

All Subjects Past Papers
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Question # 4 of 10 (Start time: 04:53:47 PM, 30 July 2018)

Total Marks: 1

a point

 x_0

is local extreme point if

Select the correct option

Reload Math Equations

☐

for all

 $x \in D_f$ ☐

partial derivatives exists and equal to zero.

☒

does not change sign in:

 $S_\delta(x_0) \cap D_f$ ☐

None of these

Click to Save Answer & Move to Next Question

Question # 8 of 10 (Start time: 04:56:40 PM, 30 July 2018)

Total Marks: 1

$$f(x, y)$$

$$(x, y) \rightarrow (0, 0)$$

Select the correct option

Reload Math Equations

☐	$\frac{1}{2}$
☒	$-\frac{1}{2}$
☐	0
☐	1

Click to Save Answer & Move to Next Question

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Question # 3 of 10 (Start time: 04:52:52 PM, 30 July 2018)

Total Marks: 1

Identify the true statement(s)

Select the correct option

Reload Math Equations

☐

the function

$$f(x, y) = x^3 + y^3$$

has a local extreme point at origin.

☒

If

$$f_x(\mathbf{X}_0) = 0$$

then

☐

At every point where

$$f_x(\mathbf{X}_0) = 0$$

function has local extreme point.

☐

None of these



Click to Save Answer & Move to Next Question

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Which statement(s) is(are) true about the function

$$f(x, y) = \frac{x^3 + y^3}{x - y}$$

Select the correct option

☐	
☐	$f_x(x, y) = \frac{2x}{x - y} - \frac{x^3 + y^3}{(x + y)^2}$
☐	$f_y(x, y) = \frac{y}{x - y} + \frac{x^3 + y^3}{(x - y)^2}$
☐	$f_y(x, y), f_x(x, y)$
☐	are continuous everywhere.
☐	f
☐	is differentiable every where except at the points where



For the function

$$f(x, y) = \frac{xy}{x^2 + y^2},$$

Select the correct option

☐	
☐	$\frac{1}{2}$
☐	$-\frac{1}{2}$
☐	0
☐	1

Question # 5 of 10 (Start time: 04:54:32 PM, 30 July 2018)

Total Marks: 1

$$df =$$

Select the correct option

[Reload Math Equations](#)

- | | |
|----------------------------------|---------------|
| ☐ | 9 |
| ☒ | 9dx |
| ☐ | -1 |
| ☐ | None of these |

[Click to Save Answer & Move to Next Question](#)

A critical point at which a function attains its maximum value among all points where it is defined is called _____

Select the correct option

☐	global minimum
☐	infimum
☐	global maximum
☐	None of these

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For the functions $f(x) = 3x^2 + 5x^3$, the differential at $x = -1$ exists because

Select the correct option

☐ $\lim_{x \rightarrow -1} \frac{f(x)}{x+1} = \infty.$

☐ $\lim_{x \rightarrow -1} \frac{9(x+1)}{x+1} = 0.$

☐ $\lim_{x \rightarrow -1} \frac{f(x) + 2 - 9(x+1)}{x+1} = 0.$

☐ $\lim_{x \rightarrow -1} \frac{f(x) + 2 - 9(x+1)}{x+1} = 1.$

Identify the false statement(s)

▶ Select the correct option

☐	The partial derivative is a special case of directional derivative.
☐	For a functions of n variables the partial derivative with respect to variable
☐	The partial derivative of the function $f(\mathbf{X})$
☐	with respect to third variable is $f(x, y, z) = 3xyz + 2x^2 + z^2$
☐	None of these

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Quiz

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MC170201745: Shakeel Ahmad

MTH631: Quiz-2

Time Left 66 sec(s)

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 2 of 10 (Start time: 04:51:15 PM, 30 July 2018)

Total Marks: 1

A set $A \subset \mathbb{R}$ of real numbers is if there exists a real number $m \in \mathbb{R}$ such that $x \geq m$ for every $x \in A$.

