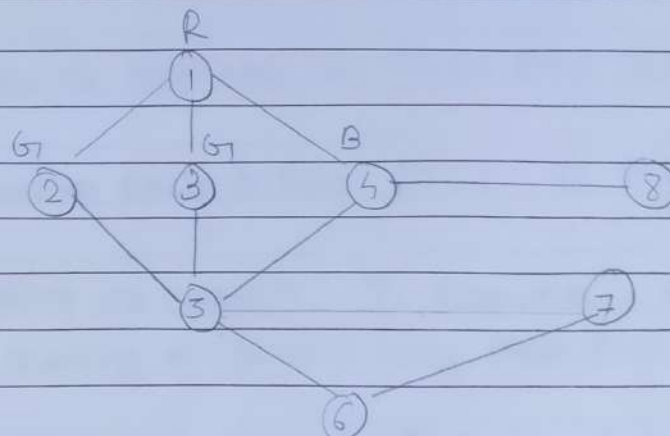
Step 01



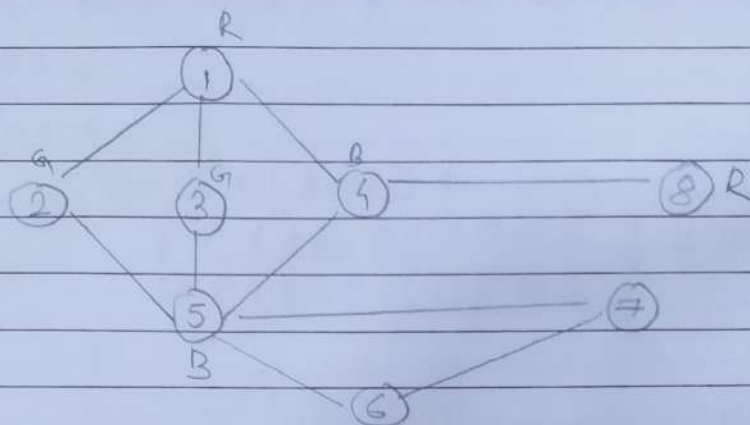
Step 2



Step 3



Step 4



Step 5

