

Microsoft Word (Product Activation Failed) - mth632 grand quiz

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LEVELS UP WITH LEVELS ACADEMY

MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 1 of 30 (Start time: 01:08:17 PM, 02 January 2021)

Domain of the function

$$f(z) = \frac{1}{z^2 - 1}$$

Select the correct option

☒ $z \neq \pm 1$

☐ $z \neq \pm 2$

☐ $z \neq \pm i$

☐ $z \neq 0$

Click to Save Answer & Move to

Page: 33 of 157 Words: 805 English (U.K.) 230% 05:41 PM 02/01/2021

LEVELS UP WITH LEVELS ACADEMY ARIFWALA

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 2 of 30 (Start time: 01:09:05 PM, 02 January 2021)

Domain of the function

$$f(z) = \frac{1}{z + \bar{z}}$$

Select the correct option Reload

<input type="radio"/>	$z \neq \pm 1$
<input type="radio"/>	$z \neq \pm 2$
<input checked="" type="radio"/>	$z \neq \pm i$
<input type="radio"/>	$z \neq 0$

Click to Save Answer & Move to

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MTM632-Grand Quiz

Time Left: 16 sec(s)

Quiz Start Time: 12:42 PM, 02 January 2021

Question # 1 of 30 (Start time: 12:42:12 PM, 02 January 2021) Total Marks: 1

A connected open set is called a _____

Select the correct option

- ☐ domain
- ☐ range
- ☒ closed set
- ☐ unbounded set

Click to Save Answer & Move to Next Question

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05:34 PM 02/01/2021



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MTH632 Grand Quiz

Quiz Start Time: 01:08 PM

Question # 3 of 30 (Start time: 01:09:56 PM, 02 January 2021)

The function $u(x, y) = \frac{xy}{x^2 + y^2}$ does not have a limit when _____.

Select the correct option

☐ $(x, y) \rightarrow (1, 1)$

☐ $(x, y) \rightarrow (0, 1)$

☐ $(x, y) \rightarrow (1, 0)$

☒ $(x, y) \rightarrow (0, 0)$

Click to Save Answer & Move to

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MTH632 Grand Quiz

Quiz Start Time: 01:08 PM

Question # 4 of 30 (Start time: 01:10:07 PM, 02 January 2021)

If $-8i = 8 \exp[i(-n/2 + 2kn)]$, then the root of $(-8i)^{1/3}$ for $k=0$ is _____

Select the correct option

☐ $\sqrt{3} - i$

☐ $\sqrt{3} + i$

☒ $2(\sqrt{3} - i)$

☐ $2(\sqrt{3} + i)$

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 5 of 30 (Start time: 01:10:24 PM, 02 January 2021)

If $f(z) = \frac{z^4 + 1}{(z^2 + 1)(z - 3)}$, then $f(z)$ is not analytic at $z =$

Select the correct option

1 ☐

-1 ☐

3 ☒

4 ☐

Reload

Page: 37 of 157 Words: 805 English (U.K.) 230% 05:42 PM 02/01/2021



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Question # 6 of 30 (Start time: 01:10:41 PM, 02 January 2021)

Conjugate of complex number $8+3i$ is _____

Select the correct option

☐ $8+3i$

☒ $8-3i$

☐ $-8+3i$

☐ $-8-3i$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 7 of 30 (Start time: 01:10:53 PM, 02 January 2021)

In general, $1^n(1/n)$ is

Select the correct option [Reload](#)

<input type="radio"/>	$\exp\left(i\frac{2\pi}{n}\right)$
<input checked="" type="radio"/>	$\exp\left(i\frac{2k\pi}{n}\right), k = 0, 1, \dots, n-1$

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

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 8 of 30 (Start time: 01:11:03 PM, 02 January 2021)

The complex number $z = 2+i0$ will be located _____.

Select the correct option

- ☒ at 2 on the real axis.
- ☐ at -2 on the imaginary axis
- ☐ at -2 on the real axis
- ☐ at 2 on the imaginary axis

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

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MTH632:Grand Quiz Quiz Start Time: 01:08 PM

Question # 9 of 30 (Start time: 01:11:20 PM, 02 January 2021)

Harmonic conjugate of $u(x, y) = e^x \cos x$ is _____.

Select the correct option Reload

<input type="radio"/>	$e^y \sin x + c$
<input type="radio"/>	$-e^y \sin x + c$
<input checked="" type="radio"/>	$e^x \sin y + c$
<input type="radio"/>	$e^x \cos y + c$

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

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MTH632 Grand Quiz

Quiz Start Time: 01:08 PM

Question # 10 of 30 (Start time: 01:12:16 PM, 02 January 2021)

The polar form of the complex function $f(z) = z^2$ is

Select the correct option

☐ $r^2(\cos\theta + i\sin\theta)$

☒ $r^2(\cos 2\theta + i\sin 2\theta)$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 11 of 30 (Start time: 01:12:37 PM, 02 January 2021)

In the complex valued function $z = x - iy$, the value of $U_x =$ _____.

