Final Practical Exam /viva

Subject: Mathematics Practical **Time 30 Min.**

BCA Second Semester **F.M 20**

Set A

1. What is MATLAB? Write its application.
2. Write any five commands used in MATLAB.
3. Find the roots of following simultaneous equation using the gauss seidel method
   20x+y-2z=17
   3x+20y-z=-18
   2x-3y+20z=25
4. Evaluate the integral X^4 within limits -3 to 3 using Simpson's 1/3 rule.
5. Create a script file to evaluate the derivative of the functions
   a) $f(x)=(x+2)(x^2+3)$ b) $f(x)=(x^2+1)^{17}$

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Set B

1. Find the limit of the function lim X ▸ 0 $x^{2-9}/x+3$
2. Write a command to find derivative of (i) $f=3t^2+2t$ (ii) e^x
3. Find all derivatives of $f=x^2+5x+6$ and also stationary point of f.
4. Find the area under the curve $y=x^3-5x-2$, X-axis and ordinates at x=0,X=1
5. Solve Algebraic Equations: (i) x-5=0 (ii) (x-2)(x-3)(x-8)=0
6. Write a matlab script file to solve $d_y/d_x+y=1$
7. Solve the system of equations 3x+y=5, x-3y=5