Code For Presentation using Beamer in LATEX

\documentclass{beamer}

\usepackage[utf8]{inputenc}

\usepackage{fancybox}

\usepackage{graphicx}

\title{Mata Sundri College for Women, \\ University of Delhi}

\author[Divyanshi Raghav]{\textbf{Divyanshi Raghav} \\ \bigskip College R.No.- MAT/20/133 \\ \bigskip University R.No.- 20044563053}

\institute[DU]{\includegraphics[scale=0.1]{dulogo.png}}

\date{}

\usetheme{Berlin}

\begin{document}

\begin{frame}

\titlepage

\end{frame}

\begin{frame}

\includegraphics[scale=0.9]{as.jpg}

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\begin{frame}

\begin{block}

{Page No.- 69 Questions}

\end{block}

\end{frame}

\begin{frame}{Q - 1....}

\begin{itemize}

\item Let $x=(x\_1,\ldots,x\_n)$ ,where the $x\_i$ are nonnegative real numbers. Set \\

\begin{center}

$$M\_r(x)=\left(\frac{x^r\_1+x^r\_2+\cdots+x^r\_n}{n} \right)^{1/r}$$ , $r$ \in $ \mathbf{R}$ \setminus \{0 \}, \\

\end{center}

and \\

\begin{center}

$M\_0(x)=(x\_1x\_2 \ldots x\_n)^{1/n}$.\\

\end{center}

We call $M\_r(x)$ the $r$ \emph{th} power mean of $x$.\\

Claim:\\

\begin{center}

$$\lim\_{r \rightarrow 0} M\_r(x)= M\_0(x)$$.

\end{center}

\end{itemize}

\end{frame}

\begin{frame}{Q - 2.....}

\begin{itemize}

\item Define\\

\begin{center}

$V\_n$ =

\begin{array}{ccccc}

1 & 1 & 1 & \ldots & 1 \\

x\_1 & x\_2 & x\_3 & \ldots & \x\_n \\

x\_1^2 & x\_2^2 & x\_3^2 & \ldots & \x\_n^2 \\

\vdots & \vdots & \vdots & \ddots & \vdots \\

x\_1^{n-1} & x\_2^{n-1} & x\_3^{n-1} & \ldots & x\_n^{n-1}

\end{array}

\bigskip

\end{center}

We call $V\_n$ the \emph{Vandermonde matrix} of order $n$.\\

Claim: \\

\[

\det V\_n=\prod\_{1 \leq i < j \leq n}(x\_j-x\_i)

\]

\end{itemize}

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\begin{block}

{ QUESTION NO. 4}

\end{block}

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\begin{frame}{Q - 4.....}

\begin{itemize}

\item \fbox{3^3+4^3+5^3=6^3} \bigskip

\item \fbox{\sqrt{100}=10} \bigskip

\item \fbox{ $$ (a+b)^3= a^3+3a^2b+3ab^2+b^3 $$}

\end{itemize}

\end{frame}

\begin{frame}{Q - 4.....}

\begin{itemize}

\item \fbox{$ \sum\_{k=1}^n = \frac{n(n+1)}{2} $} \bigskip

\item \fbox{$\frac{\pi}{4} = \frac{1}{1}- \frac{1}{3}+ \frac{1}{5}- \frac{1}{7}+ \frac{1}{9}- \frac{1}{11}+ \cdots $} \bigskip

\item \fbox{$ \cos \theta = \sin(90^{\circ}- \theta)$}

\end{itemize}

\end{frame}

\begin{frame}{Q - 4.....}

\begin{itemize}

\item \fbox{$ e^{i \theta} = \cos \theta+i \sin \theta$}\bigskip

\item \fbox{$$ \lim\_{\theta \rightarrow 0} \frac{sin \theta}{\theta} = 1 $$} \bigskip

\item \fbox{$$ \lim\_{x \rightarrow \infty} \frac{\pi (x

)}{x / log x} = 1 $$} \bigskip

\end{itemize}

\end{frame}

\begin{frame}{Q - 4.....}

\begin{itemize}

\item \fbox{$$ \int\_{-\infty} ^ \infty e^{-x^2}dx=\sqrt{\pi} $$}

\end{itemize}

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\begin{block}

{QUESTION NO. 5}

\end{block}

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\begin{frame}{Q - 5.....}

\begin{block}

{Positive numbers $a$,$b$, and $c$ are the side lengths of a triangle if and only if $a+b>c,b+c>a$ and $c+a>b$.}\bigskip

\end{block}

\begin{block}

{The area of a triangle with side lengths $a,b,c$ is given by \emph{Heron's formula}:

\begin{center}

$A=\sqrt{s(s-a)(s-b)(s-c)}$,

\end{center}

where $s$ is the semiperimeter $(a+b+c)$/2.

}

\end{block}

\end{frame}

\begin{frame}{Q - 5.....}

\begin{block}

{

The volume of rectangular tetrahedron of edge length 1 is \sqrt{2}/12 \bigskip

}.

\end{block}

\begin{block}

{

The quadratic equation $ax^2+bx+c=0$ has roots

\begin{center}

$r\_1,r\_2 = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$

\end{center}

}

\end{block}

\end{frame}

\begin{frame}{Q - 5.....}

\begin{block}

{

The derivative of the function $f$, denoted f', is defined by

\begin{center}

$$f^'(x)=\lim\_{h \rightarrow 0} \frac{f(x+h)-f(x)}{h}$$

\end{center}

\bigskip

}.

\end{block}

\begin{block}

{

A real-valued function $f$ is convex on an interval $I$ if

\begin{center}

$f(\lambda x+(1- \lambda)y) \leq \lambda f(x)+(1- \lambda)f(y)$,

\end{center}

}

for all $x,y$ \in $I$ and 0 \leq \lambda \leq 1.