Select the correct option

Options:

- ☐ -1
- ☐ 0
- ☒ 1
- ☐ 2

Reload

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 12 of 30 (Start time: 01:12:51 PM, 02 January 2021)

The polar form of a complex number z is

Select the correct option

☐ $r(\tan \theta + i \cot \theta)$

☐ $r(\sec \theta + i \cos \theta)$

☒ $r(\sin \theta + i \cos \theta)$

☐ $r(\cos \theta + i \sin \theta)$

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 13 of 30 (Start time: 01:13:05 PM, 02 January 2021)

If $f(z) = z^2$, $g(z) = \frac{1}{z}$, then $g(f(4)) =$

Select the correct option

☐ 4

☐ 16

☐ 1/4

☒ 1/16

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Question # 14 of 30 (Start time: 01:13:27 PM, 02 January 2021)

A set S is said to be _____ set if for every pair of points $z_1, z_2 \in S$ there is a curve C joining them which is entirely contained in S .

Select the correct option

☐ bounded

☐ unbounded

☐ unconnected

☒ connected

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 15 of 30 (Start time: 01:13:48 PM, 02 January 2021)

If $f(z) = \frac{4z^4 - 1}{(z^2 - 1)(z - 2)}$, then $f(z)$ is not analytic at $z =$

Select the correct option Reload

<input checked="" type="radio"/>	1
<input type="radio"/>	3
<input type="radio"/>	4
<input type="radio"/>	5

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 16 of 30 (Start time: 01:14:00 PM, 02 January 2021)

In an Argand diagram, the complex number $z = 2i$ will be a point _____.

Select the correct option

☒ 2 units along the positive imaginary axis

☐ 2 units along the positive real axis

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

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Domain of the function

$$f(z) = \frac{1}{z^2}$$

Select the correct option

☐ $z \neq \pm 1$

☐ $z \neq \pm 2$

☐ $z \neq \pm i$

☒ $z \neq 0$

Click to Save Answer & Move to

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MTH632:Grand Quiz Quiz Start Time: 01:08 PM

Question # 18 of 30 (Start time: 01:14:37 PM, 02 January 2021)

A function $f(z)$ is analytic function if _____ part $f(z)$ is analytic.

Select the correct option

- ☐ (a) real
- ☐ (b) imaginary
- ☒ (c) both (a) and (b).
- ☐ (d) none of these.

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Question # 19 of 30 (Start time: 01:14:51 PM, 02 January 2021)

If $f(z) = \frac{z^4 + 1}{(z^2 + 1)(z - 3)}$, then $f(z)$ is not analytic at $z =$

Select the correct option

☐ 1

☐ -1

☒ i

☐ 2

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 20 of 30 (Start time: 01:15:12 PM, 02 January 2021)

The value of $w = \frac{1}{z}$ when $z = 2 - i$ is

Select the correct option

☒ $\frac{1}{5}(2 + i)$

☐ $\frac{1}{5}(2 - i)$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 21 of 30 (Start time: 01:15:22 PM, 02 January 2021)

Suppose that $\lim_{z \rightarrow z_0} f(z) = A$ and $\lim_{z \rightarrow z_0} g(z) = B$, then choose the correct option .

Select the correct option Reload

<input checked="" type="radio"/>	$\lim_{z \rightarrow z_0} [f(z) + g(z)] = A + B$
<input type="radio"/>	$\lim_{z \rightarrow z_0} [f(z) + g(z)] = A - B$
<input type="radio"/>	$\lim_{z \rightarrow z_0} [f(z) + g(z)] = A \cdot B$
<input type="radio"/>	$\lim_{z \rightarrow z_0} [f(z) + g(z)] = \frac{A}{B}$

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 22 of 30 (Start time: 01:15:35 PM, 02 January 2021)

If we write the function $w = z^2 - z$ as $w = u(x, y) + iv(x, y)$, then $u(x, y) =$

Select the correct option Reload

<input checked="" type="radio"/>	$x^2 - x - y^2$
<input type="radio"/>	$x^2 - y^2$
<input type="radio"/>	$x^2 + y^2$
<input type="radio"/>	none of these

Click to Save Answer & Move to

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MTH632: Grand Quiz

Quiz Start Time: 01:08 PM

Question # 23 of 30 (Start time: 01:15:45 PM, 02 January 2021)

Given a complex - valued function $s(t)$, a rotation by an angle $\frac{\pi}{3}$ is given by _____.

Select the correct option

☐ $e^{\frac{\pi}{3}} s(t)$

☒ $e^{\frac{2\pi}{3}} s(t)$

☐ $e^{\frac{\pi}{6}} s(t)$

☐ none of the above

Click to Save Answers & Move to Next

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Question # 24 of 30 (Start time: 01:16:40 PM, 02 January 2021)

A closed disc with center z_0 and radius ϵ is defined by

Select the correct option

☐ $|z_1 - z_0| \geq \epsilon$

☒ $|z_1 - z_0| \leq \epsilon$

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Question # 25 of 30 (Start time: 01:16:51 PM, 02 January 2021)

If $-8i = 8 \exp[i(-n/2 + 2\pi n)]$, then the root of $(-8i)^{1/3}$

for $k=1$ is _____

Select the correct option

☐ $3i$

☐ $-3i$

☐ $2i$

☒ $-2i$

[Click to Save Answer & Move to](#) [Reload](#)

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MT1632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 26 of 30 (Start time: 01:18:15 PM, 02 January 2021)

If $f(z) = z^2$, then $f(x+iy) =$ _____

Select the correct option

☒ $x^2 - y^2 + 2xyi$

☐ $x^2 + y^2 - 2xyi$

☐ $x^2 + y^2 i - 2xyi$

☐ $x^2 - y^2 i - 2xyi$

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MTH632 Grand Quiz Quiz Start Time: 01:08 PM

Question # 27 of 30 (Start time: 01:18:35 PM, 02 January 2021)

The derivative of f at z_0 i.e. $f'(z_0) = \lim_{z \rightarrow z_0} \frac{f(z) - f(z_0)}{z - z_0}$ provided the limit exists. The function f must be defined in a neighbourhood of z_0 .

