

Sample Test

01). If the function $y = 3x^2 + 1$ satisfies all conditions of Rolle's theorem in interval $[-1,1]$, then $c =$ _____

- a) 2 b) 1 c) -9 d) 0

02). $\int_0^{\frac{\pi}{2}} \cos u \cdot du =$

- a). 0 b). 2 c). -1 d). 1

03). A continuous curve which does not have a point of self-intersection is called

- a) Simple Curve b) Multiple Curve c) Integral Curve d) None of these

04). To ensure that the following system of equations,

$$2x + 7y - 3z = 6 ; x + 3y + 4z = -5; 7x + 5y + 2z = 17$$

converges using the Gauss-Siedel method, one can rewrite the above equations as follows:

a.)
$$\begin{bmatrix} 2 & 7 & -3 \\ 1 & 3 & 4 \\ 7 & 5 & 2 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 6 \\ -5 \\ 17 \end{bmatrix}$$

b.)
$$\begin{bmatrix} 2 & 7 & -3 \\ 7 & 5 & 2 \\ 1 & 3 & 4 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 6 \\ 17 \\ -5 \end{bmatrix}$$

c.)
$$\begin{bmatrix} 7 & 5 & 2 \\ 2 & 7 & -3 \\ 1 & 3 & 4 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 17 \\ 6 \\ -5 \end{bmatrix}$$

d.) None

e.) All of them will converge.

Analytical reasoning

Question 5 to 7

Four computer operators (Ali, Babar, Cheema and Dar) each have to perform duties at the NADRA on four different days, Thursday through Sunday. The following is their duty schedule: Cheema has his duty day before Ali. Dar has his duty day later than Babar.

05). Which of the following is a possible order of duty days for the four operators?

- a) Cheema, Dar, Ali and Babar
b) Dar, Cheema, Ali and Babar
c) Babar, Cheema, Dar and Ali
d) Ali, Cheema, Dar and Babar

06). If Cheema has his duty day on Saturday, who must have his duty day on Thursday?

- a) Babar
- b) Ali
- c) Dar
- d) Cheema

07). Each of the following is possible EXCEPT:

- a) Cheema has his duty on Thursday
- b) Babar has his duty on Thursday
- c) Dar has his duty on Saturday
- d) Babar has his duty on Sunday

Choose the letter word that is most nearly opposite in meaning to the word

08). Accepted

(A) Followed (B) Considered (C) Rejected (D) Noted

09). Acute

(A) Obtuse (B) Figure (C) Astute (D) sharp

010). Alive

(A) Passive (B) Dead (C) Asleep (D) Awake