

DATABASE ISANCA GAMES

7/1/2023

COMPUTER ENGINEERING

ANALYSIS

491 Command window

clear

close all

Syms n t

D = diff(n)

eqn = (diff(n, t, 2)) - (diff(n, t)) - (12 \* n) == 144 \* t + 12 \* 5

pt1 = D(0) == 0.5;

pt2 = n(0) == 5;

pts = [pt1 pt2];

Sol = dsolve(eqn, pts);

Sol1 = simplify(Sol)

t = [0:0.1:1.5]

Sol2 = subs(Sol1)

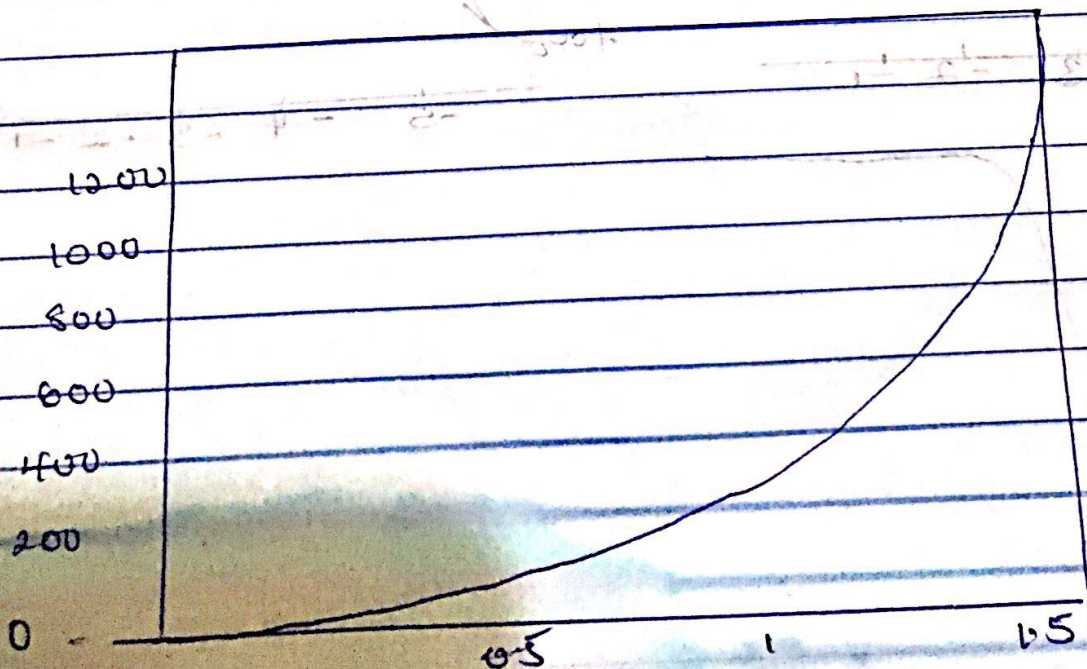
plot(t, Sol2)

grid on

grid minor

axis tight

OUTPUT

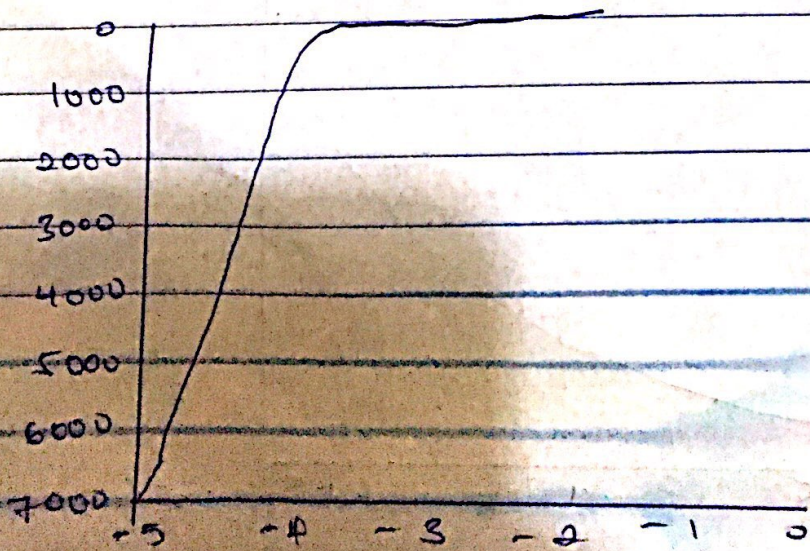
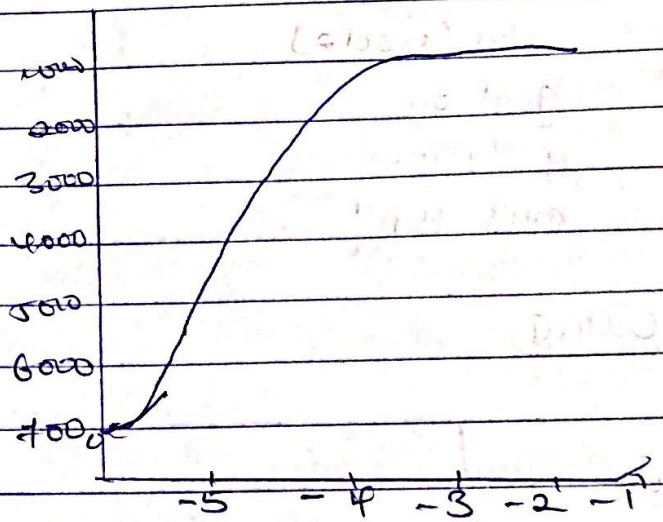
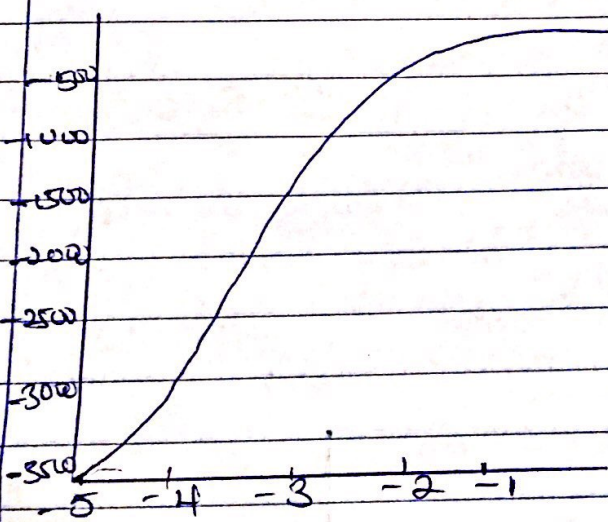


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4b. command window
clc
syms y(t) x(t)
close all
ode1 = diff(y,t) - 2*x == exp(-2*t)
ode2 = diff(x,t) + y == exp(-t)
ode = [ode1, ode2]
conds = [y(0) == 0, x(0) == 0]
[yeq, xeq] = dsolve(ode, conds)
fplot(yeq)
hold on
fplot(xeq)
grid on
grid minor

```

OUTPUT:



HCI

command window

clear

clc

syms t k a w

$P_t = k e^{-at} \sin(\omega t)$  &  $\cos(\omega t)$

$F_B = \text{laplace}(P_t)$