Select the correct option

☐ z

☒ z_0

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MTH632:Grand Quiz Quiz Start Time: 01:08 PM

Question # 28 of 30 (Start time: 01:18:52 PM, 02 January 2021)

The conjugate of $6 + 3i$ is

Select the correct option

<input type="radio"/>	$-6 - 3i$
<input type="radio"/>	$-6 + 3i$
<input checked="" type="radio"/>	$6 - 3i$
<input type="radio"/>	$6 + 3i$

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MTH632 Grand Quiz

Quiz Start Time: 01:08 PM

Question # 29 of 30 (Start time: 01:19:05 PM, 02 January 2021)

$(1 + i)^2 =$ _____

Select the correct option

☐ 1+2i

☒ 0+2i

☐ 1+i

☐ 1-2i

Click to Save Answer & Move to

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Microsoft Word (Product Activation Failed) window showing a document titled "mth632 grand quiz". The document content includes a green banner with the text "Levels up with level academy", the title "MTH632 Grand Quiz", the quiz start time "Quiz Start Time: 01:08 PM", and the question number "Question # 30 of 30 (Start time: 01:19:30 PM, 02 January 2021)". The question text is "If $f(z) = z^3$, $g(z) = z + 2$, then $g(f(4)) =$ ". Below the question, there is a section titled "Select the correct option" with four radio button options: 4, 16, 64, and 66. The option 66 is selected. A "Reload" button is visible next to the options. The document footer shows "Page: 62 of 157" and "Words: 805". The Windows taskbar at the bottom shows the time as 05:47 PM on 02/01/2021.

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MTH632 Grand Quiz

Quiz Start Time: 01:08 PM

Question # 30 of 30 (Start time: 01:19:30 PM, 02 January 2021)

If $f(z) = z^3$, $g(z) = z + 2$, then $g(f(4)) =$

Select the correct option

☐ 4

☐ 16

☐ 64

☒ 66

Reload

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 1 of 30 (Start time: 01:42:39 PM, 02 January 2021)

The principal argument of $-5-5i$ is

Select the correct option

<input type="radio"/>	$\frac{5\pi}{4}$
<input type="radio"/>	$-\frac{3\pi}{4}$
<input checked="" type="radio"/>	$\frac{3\pi}{4}$
<input type="radio"/>	$-\frac{5\pi}{4}$

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- ☒ $|z_1 - z_2|$
- ☐ $|z_1 + z_2|$

At the bottom right of the quiz page, there is a button labeled "Click to Save Answer & Move to Next".



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MTH632-Grand Quiz Quiz Start Time: 01:42 PM

Question # 3 of 30 (Start time: 01:43:51 PM, 02 January 2021)

Domain of the function

$$f(z) = \frac{1}{z^2 + 1}$$

Select the correct option

☐ $z \neq \pm 1$

☐ $z \neq \pm 2$

☒ $z \neq \pm i$

☐ $z \neq 0$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 4 of 30 (Start time: 01:44:07 PM, 02 January 2021)

If $z = -1+i$, then z expressed in polar form is

Select the correct option

☐ $2cis\left(-\frac{\pi}{4}\right)$

☒ $2cis\left(\frac{3\pi}{4}\right)$

☐ $cis\left(-\frac{\pi}{4}\right)$

☐ $cis\left(\frac{3\pi}{4}\right)$

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 5 of 30 (Start time: 01:45:18 PM, 02 January 2021)

A complex - valued function of the form $L(z) = Az + B$, where $A, B \in \mathbb{Z}_n$ represents a _____ transformation.

Select the correct option

☒ linear

☐ quadratic

☐ cubic

☐ none of the above

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 6 of 30 (Start time: 01:45:30 PM, 02 January 2021)

The third roots of 2i is

Select the correct option Reload

☒ $\sqrt[3]{2} \left[i \left(\frac{\pi}{6} + \frac{2k\pi}{3} \right) \right], k \in \mathbb{Z}$

☐ $\sqrt[3]{3} \left[i \left(\frac{\pi}{6} + \frac{2k\pi}{3} \right) \right], k \in \mathbb{Z}$

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MTH632:Grand Quiz Quiz Start Time: 01:42 PM

Question # 7 of 30 (Start time: 01:46 02 PM, 02 January 2021)

If f approaches two complex numbers $L_1 \neq L_2$ for two different curves or paths through z_0 then the $\lim_{z \rightarrow z_0} f(z)$ _____.

Select the correct option

☐ exists

☒ does not exist

Click to Save Answer & Move to

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Question # 8 of 30 (Start time: 01:46:20 PM, 02 January 2021)

If $f(z) = \frac{z^4 + 1}{(z^2 + 1)(z - 5)}$, then $f(z)$ is not analytic at $z =$

Select the correct option

<input type="radio"/>	1
<input type="radio"/>	-1
<input type="radio"/>	3
<input checked="" type="radio"/>	5

Click to Save Answer & Move to

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Question # 9 of 30 (Start time: 01:46:49 PM, 02 January 2021)

If $f(z) = z^3$, $g(x) = \frac{1}{z}$, then $g(f(-1)) =$

Select the correct option

☐ 1

☒ -1

☐ 2

☐ -2

Click to Save Answer & Move to

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Browser window showing the quiz interface:

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MTH632: Grand Quiz

Quiz Start Time: 01:42 PM

Question # 9 of 30 (Start time: 01:46:49 PM, 02 January 2021)

If $f(z) = z^3$, $g(x) = \frac{1}{x}$, then $g(f(-1)) =$

Select the correct option

Options:

- 1
- 1
- 2
- 2

Reload button

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MTH632:Grand Quiz Quiz Start Time: 01:42 PM

Question # 10 of 30 (Start time: 01:47:23 PM, 02 January 2021)

Mapping is _____ way of visualizing a given function.

