



MC200404821: IMRAN KHAN

Time Left 86 sec(s)

MTH621:Quiz-3

Quiz Start Time: 09:25 PM, 17 August 2021

Question # 2 of 10 ( Start time: 09:26:54 PM, 17 August 2021 )

Total Marks: 1

Generalized Mean Value Theorem says, if  $f$  and  $g$  are continuous on the closed interval  $[a, b]$  and differentiable on the open interval  $(a, b)$ , then

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Select the correct option

Reload Math Equations

- |                       |   |   |
|-----------------------|---|---|
| <input type="radio"/> | for some $c$ in $(a, b)$ .                | $[g(b) - g(a)]f'(c) = [f(b) - f(a)]g'(c)$ |
| <input type="radio"/> | $g'(x) = 0$ for all $x$ in $(a, b)$ .     |   |
| <input type="radio"/> | $g'(x) = f'(x)$ for all $x$ in $(a, b)$ . |   |
| <input type="radio"/> | for some $c$ in $(a, b)$ .                | $[g(b) - g(a)] = [f(b) - f(a)]g'(c)$      |

Click to Save Answer &amp; Move to Next Question

MTH621:Quiz-3

Question # 8 of 10 ( Start time: 08:50:33 PM, 17 August 2021 )

The radius of convergence of the given power series  $\sum n!x^n$  is -----.

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Select the correct option

- 1
- 0 R
- none of these
- $\infty$



MATHS: QUIZ-3

Question # 1 of 10 ( Start time: 09:06:25 PM, 17 August 2021 )

The radius of convergence of  $\sum a_n (x - x_n)^n$  is given by  $----- = \lim_{n \rightarrow \infty} \left| \frac{a_{n+1}}{a_n} \right|$   
if the limit exists in the extended real system.

Select the correct option

- |                       |               |     |
|-----------------------|---------------|-----|
| <input type="radio"/> | $\frac{1}{R}$ | $R$ |
| <input type="radio"/> | $n$           |     |
| <input type="radio"/> | none of these |     |
| <input type="radio"/> | $R$           |     |

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92: NAVEED IQBAL

Time Le

:-3

Quiz Start Time: 09:06 PM, 17

of 10 ( Start time: 09:12:24 PM, 17 August 2021 )

Let  $f$  be bounded on  $[a, b]$ , and let  $P$  be a partition on  $[a, b]$ . Then  
The lower sum  $s(P)$  of  $f$  over  $P$  is the ----- of the set of all Riemann sums of  $f$  over  $P$ .

rect option

Reload M

sup remum

R

infimum

Click to Save Answer & Move to Next Qu





( Start time: 09:14:08 PM, 17 August 2021 )

Suppose that  $f$  has  $n$  derivative at  $x_0$  and  $n$  is the the smallest positive integer such that  $f^n(x_0) \neq 0$ . If  $n$  is even,  $x_0$  is ----- if  $f^{(n)}(x_0) < 0$ .

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option

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a local minimum of  $f$ .

R

a local maximum of  $f$ .

not a local extreme point of  $f$ .

None of these

Click to Save Answer & Move





992: NAVEED IQBAL

Time Le

liz-3

Quiz Start Time: 09:06 PM, 17

9 of 10 ( Start time: 09:14:52 PM, 17 August 2021 )

Let  $f$  be bounded on  $[a, b]$ , and let  $P$  be a partition on  $[a, b]$ . Then  
The upper sum  $s(P)$  of  $f$  over  $P$  is the ----- of the set of all Riemann sums of  $f$  over  $P$ .

Correct option

Reload M

infimum

R

supremum

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Click to Save Answer & Move to Next Qu





LANGIR

Quiz Start Time: 09:27

09:27:04 PM, 17 August 2021 )

If  $f$  is ----- on  $[a, b]$ , then  $f$  is not integrable on  $[a, b]$ .

R

unbounded

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bounded

Click to Save Answer & Move to





MC200403975: MOEEZA JAHANGIR

MTH621:Quiz-3

Question # 5 of 10 ( Start time: 09:30:12 PM, 17 August 2021 )

The series  $\sum (-1)^n a_n$  converges if  $0 \leq a_{n+1} \leq a_n$  and  $\lim_{x \rightarrow \infty} a_n = \dots$

Select the correct option

- |                       |               |
|-----------------------|---------------|
| <input type="radio"/> | -1            |
| <input type="radio"/> | None of these |
| <input type="radio"/> | 1             |
| <input type="radio"/> | 0             |

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Quiz Start

3:31:21 PM, 17 August 2021 )

If  $f$  is unbounded on  $[a, b]$ , then  $f$  is ----- on  $[a, b]$ .

integrable

R

not integrable

Click to Save Ans



If  $f$  is differentiable at  $x_0$ , then  $f$  is continuous at  $x_0$ .