Select the correct option

☐	bounded below	
☐	uniformly continuous	
☐	bounded above	
☐	None of these	

Click to Go to Answer & Move to Next Question

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4:51 PM 7/30/2018

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MC170202886: Aqsa Zunaira

MTH631: Quiz-2

Time Left 41 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 9 of 10 (Start time: 04:01:11 PM, 30 July 2018)

Total Marks: 1

along the line

$y = -x$

is

Select the correct option

Reload Math Equations

☐	$\frac{1}{2}$
☐	$-\frac{1}{2}$
☐	0
☐	1

Click to View Answer & Move to Next Question

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Type here to search

4:02 PM 7/30/2018

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MC170202886: Aqsa Zunaira

MTH631:Quiz-2

Time Left75 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 8 of 10 (Start time: 04:00:51 PM, 30 July 2018)

Total Marks: 1

A sufficient condition for a function of several variables to be differentiable at point is

Select the correct option

☐

only the partial derivative should exists at that point.

☒

All partial derivatives exists and are continuous at that point.

☐

only limit at that point should exists.

☐

None of these

Reload Math Equations

Click to Save Answer & Move to Next Question

Type here to search

4:01 PM7/30/2018

MC170202886: Aqsa Zunaira

MTH631: Quiz-2

Time Left 43 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 7 of 10 (Start time: 03:59:57 PM, 30 July 2018)

Total Marks: 1

Identify the false statement(s)

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Select the correct option

Reload Math Equations

☐	The partial derivative is a special case of directional derivative.
☐	$\frac{\partial f(X)}{\partial E_2}$
☒	with respect to third variable is $f_z = 2z$
☐	None of these

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

MTH631:Quiz-2

Time Left 31 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 1 of 10 (Start time: 03:53:17 PM, 30 July 2018)

Total Marks: 1

and

$$f_{yx}(x_0, y_0)$$

exists. Then:

Select the correct option

Reload Math Equations

- | | |
|----------------------------------|---------------------------------------|
| ☒ | $f_{yx}(x_0, y_0) = f_{xy}(x_0, y_0)$ |
| ☐ | $f_{xx}(x_0, y_0) = f_{yy}(x_0, y_0)$ |
| ☐ | $f_x(x_0, y_0) = f_y(x_0, y_0)$ |
| ☐ | None of these |

Click to Save Answer & Move to Next Question

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MC170202886: Aqsa Zunaira

MTH631: Quiz-2

Time Left 58 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 3 of 10 (Start time: 03:55:28 PM, 30 July 2018)

Total Marks: 1

A critical point at which a function attains its maximum value among all points where it is defined is called _____

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Select the correct option

- | | | |
|-----------------------|----------------|----|
| ☐ | global minimum | |
| ☐ | infimum | // |
| ☐ | global maximum | / |
| ☐ | None of these | / |

Click to view Answer & Move to Next Question

MC170202886: Aqsa Zunaira

MTH631:Quiz-2

Time Left 31 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 4 of 10 (Start time: 03:56:48 PM, 30 July 2018)

Total Marks: 1

Which expression represents the differential of a function of n variables at the point X_0 ?

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Select the correct option

Reload Math Equations

- | | |
|-----------------------|--|
| ☐ | $L(X) = f_{x_1}(X_0) + f_{x_2}(X_0) + \dots + f_{x_n}(X_0)$ |
| ☐ | $L(X) = f(X_0)x_1 + f(X_0)x_2 + \dots + f(X_0)x_n$ |
| ☐ | $L(X) = f_{x_1}(X_0)x_1 + f_{x_2}(X_0)x_2 + \dots + f_{x_n}(X_0)x_n$ |
| ☐ | None of these |

Click to View Answer & Move to Next Question

MC170201745: Shakeel Ahmad

MTH631: Quiz-2

Time Left 82 sec(s)

Quiz Start Time: 04:51 PM, 30 July 2018

Question # 1 of 10 (Start time: 04:51:01 PM, 30 July 2018)

Total Marks: 1

A point on the graph of a function at which the tangent line is parallel to x-axis is called the _____

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Select the correct option

- | | | |
|----------------------------------|---------------------------|---|
| ☒ | critical point | ✓ |
| ☐ | point of inflection | ✗ |
| ☐ | point of relative extrema | ✗ |
| ☐ | None of these | ✗ |

Click to Save Answer & Move to Next Question

MC170202886: Aqsa Zunaira

MTH631: Quiz-2

Time Left 19 sec(s)

Quiz Start Time: 03:53 PM, 30 July 2018

Question # 5 of 10 (Start time: 03:57:57 PM, 30 July 2018)