Select the correct option

- ☐ an analytical
- ☒ a geometrical
- ☐ a numerical
- ☐ none of the above

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MTH632:Grand Quiz Quiz Start Time: 01:42 PM

Question # 10 of 30 (Start time: 01:47:23 PM, 02 January 2021)

Mapping is _____ way of visualizing a given function.

Select the correct option

- ☐ an analytical
- ☒ a geometrical
- ☐ a numerical
- ☐ none of the above

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

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MTH632 Grand Quiz

Quiz Start Time: 01:42 PM

Question # 11 of 30 (Start time: 01:48:57 PM, 02 January 2021)

The complex number

$$(4i)^4$$

have _____ number of roots.

Select the correct option

☐ 1

☐ 2

☐ 3

☒ 4

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Question # 12 of 30 (Start time: 01:49:33 PM, 02 January 2021)

The three cube roots of the number $-8i$ are

Select the correct option [Reload](#)

<input type="radio"/>	$2 \exp \left[i \left(-\frac{\pi}{6} + \frac{2k\pi}{3} \right) \right], k = 0, 1, 2$
<input type="radio"/>	$2 \exp \left[i \left(-\frac{\pi}{6} + \frac{2k\pi}{3} \right) \right], k = 0, 1$

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

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MTH632: Grand Quiz Quiz Start Time: 01:42 PM

Question # 13 of 30 (Start time: 01:50:20 PM, 02 January 2021)

A complex power function is a function of the form _____, where α is a complex constant.

Select the correct option

☒ $f(z) = z^\alpha$

☐ $f(z) = \alpha^z$

☐ $f(\alpha) = z^\alpha$

☐ $f(\alpha) = \alpha^z$

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mth632 grand quiz - Microsoft Word (Product Activation Failed)

MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 14 of 30 (Start time: 01:50:45 PM, 02 January 2021)

$|z_1 + z_2| =$

Select the correct option

☐ $> |z_1| + |z_2|$

☒ $\leq |z_1| + |z_2|$

☐ $\leq z_1 + z_2$

☐ $> z_1 + z_2$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 14 of 30 (Start time: 01:50:45 PM, 02 January 2021)

$|z_1 + z_2| =$

Select the correct option

☐ $> |z_1| + |z_2|$

☒ $\leq |z_1| + |z_2|$

☐ $\leq z_1 + z_2$

☐ $> z_1 + z_2$

Reload

Click to Save Answer & Move to

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Microsoft Word (Product Activation Failed) window showing a quiz titled "MTH632: Grand Quiz". The quiz start time is 01:42 PM. The question is "Question # 15 of 30 (Start time: 01:51:17 PM, 02 January 2021)". The question text is "The Jordan Curve Theorem guarantees that a simple closed curve must enclose a region." The options are:

- ☐ Euler curve
- ☒ Jordan curve
- ☐ Simple curve
- ☐ Rotation curve

A button labeled "Click to Save Answer & Move to" is visible at the bottom right of the question area.

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 16 of 30 (Start time: 01:51:29 PM, 02 January 2021)

Let $z = 3$, then $\arg(z) =$ _____.

Select the correct option Reload

<input checked="" type="radio"/>	0 degree
<input type="radio"/>	60 degree
<input type="radio"/>	90 degree
<input type="radio"/>	270 degree

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 17 of 30 (Start time: 01:51:40 PM, 02 January 2021)

The complex number $1-i$ has exponential form

Select the correct option Reload

<input type="radio"/>	$\sqrt{2} \left[i \left(-\frac{3\pi}{2} \right) \right]$
<input checked="" type="radio"/>	$\sqrt{2} \left[i \left(-\frac{3\pi}{4} \right) \right]$

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

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Microsoft Word (Product Activation Failed) window showing a document titled "mth632 grand quiz". The document content includes a banner for "Level up with level academy", the title "MTH632 Grand Quiz", and a question about the fifth roots of -1. The question is: "The fifth roots of -1 are exactly". Below the question, there are four radio button options for selecting the correct answer. The options are: $\text{cis}(n/5)$, $\text{cis}(3n/5)$, $\text{cis}((-3n)/5)$ and $\text{cis}((-n)/5)$; $\text{cis}(\pm n/5)$, $\text{cis}(\pm 3n/5)$, and -1; $\text{cis}(\pm n/10)$, $\text{cis}(\pm 3n/10)$, and -1; and none. A button at the bottom right says "Click to Save Answer & Move to". The status bar at the bottom indicates "Page: 82 of 157", "Words: 805", and "English (U.K.)". The system clock shows "05:52 PM 02/01/2021".