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\begin{frame}{Q - 5.....}

\begin{block}

{

The general solution to the differential equation

\begin{center}

$y^{''}-3y^'+3y=0$

\end{center}

is

\begin{center}

$y=C\_1e^x+C\_2e^{2x}$.

\end{center}

\bigskip

}.

\end{block}

\begin{block}

{

The \emph{Fermat number}$F\_n$ is defined as

\begin{center}

$F\_n=2^{2^n}, n \geq 0$.

\end{center}

}

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\begin{block}

{QUESTION NO. 6}

\end{block}

\end{frame}

\begin{frame}{Q - 6.....}

\begin{itemize}

\item \begin{center}\fbox{$\frac{d}{dx}\left(\frac{x}{x+1}\right)=\frac{1}{(x+1)^2}$} \end{center} \bigskip

\item \begin{center}

\fbox{$$\lim\_{n \rightarrow \infty}\left(1+\frac{1}{n}\right)^n=e $$} \end{center}

\bigskip

\item \begin{center} \fbox{\left|\begin{array}{cc}

a & b \\

c & d

\end{array}

\right|

=ad-bc

} \end{center}

\end{itemiize}

\end{frame}

\begin{frame}{Q - 6.....}

\begin{itemize}

\item \fbox{$R\_\theta=\left[\begin{array}{cc}

\cos \theta & -\sin \theta \\

\sin \theta & \cos \theta

\end{array}\right]$} \bigskip

\item \fbox{$$\left|\begin{array}{ccc}

\textbf{i} & \textbf{j} & \textbf{k} \\

a\_1 & a\_2 & a\_3 \\

b\_1 & b\_2 & b\_3

\end{array}\right|=\left|\begin{array}{cc}

a\_1 & a\_3 \\

b\_1 & b\_3

\end{array}\right| \textbf{i}-\left|\begin{array}{cc}

a\_1 & a\_3 \\

b\_1 & b\_3

\end{array}\right| \textbf{j}+\left| \begin{array}{cc}

a\_1 & a\_2 \\

b\_1 & b\_2

\end{array}\right| \textbf{k}$}

\end{itemize}

\end{frame}

\begin{frame}{Q - 6....}

\begin{itemize}

\item \fbox{$\left[\begin{array}{cc}

a\_{11} & a\_{12} \\

a\_{21} & a\_{22}

\end{array}\right]\left[\begin{array}{cc}

b\_{11} & b\_{12} \\

b\_{21} & b\_{22}

\end{array}\right]=\left[\begin{array}{cc}

a\_{11}b\_{11}+a\_{12}b\_{21} & a\_{11}b\_{12}+a\_{12}b\_{22}\\

a\_{21}b\_{11}+a\_{22}b\_{21} & a\_{21}b\_{12}+a\_{22}b\_{22}

\end{array}\right]$}\bigskip

\item \fbox{$f(x)=\left\{\begin{array}{ccc}

-x^2 , & x<0 \\

x^2 , & 0 \leq x \leq 2\\

4 , & x>2

\end{array}$}

\end{itemize}

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{QUESTION NO. 7}

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\begin{frame}{Q - 7.....}

\begin{block}

{

\[1+2=3\]\\

\[4+5+6=7+8\]\\

\[9+10+11+12=13+14+15\]\\

\[16+17+18+19+20=21+23+24\]\\

\[25+26+27+28+29+30=31+32+33+34+35\]\\

}

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\begin{frame}{Q - 7.....}

\begin{block}

{$

\begin{array}{lcl}

(a+b)^2 & = & (a+b)(a-b)\\[0.2cm]

& = & (a+b)a+(a+b)b\\[0.2cm]

& = & a(a+b)+b(a+b)\\[0.2cm]

& = & a^2+ab+ba+b^2\\[0.2cm]

& = & a^2+ab+ab+b^2\\[0.2cm]

& = & a^2+2ab+b^2

\end{array}

$}

\end{block}

\end{frame}

\begin{frame}{Q - 7....}

\begin{block}

{

\begin{array}{lcl}

\tan(\alpha +\beta +\gamma) & = & \frac{\tan(\alpha +\beta)+\tan \gamma}{1-\tan(\alpha +\beta) \tan \gamma} \\[0.4cm]

& = & \frac{\frac{\tan \alpha +\tan \beta}{1-\tan \alpha \tan \beta}+\tan \gamma}{1-\left(\frac{\tan(\alpha +\beta)}{1-\tan(\alpha +\beta)}\right)\tan \gamma} \\[0.4cm]

& = & \frac{\tan \alpha + \tan \beta +(1-\tan \alpha \tan \beta)\tan \gamma}{1-\tan \alpha \tan \beta -(\tan \alpha+\tan \beta)\tan \gamma}\\[0.4cm]

& = & \frac{\tan \alpha +\tan \beta +\tan \gamma -\tan \alpha \tan \beta \tan \gamma}{1-\tan \alpha \tan \beta -\tan \alpha \tan \gamma -\tan \beta \tan \gamma}

\end{array}

}

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\begin{block}

{\begin{array}{lcl}

\prod\_p(1-\frac{1}{p^2}) & = & \prod\_p \frac{1}{1+\frac{1}{p^2}+\frac{1}{p^4}+\ldots}\\[0.3cm]

& = &(\prod\_p(1+\frac{1}{p^2}+\frac{1}{p^4}+\cdots))^{-1}

\\[0.3cm]

& = &(1+\frac{1}{2^2}+\frac{1}{3^2}+\frac{1}{4^2}+\cdots)^{-1}\\[0.3cm]

& = &\frac{6}{\pi ^2}

\end{array}

}

\end{block}

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\begin{frame}

\fbox{\includegraphics[scale=2]{thank.jpg}}

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\end{document}