Total Marks: 1

Which statement(s) is(are) true about the function

$$f(x, y) = \frac{x^2 + y^2}{x - y}$$

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Select the correct option

Reload Math Equations

- | | | |
|-----------------------|--|--|
| ☐ | | $f_x(x, y) = \frac{2x}{x - y} - \frac{x^2 + y^2}{(x + y)^2}$ |
| ☐ | | $f_y(x, y) = \frac{y}{x - y} + \frac{x^2 + y^2}{(x - y)^2}$ |
| ☐ | are continuous everywhere. | $f_y(x, y), f_x(x, y)$ |
| ☐ | is differentiable every where except at the points where | $y = x$ |

Click to View Answer & Move to Next Question

▶ Select the correct option

☐	the function	$f(x, y) = x^3 + y^3$
☐	has a local extreme point at origin:	f
☐	may or may not has a local extreme point at	X_0
☐	At every point where	$f_{x_i}(X_0) = 0$
☐	function has local extreme point	
☐	None of these	



is continuous at

$$f(x, y)$$

Select the correct option:

☐ $f_{xy}(x_0, y_0) = f_{yx}(x_0, y_0)$

☐ $f_{xz}(x_0, y_0) = f_{zx}(x_0, y_0)$

☐ $f_x(x_0, y_0) = f_y(x_0, y_0)$

None of these

Question # 10 of 10 (Start time: 04:57:08 PM, 30 July 2018)

Total Marks: 1

A tangent plane to the surface

$$z = f(x, y)$$

is always the limit of the -----

Select the correct option

Reload Math Equations

☒	secant plane
☐	tangent line
☐	normal plane
☐	None of these

Click to Save Answer & Move to Next Question

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For a function of several variables,

a point

$$f(\mathbf{X})$$

Select the correct option

☐	for all	$f(\mathbf{X}) - f(\mathbf{X}_0)$
☐	partial derivatives exists and equal to zero,	$\mathbf{X} < 0$
☐	if	
☐	does not change sign in	$f(\mathbf{X}) - f(\mathbf{X}_0)$
☐	None of these	



Question # 7 of 10 (Start time: 04:56:19 PM, 30 July 2018)

Total Marks: 1

and

$$f_{yx}(x_0, y_0)$$

exists. Then,

Select the correct option

Reload Math Equations

☒	$f_{yx}(x_0, y_0) = f_{xy}(x_0, y_0)$
☐	$f_{xx}(x_0, y_0) = f_{yy}(x_0, y_0)$
☐	$f_x(x_0, y_0) = f_y(x_0, y_0)$
☐	None of these

Click to Save Answer & Move to Next Question

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Question # 3 of 10 (Start time: 06:43:31 PM, 31 July 2018)

A tangent plane to the surface

$$z = f(x, y)$$

is always the limit of the

Select the correct option

☐	secant plane
☐	tangent line
☐	normal plane
☐	None of these

A sufficient condition for a function of several variables to be differentiable at point is

Select the correct option

☐	only the partial derivative should exists at that point
☐	All partial derivatives exists and are continuous at that point
☐	only limit at that point should exists
☐	None of these



is the correct option

the function

has a local extreme point at origin,

$$f(x, y) = x^3 + y^3$$

then

$$f_{x_1}(x_0) = 0$$

f

At every point where

function has local extreme point

$$f_{x_1}(x_0) = 0$$

None of these

Identify the true statement(s)

Select the correct option

☐	the function has a local extreme point at origin;	$f(x, y) = x^3 + y^3$
☐	If then	$f_z(\mathbf{X}_0) = 0$
☐	At every point where	
☐	function has local extreme point	$f_x(\mathbf{X}_0) = 0$
☐	None of these	



Question # 6 of 10 (Start time: 04:54:54 PM, 30 July 2018)

Total Marks: 1

For the function

$$f(x, y) = 3x^2y^3 + xy$$

in two variables,

Select the correct option

Reload Math Equations

☐	0
☐	-1
☒	1
☐	None of these



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MC170203385: Maffia Bibi

Time Left 83 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 10 of 10 (Start time: 03:07:17 PM, 31 May 2018)

Total Marks: 1

If we have

$$f(x) = \sum_{n=0}^{\infty} a_n (x - x_0)^n, \quad |x - x_0| < R,$$

Select the correct option

Reload Math Equations



$$a_n = \frac{f^{(n)}(0)}{n!}.$$



$$a_n = \frac{f^{(2n)}(x_0)}{n!}.$$



$$a_n = \frac{f(nx_0)}{n!}.$$



$$a_n = \frac{f^{(n)}(x_0)}{n!}.$$

Click to Save Answer & Move to Next Question

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The values of x in a specific interval for which a given power series converges is called