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MTH632 Grand Quiz

Quiz Start Time: 01:42 PM

Question # 18 of 30 (Start time: 01:52:32 PM, 02 January 2021)

The fifth roots of -1 are exactly

Select the correct option

☐ $\text{cis}(n/5)$, $\text{cis}(3n/5)$, $\text{cis}((-3n)/5)$ and $\text{cis}((-n)/5)$

☐ $\text{cis}(\pm n/5)$, $\text{cis}(\pm 3n/5)$, and -1

☐ $\text{cis}(\pm n/10)$, $\text{cis}(\pm 3n/10)$, and -1

☐ none

Click to Save Answer & Move to

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MTH632: Grand Quiz Quiz Start Time: 01:42 PM

Question # 19 of 30 (Start time: 01:53:54 PM, 02 January 2021)

Consider $\lim_{z \rightarrow z_0} f(z) = A$ and $\lim_{z \rightarrow z_0} g(z) = B$. Then $\lim_{z \rightarrow z_0} \frac{f(z)}{g(z)} =$ _____.

Select the correct option

☐ $\frac{A}{B}, B \neq 0$

☐ $A + B$

☐ $A - B$

☐ $A \cdot B$

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Question # 20 of 30 (Start time: 01:54:14 PM, 02 January 2021)

If Cauchy – Riemann equations are satisfied at a point z_0 then function _____ differentiable at z_0 .

Select the correct option [Reload](#)

☒ (a) may be

☐ (b) may not be

☐ (c) Both (a) and (b).

☐ (d) None of these.

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

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Question # 20 of 30 (Start time: 01:54:14 PM, 02 January 2021)

If Cauchy – Riemann equations are satisfied at a point z_0 then function _____ differentiable at z_0 .

Select the correct option

(a) may be

(b) may not be

Select the correct option

(a) may be

(b) may not be

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 20 of 30 (Start time: 01:54:14 PM, 02 January 2021)

If Cauchy – Riemann equations are satisfied at a point z_0 then function_____ differentiable at z_0 .

Select the correct option

☐ (a) may be

☐ (b) may not be

☒ (c) Both (a) and (b).

☐ (d) None of these.

Reload

Click to Save Answer & Move to

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MTH632:Grand Quiz Quiz Start Time: 01:42 PM

Question # 21 of 30 (Start time: 01:56:04 PM, 02 January 2021)

If two complex - valued functions f and g satisfy conditions $g(f(z)) = z$ and $f(g(w)) = w$, then these functions are_____of each other.

Select the correct option Reload

<input type="radio"/>	conjugates
<input checked="" type="radio"/>	inverses
<input type="radio"/>	reciprocals
<input type="radio"/>	none of the above

Click to Save Answer & Move to

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MTH632:Grand Quiz Quiz Start Time: 01:42 PM

Question # 22 of 30 (Start time: 01:56:37 PM, 02 January 2021)

If $-8i = 8 \exp[i(-\pi/2 + 2kn)]$, then the root of $(-8i)^{1/3}$

for $k=1$ is _____

Select the correct option [Reload](#)

<input type="radio"/>	3i
<input type="radio"/>	-3i
<input checked="" type="radio"/>	2i
<input type="radio"/>	-2i

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Click to Save Answers & Move To



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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 23 of 30 (Start time: 01:56:52 PM, 02 January 2021)

Which of the following does NOT describe the modulus of the complex number $a + bi$?

Select the correct option

☐ The length of the directed line segment from the origin of the complex plane to the point (a, b) .

☐ The magnitude of the vector representing the complex number $a + bi$.

☐ $\sqrt{a^2 + b^2}$

☒ The difference between the numbers a and b .

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Question # 24 of 30 (Start time: 01:57:29 PM, 02 January 2021)

By definition, $\lim_{z \rightarrow z_0} f(z) = L$ means that for every $\epsilon > 0$ there exists a $\delta > 0$ such that _____.

Select the correct option

☒ $|f(z) - L| < \epsilon$ whenever $0 < |z - z_0| < \delta$

☐ $|f(z) - z_0| < \epsilon$ whenever $0 < |z - L| < \delta$

☐ $|f(z) - L| < \delta$ whenever $0 < |z - z_0| < \epsilon$

☐ $|f(z) - z_0| < \delta$ whenever $0 < |z - L| < \epsilon$

Click to Save Answer & Move to

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MTB332 Grand Quiz Quiz Start Time: 01:42 PM

Question # 25 of 30 (Start time: 01:57:54 PM, 02 January 2021)

In the complex valued function $z = x - iy$, the value of $U_x =$ _____.

Select the correct option

☐ -1

☐ 0

☒ 1

☐ 2

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 26 of 30 (Start time: 01:58:05 PM, 02 January 2021)

The Cartesian form of the complex number $6\text{cis}(n)$ is

Select the correct option

☒ -6

☐ 6

☐ $6n$

☐ $-6n$

Click to Save Answer & Move to

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MTH632:Grand Quiz Quiz Start Time: 01:42 PM

Question # 27 of 30 (Start time: 01:58:19 PM, 02 January 2021)

In the complex valued function $z = x - iy$, the value of $V_x =$ _____.

Select the correct option Reload

<input type="radio"/>	-1
<input checked="" type="radio"/>	0
<input type="radio"/>	1
<input type="radio"/>	2

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 28 of 30 (Start time: 01:58:36 PM, 02 January 2021)

$If f(z) = z^3, g(z) = \frac{1}{z}, \text{ then } g(f(i)) =$

Select the correct option Reload

<input checked="" type="radio"/>	i
<input type="radio"/>	i^2
<input type="radio"/>	i^3
<input type="radio"/>	-1

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 01:42 PM

Question # 29 of 30 (Start time: 01:59:14 PM, 02 January 2021)

A complex-valued linear transformation could be a composition of _____.

