

Subject:

19, V&

Date:

Question

الف) $y'' = r^2 y + r n - 1$

$y_1'' = r^2 y_1 + r n - 1$

$y_2'' = r^2 y_2 + r n - 1$

$\rightarrow y_1 = y_2 \rightarrow y_1 = y_2$ ✓

①

(r)

ب) $n \cos y = y \cos n \rightarrow n \leq \frac{\pi}{2}$ ✓

②

ج) $\frac{n+y}{r}, \sqrt{ny} \rightarrow ny > 0 \rightarrow n+y = \sqrt{ny} \rightarrow n = (\sqrt{n}-\sqrt{y})^2 \rightarrow n \leq y \rightarrow \text{مطلوب}$

د) $n y^2 + r n = y - r y \rightarrow n(y^2 + r) = y(y^2 + r) \rightarrow n = y$ ✓

هـ) $|y| + n^2 \leq r y \begin{cases} y \geq 0 \rightarrow y \leq n^2 \\ y < 0 \rightarrow r y \leq n^2 \end{cases}$ ✓

③

(r)

و) $[y] + [n] \leq 1 \rightarrow n \leq 0, 1 \rightarrow [n] \leq 0, 1 \rightarrow y \in (r, 1]$ ✓

مطلوب

ز) $f(n) = \begin{cases} r a^2 - b & n \geq n \\ r a + r n & 0 < n < n \\ r n^2 - b & n \leq -1 \end{cases} \rightarrow a \rightarrow a + b \leq 1$ ✓

④

(r)

ح) $\frac{a+b}{a} \leq -b \rightarrow a+b \leq -b \rightarrow a \leq -2b \rightarrow a \leq -2(-1) \leq 2$ ✓

(r)

⑤

ط) $\frac{a+b}{a} \leq -a \rightarrow b \leq -1 \rightarrow a+b \leq 0$ ✓

(r)

⑥

ي) $\frac{a}{b} + c \leq \frac{a}{b} + b - r b \leq \frac{a}{b} + b$ ✓

(r)

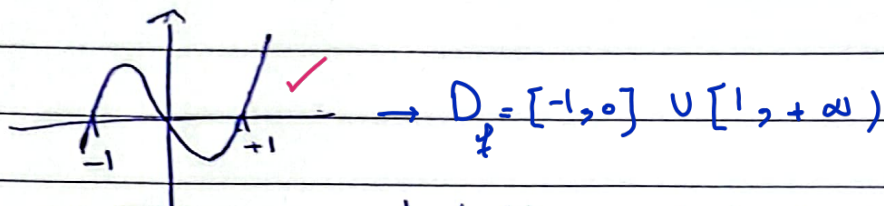
⑦

s.a.m

$$\frac{m+r+a(n+b)}{n+b} = \frac{m+r+a(n+b)}{n+b} = \frac{m(r+a)+r+b}{n+b} \quad (r)$$

$$n+b=0 \xrightarrow{a-r} r+b=0 \rightarrow b=-r \quad (r) \checkmark$$

$$\text{ii) } m \cdot n > 0 \quad n(n^2-1) > 0 \rightarrow n(n-1)(n+1) > 0 \quad (v)$$



$$b) \sqrt{|n|-1} > 0 \rightarrow |n|-1 > 0 \rightarrow |n| > 1 \rightarrow \begin{matrix} n > 1 \\ n < -1 \end{matrix}$$

$$D_f = (-\infty, -1) \cup (1, +\infty) \quad \checkmark$$

$$\text{iii) } |a| \neq [n] \quad b) \sqrt{n} \rightarrow n > 0 \quad (r) \quad (a)$$

$$\rightarrow D_f = \mathbb{R} - \mathbb{W} \quad \checkmark \quad \sqrt{n} \leq 9 - \sqrt{n} \rightarrow 9 - \sqrt{n} > 0$$

$$9 > \sqrt{n} \rightarrow -11 \leq n \leq 11 \quad (r)$$

$$\sqrt{n} \leq 9 \quad (a) \quad (b)$$

$$D_f = [0, 11] \quad \checkmark$$

$$\left[\frac{m-1}{p} \right] + \left[\frac{m-1}{p} \right] + p > 0 \quad (a)$$

$$p \left[\frac{m-1}{p} \right] > -p \rightarrow \left[\frac{m-1}{p} \right] > -1 \quad (r)$$

$$\frac{m-1}{p} > 0 \rightarrow m > \frac{1}{p} \rightarrow m > \frac{1}{2} \rightarrow D_f = \left[\frac{1}{2}, +\infty \right) \quad \checkmark$$

$$m-a > 0 \rightarrow m > a \rightarrow m > \frac{a}{p} \quad 1 - \log(rm-a) > 0 \quad (r) \quad (a)$$

$$m-a < 10 \rightarrow m \leq \frac{10+a}{p} \quad \log m-a < 1$$

$$\frac{a}{p} < m < \frac{10+a}{p} \rightarrow c-b \leq \frac{10+a}{p} - \frac{a}{p} \rightarrow c-b \leq \frac{10}{p} \quad (a) \quad \checkmark$$