Select the correct option

☐	Interval of continuity
☐	Interval of convergence
☐	radius of convergence
☐	None of these

If we have:

$$f(x) = \sum_{n=0}^{\infty} a_n (x - x_0)^n, \quad |x - x_0| < R,$$

Select the correct option

☐	$a_n = \frac{f^{(n)}(0)}{n!}.$
☐	$a_n = \frac{f^{(2n)}(x_0)}{n!}.$
☐	$a_n = \frac{f(n x_0)}{n!}.$
☐	$a_n = \frac{f^{(n)}(x_0)}{n!}.$



If $f(x) = \sin x$, then

Select the correct option

☐ $f^{2m+1}(0) = 1, m \geq 0$

☐ $f^{2m}(0) = 1$

☐ $f''(x) = \sin x$

☐ $\|f^{(k)}\|_{(-\infty, \infty)} = 1, k > 0$

limit of uniformly convergent : x

LMS-Virtual University of Pak: x

Quiz x

+

90%

home refresh undo star left

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Google

search

three dots

three lines

MC170203385: Maffia Bibi

MTH631:Quiz-1

Time Left 84 sec(s)

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 1 of 10 (Start time: 03:04:50 PM, 31 May 2018)

Total Marks: 1

The limit of a uniformly convergent series of integrable functions is always:

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Select the correct option

Reload Math Equations

☐

not integrable

☐

☒

☐

☐

None of these

Click to Save Answer & Move to Next Question

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3:05 PM 5/31/2018

MC170201823: Abid Farooq

Time Left 83 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 3 of 10 (Start time: 03:20:46 PM, 31 May 2018)

Total Marks: 1

If we have

$$f(x) = \sum_{n=0}^{\infty} a_n (x - x_0)^n, \quad |x - x_0| < R,$$

Select the correct option

Reload Math Equations

- | | |
|----------------------------------|-----------------------------------|
| ☐ | $a_n = \frac{f^{(n)}(0)}{n!}.$ |
| ☐ | $a_n = \frac{f^{(2n)}(x_0)}{n!}.$ |
| ☐ | $a_n = \frac{f(nx_0)}{n!}.$ |
| ☒ | $a_n = \frac{f^{(n)}(x_0)}{n!}.$ |

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Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 6 of 10 (Start time: 03:06:15 PM, 31 May 2018)

Total Marks: 1

If a series converges absolutely uniformly on S , then

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Select the correct option

- | | | |
|----------------------------------|-------------------------------|---|
| ☒ | it converges uniformly on S | A |
| ☐ | it diverges | B |
| ☐ | it is differentiable on S | C |
| ☐ | None of these | D |

Click to Save Answer & Move to Next Question

Exam date: 20.06.2017, 01 June 2018)

If a series converges absolutely uniformly on S , then

Select the correct option

☐	it converges uniformly on S
☐	it diverges
☐	it is differentiable on S
☐	None of these

Question # 3 of 10 (Start time: 08:04:27 PM, 01 June 2018)

The term by term differentiation of the series $f(x) = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}$

Select the correct option

☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}$

☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}$

☐ $\sum_{n=0}^{\infty} \frac{x^{2n+1}}{(2n+1)!}$

☐ None of these

MC170203385: Maffia Bibi

MTH631:Quiz-1

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Time Left 85 sec(s)

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 2 of 10 (Start time: 03:05:01 PM, 31 May 2018)

Total Marks: 1

If $f(x) = \sin x$, then

Select the correct option

Reload Math Equations

- | | |
|----------------------------------|---|
| ☐ | $f^{2m+1}(0) = 1, m \geq 0$ |
| ☐ | $f^{2m}(0) = 1$ |
| ☐ | $f''(x) = \sin x$ |
| ☒ | $\ f^{(k)}\ _{(-\infty, \infty)} = 1, k \geq 0$ |

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 82 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 2 of 10 (Start time: 03:20:33 PM, 31 May 2018)

Total Marks: 1

The infinite series expansion of $\cos x$ for $-\infty < x < \infty$ is given by.