Select the correct option

- ☐ translation
- ☐ rotation
- ☐ magnification
- ☒ all of the above

Click to Save Answer & Move to

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MTH632: Grand Quiz

Quiz Start Time: 01:42 PM

Question # 30 of 30 (Start time: 01:59:24 PM, 02 January 2021)

A point at which a function ceases to be analytic is called a _____ point.

Select the correct option

☒ regular

☐ non-regular

☐ singular

☐ non-singular

Click to Save Answers & Move to Next

Windows taskbar shows: Page: 96 of 157, Words: 805, English (U.K.), 230%, 05:55 PM, 02/01/2021.



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MTH632-Grand Quiz Quiz Start Time: 02:01 PM

Question # 1 of 30 (Start time: 02:01:43 PM, 02 January 2021)

The polar form of a complex number z is

Select the correct option

☐ $r(\tan \theta + i \cot \theta)$

☐ $r(\sec \theta + i \cos \theta)$

☐ $r(\sin \theta + i \cos \theta)$

☒ $r(\cos \theta + i \sin \theta)$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 2 of 30 (Start time: 02:02:15 PM, 02 January 2021)

Domain of the function

$$f(z) = \frac{1}{z^2 - 1}$$

Select the correct option Reload

<input checked="" type="radio"/>	$z \neq \pm 1$
<input type="radio"/>	$z \neq \pm 2$
<input type="radio"/>	$z \neq \pm i$
<input type="radio"/>	$z \neq 0$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 3 of 30 (Start time: 02:02:33 PM, 02 January 2021)

If $f(z) = \frac{z^4 + 1}{(z^2 + 1)(z - 3)}$, then $f(z)$ is not analytic at $z =$

Select the correct option Reload

<input type="radio"/>	1
<input type="radio"/>	-1
<input checked="" type="radio"/>	i
<input type="radio"/>	2

Click to Save Answer & Move to

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Any polynomial $p(z) = a_0 + a_1z + a_2z^2 + \dots + a_nz^n$ ($a_n \neq 0$), of degree n ($n \geq 1$) has least one zero, i.e. there exists at least z_0 , such that $P(z_0) = 0$.

Select the correct option

☐ n points

☐ 10 points

☒ one point

☐ no points

Click to Save Answer & Move to

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MTH632:Grand Quiz

Quiz Start Time: 02:01 PM

Question # 5 of 30 (Start time: 02:03:06 PM, 02 January 2021)

A complex-valued linear transformation is always _____ on the entire complex plane.

Select the correct option

- ☐ only one-to-one
- ☐ only onto
- ☒ one-to-one and onto
- ☐ none of the above

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 6 of 30 (Start time: 02:03:37 PM, 02 January 2021)

The complex number $(4i)^4$

have _____ number of roots.

Select the correct option

☐ 1

☐ 2

☐ 3

☐ 4

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MTH632: Grand Quiz Quiz Start Time: 02:01 PM

Question # 7 of 30 (Start time: 02:03:45 PM, 02 January 2021)

If $f(z) = x + ay + i(bx + cy)$ is analytic, then a, b, c equals to _____

Select the correct option

- ☐ $a = 1$ and $c = -b$
- ☐ $a = b = c = 1$
- ☐ $b = 1$ and $a = -c$
- ☐ $c = 1$ and $a = -b$

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Question # 8 of 30 (Start time: 02:04:48 PM, 02 January 2021)

If two complex - valued functions f and g satisfy conditions $g(f(z)) = z$ and $f(g(w)) = w$, then these functions are _____ of each other.

Select the correct option

☐ conjugates

☒ inverses

☐ reciprocals

☐ none of the above

Reload

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 9 of 30 (Start time: 02:05:01 PM, 02 January 2021)

The three cube roots of the number $-8i$ are

Select the correct option Reload

<input checked="" type="radio"/>	$2 \exp \left[i \left(-\frac{\pi}{6} + \frac{2k\pi}{3} \right) \right], k = 0, 1, 2$
<input type="radio"/>	$2 \exp \left[i \left(-\frac{\pi}{6} + \frac{2k\pi}{3} \right) \right], k = 0, 1$

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MTH632 Grand Quiz

Quiz Start Time: 02:01 PM

Question # 10 of 30 (Start time: 02:05:11 PM, 02 January 2021)

If $z = a + ib$ is a complex number, then

Select the correct option

☐ $\text{Re}(z) = \frac{z + \bar{z}}{2i}$

☒ $\text{Re}(z) = \frac{z + \bar{z}}{2}$

☐ $\text{Re}(z) = z + \bar{z}$

☐ None of these

Click to Save Answer & Move to

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MTH632 Grand Quiz

Quiz Start Time: 02:01 PM

Question # 11 of 30 (Start time: 02:06:30 PM, 02 January 2021)

The sequence $z_n = \frac{i}{n^2}$ ($n = 1, 2, 3, \dots$) for $n \rightarrow \infty$ converges to _____.

Select the correct option

☒ 0

☐ 1/2

☐ 1

☐ infinity

Reload

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05:57 PM 02/01/2021

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quiz.vu.edu.pk/QuizQuestion.aspx?ver=af9e11bc-39e0-4466-b9d7-9f3a8997ca2c

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Levels up with level academy

MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 12 of 30 (Start time: 02:07:18 PM, 02 January 2021)

The derivative of f at z_0 i.e. $f'(z_0) = \lim_{z \rightarrow z_0} \frac{f(z) - f(z_0)}{z - z_0}$ provided the limit exists. The function f must be defined in a neighbourhood of z_0 .

