MTH381
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1. Fourier series uses which domain representation of signals?

   Time domain representation

--->> Frequency domain representation

   Both A and B

   Neither depends on the situation of A and B

2. The singularity of $f(z)=\frac{z+3}{(z-1)(z-2)}$ are

   $z=1,3$

   $z=1,0$

--->> $z=1,2$

   $z=2,3$

3. Evaluate the residue of $f(z)=\frac{1+e^z}{\sin z+z \cos z}$ at the pole where $z=0$.

   0

--->> 1

   -1

   ± 1

4. What is an integral curve along a simple closed curve called?

   Multiple Integral

   Jordan Integral

--->> Countour Integral

   Connected Integral

5. Find the pole of this function $f(z)=\frac{z-2}{z^2}\sin \frac{1}{z-1}$

--->> 2

1

(-1)

6. Find the Jacobian of p, q, r with respect to x, y, z given $(p=x+y+z, q=y+z)$ and $(r=z)$

(0)

2

(-1)

--->> 1

7. Find the $\(_{z\rightarrow2+3i}\lim[3x+i(2x-4y)]\)$

$(16+6i)$

$(16-6i)$

--->> $(6+16i)$

$(6-16i)$

8. What is the Laplace transform of the function $(f(t)=t)$ where $(t\geq 0)$.

(s)

$(\frac{1}{s})$

--->> $(\frac{1}{s^2})$

$(\frac{1}{s^3})$

9. The Stoke¢â¬â„¢s theorem uses which of the following operation?

Divergence

Gradient

--->> Curl

Laplacian

10. Given that $(u=\frac{yz}{x})$, $(v=\frac{xz}{y})$ and $(w=\frac{xy}{z})$, then what is the value of $(\frac{\partial(u, v, w)}{\partial(x, y, z)})$?

2

(-2)

--->> 4