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Select the correct option

Reload Math Equations

- | | |
|----------------------------------|--|
| ☒ | $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{2n!}$ |
| ☐ | $\sum_{n=0}^{\infty} (-1)^n \frac{x^n}{n!}$ |
| ☐ | $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(n+1)!}$ |
| ☐ | None of these |

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 8 of 10 (Start time: 03:06:56 PM, 31 May 2018)

Total Marks: 1

Fourier series expansion of a function is a representation of the function as a linear combination of

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Select the correct option

- ☐ sines and tangents
- ☐ cosines and tangents
- ☐ tangents and cotangents
- ☒ sines and cosines

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 79 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 4 of 10 (Start time: 03:05:24 PM, 31 May 2018)

Total Marks: 1

The infinite series expansion of $\cos x$ for $-\infty < x < \infty$ is given by.

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Select the correct option

Reload Math Equations

☒	$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{2n!}$
☐	$\sum_{n=0}^{\infty} (-1)^n \frac{x^n}{n!}$
☐	$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(n+1)!}$
☐	None of these

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 58 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 7 of 10 (Start time: 03:21:28 PM, 31 May 2018)

Total Marks: 1

Let f be defined by a power series with finite radius of convergence R . Then $\lim_{x \rightarrow (R+)^-} f(x) = \sum_{n=0}^{\infty} a_n R^n$ only if

Select the correct option

Reload Math Equations

- ☐ $\sum_{n=0}^{\infty} b_n R^n$ is convergent.
- ☒ $\sum_{n=0}^{\infty} (-1)^n a_n R^n$ converges.
- ☐ $\sum_{n=0}^{\infty} a_n R^n$ converges.
- ☐ None of the above

Click to Save Answer & Move to Next Question

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MC170201823: Abid Farooq

Time Left 78 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 10 of 10 (Start time: 03:22:52 PM, 31 May 2018)

Total Marks: 1

The power series expansion of $f(x) = \sin x$ about $x_0 = 0$ is

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Select the correct option

Reload Math Equations

- ☐ $\sum_{n=0}^{\infty} \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty,$
- ☐ $\sin x = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty,$
- ☒ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty,$
- ☐ $\sum_{n=0}^{\infty} \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty,$

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 4 of 10 (Start time: 03:20:57 PM, 31 May 2018)

Total Marks: 1

Fourier series expansion of a function is a representation of the function as a linear combination of

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Select the correct option

- ☐ sines and tangents
- ☐ cosines and tangents
- ☐ tangents and cotangents
- ☒ sines and cosines

Click to Save Answer & Move to Next Question

Question # 1 of 10 (Start time: 08:02:38 PM, 01 June 2018)

The limit of a uniformly convergent series of integrable functions is always

Select the correct option

☐	not integrable
☐	differentiable
☐	integrable
☐	None of these

MC170201823: Abid Farooq

Time Left 42 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 1 of 10 (Start time: 03:19:30 PM, 31 May 2018)

Total Marks: 1

The term by term differentiation of the series:

$$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty$$

Select the correct option

Reload Math Equations

- ☐ $\sum_{n=0}^{\infty} \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
- ☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$
- ☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty.$
- ☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty.$

Click to Save Answer & Move to Next Question

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MC170203385: Maffia Bibi

MTH631: Quiz-1

Time Left 81 sec(s)

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 3 of 10 (Start time: 03:05:10 PM, 31 May 2018)

Total Marks: 1

Let f be defined by a power series with finite radius of convergence R . Then $\lim_{x \rightarrow (x_0 + R)^-} f(x) = \sum_{n=0}^{\infty} a_n R^n$ only if

Select the correct option

Reload Math Equations

- | | |
|----------------------------------|--|
| ☐ | $\sum_{n=0}^{\infty} b_n R^n$ is uniformly convergent. |
| ☒ | $\sum_{n=0}^{\infty} a_n R^n$ converges. |
| ☐ | $\sum_{n=0}^{\infty} (-1)^n a_n R^n$ converges. |
| ☐ | None of these. |

Click to Save Answer & Move to Next Question

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Question # 5 of 10 (Start time: 08:05:49 PM, 01 June 2018)

Which of these functions is not uniformly continuous on $(0, 1)$?