Select the correct option

☐ z

☒ z_0

Click to Save Answer & Move to

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Question # 13 of 30 (Start time: 02:07 28 PM, 02 January 2021)

Domain of the function

$$f(z) = \frac{1}{z^2}$$

Select the correct option

☐ $z \neq \pm 1$

☐ $z \neq \pm 2$

☐ $z \neq \pm i$

☒ $z \neq 0$

Click to Save Answer & Move to

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Microsoft Word (Product Activation Failed) window showing a quiz interface.

MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 14 of 30 (Start time: 02:07:44 PM, 02 January 2021)

Conjugate of complex number $-7-4i$ is _____.

Select the correct option

- ☐ $-7-4i$
- ☐ $7-4i$
- ☒ $-7+4i$
- ☐ $7+4i$

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

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 16 of 30 (Start time: 02:08:08 PM, 02 January 2021)

A closed disc with center z_0 and radius ϵ is defined by

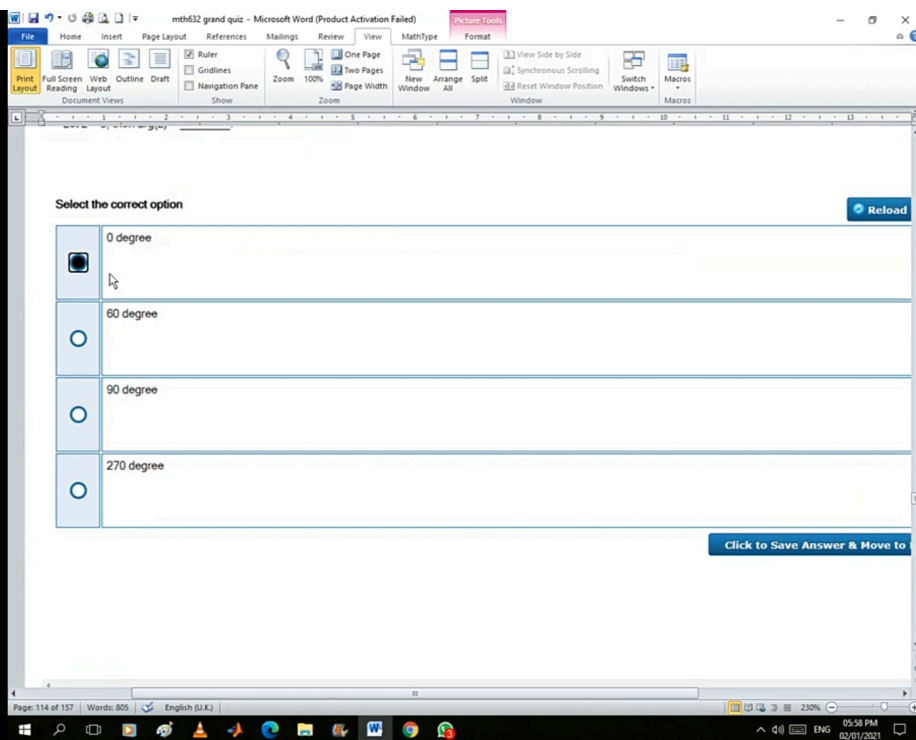
Select the correct option Reload

<input type="radio"/>	$ z_1 - z_0 \geq \epsilon$
<input checked="" type="radio"/>	$ z_1 - z_0 \leq \epsilon$

Click to Save Answer & Move to

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Question # 17 of 30 (Start time: 02:08:22 PM, 02 January 2021)

Let $z = 3$, then $\arg(z)$ _____

Select the correct option Reload

<input checked="" type="radio"/>	0 degree
<input type="radio"/>	60 degree
<input type="radio"/>	90 degree
<input type="radio"/>	270 degree

Click to Save Answer & Move to

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Microsoft Word (Product Activation Failed) window showing a quiz interface. The interface includes a header with "Levels up with level academy" and "MTH632 Grand Quiz". The question is: "Question # 18 of 30 (Start time: 02:08:32 PM, 02 January 2021)". The text of the question is: "A point at which a function ceases to be analytic is called a _____ point." Below the question, there are four radio button options: "regular", "non-regular", "singular", and "non-singular". The "singular" option is selected. A button at the bottom right says "Click to Save Answer & Move to". The Windows taskbar at the bottom shows the time as 05:58 PM on 02/01/2021.

Levels up with level academy

MTH632 Grand Quiz

Quiz Start Time: 02:01 PM

Question # 18 of 30 (Start time: 02:08:32 PM, 02 January 2021)

A point at which a function ceases to be analytic is called a _____ point.

Select the correct option

- ☐ regular
- ☐ non-regular
- ☒ singular
- ☐ non-singular

Click to Save Answer & Move to

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Question # 19 of 30 (Start time: 02:08:48 PM, 02 January 2021)

In the complex valued function $z = x - iy$, the value of $U_z =$ _____.

