## 20 Lecture - MTH101

## Important Mcqs

What is the derivative of $\ln (x)$ ?
a) $x$
b) $1 / x$
c) $\ln (x)$
d) 0

Solution: b) $1 / x$

What is the derivative of $e^{\wedge} x$ ?
a) $x$
b) $e^{\wedge} x$
c) $\ln (x)$
d) 0

Solution: b) $e^{\wedge} \mathrm{x}$

What is the derivative of $\ln (u)$, where $u$ is a function of $x$ ?
a) $1 / u$
b) $\mathrm{u} / \ln (\mathrm{u})$
c) $u^{\prime} / \ln (u)$
d) $\ln (u) / u^{\prime}$

Solution: c) $u^{\prime} / u$

What is the derivative of $e^{\wedge} u$, where $u$ is a function of $x$ ?
a) $e^{\wedge} u$
b) $u^{\prime} e^{\wedge} u$
c) $e^{\wedge}(u / x)$
d) $e^{\wedge}\left(u^{\wedge} 2\right)$

Solution: b) $u^{\prime} \mathrm{e}^{\wedge} \mathrm{u}$

What is the derivative of $\ln (\mathbf{a x})$, where a is a constant?
a) $1 / x \ln (a)$
b) $a / x$
c) $x \ln (a)$
d) 0

Solution: a) $1 / x \ln (a)$

What is the derivative of $\mathrm{e}^{\wedge}(a x)$, where a is a constant?
a) $a e^{\wedge} x$
b) $\mathrm{e}^{\wedge}(\mathrm{ax})$
c) $x^{\wedge} a$
d) $a^{\wedge} x$

Solution: a) $\mathrm{ae}^{\wedge}(\mathrm{ax})$

What is the derivative of $\ln \left(x^{\wedge} n\right)$, where $n$ is a constant?
a) $n \ln (x)$
b) $n / x$
c) $x / n$
d) 0

Solution: b) $n / x$

What is the derivative of $\mathrm{e}^{\wedge}(\mathrm{n} x)$, where n is a constant?
a) $e^{\wedge}(n x)$
b) $n^{\wedge} x$
c) $n e^{\wedge}(n x)$
d) $e^{\wedge}\left(n^{\wedge} x\right)$

Solution: c) $\mathrm{ne}^{\wedge}(\mathrm{nx})$

What is the derivative of $\ln \left(\mathrm{e}^{\wedge} \mathrm{x}\right)$ ?
a) $x$
b) 1
c) $e^{\wedge} x$
d) $\ln (x)$

Solution: b) 1

What is the derivative of $\mathrm{e}^{\wedge}(\ln (\mathrm{x}))$ ?
a) $x$
b) $e^{\wedge} x$
c) $\ln (x)$
d) 1

Solution: a) x