Select the correct option

☐	x^2
☐	$1/x^2$
☐	$\sin x$
☐	$\frac{\sin x}{x}$

MC170203385: Maffia Bibi

Time Left 65 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 7 of 10 (Start time: 03:06:27 PM, 31 May 2018)

Total Marks: 1

The radius of convergence of the power series $\sum_{n=1}^{\infty} a_n (x - x_0)^n$ is

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Select the correct option

Reload Math Equations

☐	$R = \lim_{n \rightarrow \infty} \left \frac{a_{n+1}}{a_n} \right $
☒	$\frac{1}{R} = \lim_{n \rightarrow \infty} \left \frac{a_{n+1}}{a_n} \right $
☐	$\frac{1}{R} = \lim_{n \rightarrow \infty} \left \frac{a_n}{a_{n+1}} \right $
☐	None of these

Click to Save Answer & Move to Next Question

MC170201823: Abid Farooq

Time Left 82 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 8 of 10 (Start time: 03:22:21 PM, 31 May 2018)

Total Marks: 1

Which of these functions is not uniformly continuous on $(0, 1)$?

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Select the correct option

Reload Math Equations

- | | |
|----------------------------------|--------------------|
| ☐ | x^2 |
| ☒ | $1/x^2$ |
| ☐ | $\sin x$ |
| ☐ | $\frac{\sin x}{x}$ |

Click to Save Answer & Move to Next Question

MC170203385: Maffia Bibi

Time Left 83 sec(s)

MTH631:Quiz-1

Quiz Start Time: 03:04 PM, 31 May 2018

Question # 9 of 10 (Start time: 03:07:07 PM, 31 May 2018)

Total Marks: 1

The values of x in a specific interval for which a given power series converges is called.

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Select the correct option

Reload Math Equations

- | | |
|----------------------------------|--------------------------|
| ☐ | Interval of continuity |
| ☒ | interval of convergence. |
| ☐ | radius of convergence |
| ☐ | None of these |

Click to Save Answer & Move to Next Question

The term by term differentiation of the series

$$\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty$$

Select the correct option

☐ $\sum_{n=0}^{\infty} \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$

☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad -\infty < x < \infty.$

☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty$

☐ $\sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad -\infty < x < \infty.$

MC170201823: Abid Farooq

MTH631: Quiz-1

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Time Left 84 sec(s)

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 6 of 10 (Start time: 03:21:18 PM, 31 May 2018)

Total Marks: 1

In the definition of uniform convergence the natural number N always depends on

Select the correct option

Reload Math Equations

- | | |
|----------------------------------|----------------------|
| ☒ | ϵ (epsilon) |
| ☐ | η |
| ☐ | β |
| ☐ | None of these |

Click to Save Answer & Move to Next Question

Question # 2 of 10 (Start time: 08:03:43 PM, 01 June 2018)

The power series expansion of $f(z) = \sin z$ about $z_0 = 0$ is

Select the correct option

☐	$\sum_{n=0}^{\infty} 0 \frac{z^{2n}}{(2n)!} ; \quad -\infty < z < \infty$
☐	$\sin z = \sum_{n=0}^{\infty} 0 (-1)^n \frac{z^{2n}}{(2n)!} ; \quad -\infty < z < \infty$
☐	$\sum_{n=0}^{\infty} 0 (-1)^n \frac{z^{2n+1}}{(2n+1)!} ; \quad -\infty < z < \infty$
☐	$\sum_{n=0}^{\infty} 0 \frac{z^{2n+1}}{(2n+1)!} ; \quad -\infty < z < \infty$

Question # 4 of 10 (Start time: 08:05:11 PM, 01 June 2018)

In the definition of uniform convergence the natural number N always depends on

Select the correct option

☒	ϵ (epellon)
☐	n
☐	N
☐	None of these

MC170201823: Abid Farooq

Time Left 83 sec(s)

MTH631: Quiz-1

Quiz Start Time: 03:19 PM, 31 May 2018

Question # 5 of 10 (Start time: 03:21:08 PM, 31 May 2018)

Total Marks: 1

If $f(x) = \sin x$, then

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Select the correct option

Reload Math Equations

- | | |
|----------------------------------|---|
| ☐ | $f^{2m+1}(0) = 1, m \geq 0$ |
| ☐ | $f^{2m}(0) = 1$ |
| ☐ | $f''(x) = \sin x$ |
| ☒ | $\ f^{(k)}\ _{(-\infty, \infty)} = 1, k \geq 0$ |

Click to Save Answer & Move to Next Question