Select the correct option

☐ -1

☐ 0

☒ 1

☐ 2

[Click to Save Answer & Move To](#)

[Reload](#)

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Question # 20 of 30 (Start time: 02:09:06 PM, 02 January 2021)

The polar form of the complex function $f(z) = z^2$ is

Select the correct option Reload

<input type="radio"/>	$r^2(\cos\theta + i\sin\theta)$
<input checked="" type="radio"/>	$r^2(\cos 2\theta + i\sin 2\theta)$

Click to Save Answer & Move to

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 21 of 30 (Start time: 02:09:17 PM, 02 January 2021)

The sequence $z_n = -3 + i \frac{1}{n}$ ($n = 1, 2, 3, \dots$) for $n \rightarrow \infty$ converges to _____.

Select the correct option

☐ i

☐ -1

☐ 1

☒ -3

Click to Save Answer & Move to

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Microsoft Word (Product Activation Failed) window showing a document titled "mth632 grand quiz". The document content is a quiz page from quiz.vu.edu.pk. The quiz is titled "MTH632 Grand Quiz" and has a start time of 02:01 PM. The question is "Question # 22 of 30 (Start time: 02:09:40 PM, 02 January 2021)". The question text is "The complex number $z = 2+i0$ will be located _____". The options are:

- ☒ at 2 on the real axis.
- ☐ at -2 on the imaginary axis
- ☐ at -2 on the real axis
- ☐ at 2 on the imaginary axis

The bottom of the image shows a Windows taskbar with the time 05:59 PM and date 02/01/2021. A small logo for "LEVELS UP WITH LEVELS ACADEMY ARIFWALA" is visible in the bottom right corner.

Level up with level academy

MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 23 of 30 (Start time: 02:09:52 PM, 02 January 2021)

$If f(z) = z^3, g(z) = z + 2, \text{ then } g(f(5)) =$

Select the correct option Reload

<input type="radio"/>	7
<input type="radio"/>	125
<input checked="" type="radio"/>	127
<input type="radio"/>	130

Click to Save Answer & Move To

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MTH632-Grand Quiz Quiz Start Time: 02:01 PM

Question # 24 of 30 (Start time: 02:10:06 PM, 02 January 2021)

Consider $\lim_{z \rightarrow 1-0} f(z) = A$ and $\lim_{z \rightarrow 1-0} g(z) = B$. Then $\lim_{z \rightarrow 1-0} (f(z)g(z)) =$ _____.

Select the correct option Reload

<input type="radio"/>	$A + B$
<input type="radio"/>	$A - B$
<input checked="" type="radio"/>	$A \cdot B$
<input type="radio"/>	$A \pm B$

Click to Save Answer & Move To

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LEVELS UP WITH LEVEL ACADEMY ARIFWALA

Microsoft Word (Product Activation Failed) window is open in the background.

Browser window (quiz.vu.edu.pk) displays:

Levels up with level academy

MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 25 of 30 (Start time: 02:10:20 PM, 02 January 2021)

The polar form of the complex function $f(z) = z^3$ is

Select the correct option Reload

<input type="radio"/>	$r^2(\cos 3\theta + i \sin 3\theta)$
<input checked="" type="radio"/>	$r^3(\cos 3\theta + i \sin 3\theta)$

Click to Save Answer & Move to

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Question # 26 of 30 (Start time: 02:10:31 PM, 02 January 2021)

A set S is said to be _____ set if for every pair of points $z_1, z_2 \in S$ there is a curve C joining them which is entirely contained in S .

Select the correct option

☐ bounded

☐ unbounded

☐ unconnected

☒ connected

Click to Save Answer & Move to

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CS 101 grand quiz s
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Solved Grand Quiz
<https://youtu.be/XfH>

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Microsoft Word (Product Activation Failed) interface showing a document titled "mth632 grand quiz". The document content includes a banner for "Levels up with level academy" and a quiz titled "MTH632 Grand Quiz" with a start time of 02:01 PM. The quiz question is: "Question # 27 of 30 (Start time: 02:10:44 PM, 02 January 2021) The Cartesian form of the complex number $6\text{cis}(n)$ is". The options are: -6, 6, $6n$, and $-6n$. The correct option is -6.

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 27 of 30 (Start time: 02:10:44 PM, 02 January 2021)

The Cartesian form of the complex number $6\text{cis}(n)$ is

Select the correct option

☒ -6

☐ 6

☐ $6n$

☐ $-6n$

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MTH632 Grand Quiz Quiz Start Time: 02:01 PM

Question # 28 of 30 (Start time: 02:11:00 PM, 02 January 2021)

Let $z = 7i$, then $r =$ _____

Select the correct option

1 ☐

2 ☐

4 ☐

7 ☒

Click to Save Answer & Move to

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MTH632-Grand Quiz Quiz Start Time: 02:01 PM

Question # 29 of 30 (Start time: 02:11:14 PM, 02 January 2021)

The polar form of the complex function $f(z) = \frac{1}{z}$ is

Select the correct option Reload

<input type="radio"/>	$r(\cos \theta + i \sin \theta)$
<input type="radio"/>	$r(\cos \theta - i \sin \theta)$
<input checked="" type="radio"/>	$\frac{1}{r}(\cos \theta - i \sin \theta)$
<input type="radio"/>	$\frac{1}{r}(\cos \theta + i \sin \theta)$

Click to Save Answer & Move to

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STA641 grand assignment 2021 part 2
(complete working Must watch) Quiz Start Time: 02:01 PM

MTH632 Grand Quiz

Question # 30 of 30 (Start time: 02:12:13 PM, 02 January 2021)

Mapping is _____ way of visualizing a given function.

Select the correct option

- ☐ an analytical
- ☒ a geometrical
- ☐ a numerical
- ☐ none of the above

Click to Save Answer & Move to

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