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R

*true*



# Quiz

https://quiz.vu.edu.pk



1 of 10 ( Start time: 09:58:01 PM, 17 August 2021 )

Suppose that  $f$  has  $n$  derivative at  $x_0$  and  $n$  is the smallest positive integer such that  $f^{(n)}(x_0) \neq 0$ . If  $n$  is odd,  $x_0$  is \_\_\_\_\_.

correct option

None of these

a local maximum of  $f$ .

R

not a local extreme point of  $f$ .

a local minimum of  $f$ .

Click to Save Answer & Mark

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Question # 3 of 10 ( Start time: 09:58:46 PM, 17 August 2021 )

If  $\sum_{n=1}^{\infty} b_n$  is rearrangement of an absolutely convergent series  $\sum_{n=1}^{\infty} a_n$ , then  $\sum_{n=1}^{\infty} b_n$  also ----- absolutely, and to the same sum.

Select the correct option

<input type="radio"/>	<i>converges</i>
<input type="radio"/>	<i>diverges</i>

R

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Quiz Start Time: 09:55

10:00:47 PM, 17 August 2021 )

In the Riemann integral  $\int_a^b f(x) dx$ , if it exist, is -----.

different

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R

unique

Click to Save Answer & Move to






## MTH621:Quiz-3

Question # 7 of 10 ( Start time: 10:02:56 PM, 17 August 2021 )

The series  $\sum a_n b_n$  converges if  $a_{n+1} \leq a_n$  for  $n \geq k$ ,  $\lim_{x \rightarrow \infty} a_n = 0$ , and  $|b_k + b_{k+1} + \dots + b_n| \leq M$ , for some constant  $M$ .

Select the correct option

- |                       |               |  |
|-----------------------|---------------|--|
| <input type="radio"/> | $\leq$        |  |
| <input type="radio"/> | None of these |  |
| <input type="radio"/> | $<$           |  |
| <input type="radio"/> | $\geq$        |  |





04:52 PM, 17 August 2021

If  $f$  is continuous at  $x_0$ , then  $f$  is differentiable at  $x_0$ .

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R

false

true

Click to Sa





quiz.vu.edu.pk/QuizC

21



The function  $g(x) = x^2$  is ----- on  $[0, \infty)$ .

R

increasing

decreasing

Click to Save Answer







quiz.vu.edu.pk/QuizC

21



Start time: 10:17:27 PM, 17 August 2021 )

Suppose that  $f$  has  $n$  derivative at  $x_0$  and  $n$  is the the smallest positive integer such that  $f^n(x_0) \neq 0$ . If  $n$  is even,  $x_0$  is ----- if  $f^{(n)}(x_0) > 0$ .

option

None of these

R

a local minimum of  $f$ .

not a local extreme point of  $f$ .

a local maximum of  $f$ .

Click to Save Answer & Move

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10:15:52 PM, 17 August 2021 )

Investigate the value of  $\lim_{x \rightarrow \infty} x^{\frac{1}{x}} = \text{---}$ .

None of these

0

1

-1

Click to S





10:48 PM, 17 August 2021 )

Investigate the value of  $\lim_{x \rightarrow 0^+} x \log x = \text{-----}$ .

1

R

0

None of these

-1

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IC190405608: ANAM NAWAZ

ITH621:Quiz-3

Question # 7 of 10 ( Start time: 10:21:59 PM, 17 August 2021 )

The radius of convergence of the given power series  $\sum \frac{x^n}{n!}$  is -----.

Select the correct option

- |                                  |                   |
|----------------------------------|-------------------|
| <input type="radio"/>            | None of these     |
| <input checked="" type="radio"/> | $\infty$ <b>R</b> |
| <input type="radio"/>            | 1                 |
| <input type="radio"/>            | 0                 |





Question # 10 of 10 ( Start time: 10:25:10 PM, 17 August 2021 )

The series  $\sum (-1)^n a_n$  ----- if  $0 \leq a_{n+1} \leq a_n$  and  $\lim_{x \rightarrow \infty} a_n = 0$

Select the correct option

- |                                  |                  |
|----------------------------------|------------------|
| <input type="radio"/>            | <i>converges</i> |
| <input checked="" type="radio"/> | <i>R</i>         |
| <input type="radio"/>            | <i>diverges</i>  |





## MTH621:Quiz-3

Question # 3 of 10 ( Start time: 10:38:02 PM, 17 August 2021 )

$\lim_{x \rightarrow 0^+} x \log x$ , has the following indeterminate form

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Select the correct option

- |                       |                          |
|-----------------------|--------------------------|
| <input type="radio"/> | $(0)(\infty)$ .          |
| <input type="radio"/> | $\infty \times \infty$ . |
| <input type="radio"/> | $0^\infty$ .             |
| <input type="radio"/> | $\frac{0}{0}$ .          |

R





6: SAMEER AHSAN KHAN

3

Quiz

f 10 ( Start time: 10:39:39 PM, 17 August 2021 )

The function  $g(x) = x^2$  is increasing on -----.

Correct option

none of these

R

$[0, \infty)$

$(-\infty, 0)$

$(-\infty, -1)$

Click to Save Answer

