

پاسخنامه
14
امری

کے لیے $\alpha_{22} \rightarrow$

$$\hookrightarrow \alpha_{\gamma\gamma} \rightarrow \alpha_{\gamma}$$

2.4 $f(w)_{20} = 4 + 0 \rightarrow 4$ ✓

$$\Delta \leq 0 \rightarrow \kappa - \kappa'(n, m^*) \leq 0$$

$$f_{-1} + f_m \leq 0$$

$$r_{m^*} \approx 10$$

$$\sum m_i \leq n$$

$$m^2 \leq 1$$

$$-1 \leq m \leq 1$$

امثلة ، ١-٢-٣-٤-٥
٦

$$\begin{aligned} & \exists x^M \geq 0 \\ & x^M \leq r \\ & -1 \leq x \leq 1 \end{aligned}$$

$$\{x\} + \{-x\} \begin{cases} x \in \mathbb{Z} \rightarrow 0 \\ x \notin \mathbb{Z} \rightarrow -1 \end{cases} \rightarrow \{x\} + [-x]_{\mathbb{Z}}$$

$\downarrow$
 $\mathbb{R} - \{x \mid x \notin \mathbb{Z}\}$

$$D_f = \{-1, -1, 0, 1\}$$

الف) $x^2(x+3) \geq 0$

$$Df_2(-w, +\infty) \quad \text{D}$$

$$b) \frac{(x-1)(x+1)x^2(x-3)}{(x-1)(x^2x+1)} \geq 0$$

$$\begin{array}{ccccccc} & -1 & * & * & \mu & & \\ & \downarrow & & & & & \\ + & d & - & \phi & - & \phi & + \end{array}$$

$$D_f = (-\infty, -1] \cup \{0\} \cup [3, +\infty)$$

الف) $|x-2| - 3 \geq 0$

$$|x-y| \geq \epsilon$$

$$\int x \cdot y \geq z \rightarrow x \geq w$$

$$\left. \begin{array}{l} x, y \in \mathbb{R} \end{array} \right\} x, y \leq -1 \rightarrow x, y \leq -1$$

$$D_f = (-\infty, -1] \cup [0, \infty)$$

ب) $\sum_{n=1}^{\infty} |x_n| \geq 0$

$$r \geq |r - x|$$

$$- \frac{1}{2} \leq x \leq \frac{1}{2}$$

$$-4 \leq x \leq 2$$

$$-1 \leq x \leq 1$$

~~$\rho \in [-1, 1]$~~

الف) $1 - x x \geq 0$ $ x \geq x$ $x \leq 1$ $D_f = (-\infty, 1]$	ب) $3 - x-2 \geq 0$ $3 \geq x-2 $ $-3 \leq x-2 \leq 3$ $-1 \leq x \leq 5$ $\sqrt{3- x-2 } \neq 1$ $3- x-2 \neq 1$ $- x-2 \neq -2, -1$ $ x-2 \neq 1, 2$ $x-2 \neq -3, -1, 1, 2$ $x \neq 1, 3, 5, 9$ $D_f = [1, 5] - \{3, 5\}$	6
الف) $\cos x \neq 0$ $x \neq \frac{\pi}{2}, \frac{3\pi}{2}$ $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$ $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{2}\}$	ب) $\cos x - 1 \neq 0$ $\cos x \neq \frac{1}{2}$ $x \neq \frac{\pi}{3}, \frac{5\pi}{3}$ $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{3}, k\pi + \frac{5\pi}{3}\}$ $D_f = \mathbb{R} - \{k\pi + \frac{\pi}{3}, k\pi + \frac{5\pi}{3}\}$	7
الف) $ 2x+1 \neq x+3 $ $ 2x+1 \neq x+3$ $x \neq 2$ $D_f = \mathbb{R} - \{2\}$ $2n+1 < n+3 \rightarrow n < 2$ $-2n-1 = n+3 \rightarrow -3n = 4 \rightarrow n = -\frac{4}{3}$	ب) $ 2x+1 - x+3 \geq 0$ $ 2x+1 \geq x+3 $ $2x+1 \geq x+3$ $x \geq 2$ باید یا در طرف راست یا در وسط یا در طرف چپ $D_f = [2, +\infty)$	8
$2x-1 > 0$ $2x > 1$ $x > \frac{1}{2}$ $D_f = (\frac{1}{2}, +\infty)$	$\log_{2x-1} 2 > 0$ $2x-1 > 1$ $2x > 2$ $x > 1$ $\log_{2x-1} 2 \leq 1$ $2x-1 \leq 2$ $2x \leq 3$ $x \leq \frac{3}{2}$	9
الف) $\cos x + 1 > 0$ $\cos x > -1$ $D_f = (k\pi - \frac{3\pi}{2}, k\pi + \frac{3\pi}{2})$	ب) $\frac{x-1}{x+1} > 0$ $\frac{x-1}{x+1} \geq 0 \rightarrow \frac{x-1}{x+1} \geq 1$ $\frac{-2}{x+1} \geq 0$ $D_f = (-\infty, -1)$	10

$$٨ - \text{الف}) \quad |x_{n+1}| - |n+3| = 0 \rightarrow |x_{n+1}| = |n+3| \xrightarrow{\text{توازن}} x_n^2 + x_{n+1} = n^2 + 4n + 9$$

$$\rightarrow x_n^2 - x_n - 8 = 0 \rightarrow n^2 - x_n - 2 = 0 \rightarrow (n-4)(n+2) = 0 \quad \begin{matrix} \rightarrow n = \frac{4}{1} = 2 \\ \rightarrow n = -\frac{2}{1} \end{matrix} \rightarrow D_f = \mathbb{R} - \left\{ -\frac{2}{1}, 2 \right\}$$

$$٨ - \text{ب}) \quad |x_{n+1}| - |n+3| \geq 0 \rightarrow |x_{n+1}| \geq |n+3| \xrightarrow{\text{توازن}} x_n^2 + x_{n+1} \geq n^2 + 4n + 9 \rightarrow x_n^2 - x_n - 8 \geq 0$$

$$\frac{-\frac{2}{1}}{+0-0+} \rightarrow D_f = (-\infty, -\frac{2}{1}] \cup [2, +\infty)$$
