

**KOLHAPUR INSTITUTE OF TECHNOLOGY'S  
COLLEGE OF ENGINEERING (AUTONOMOUS), KOLHAPUR**

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**First Year BTech  
MID SEMESTER EXAMINATION  
Engineering Mathematics 1 (123)**

Day and Date :

PRN:

Time :

Max Marks:30

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**Instructions:**

**IMP: Verify that you have received question paper with correct course, code, branch, etc**

- i) All Questions are Compulsory
- ii) Figure to right indicate full marks
- iii) Assume suitable data wherever necessary

<b>QNo</b>	<b>Question</b>	<b>Marks</b>	<b>CO</b>	<b>BL</b>
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<b>1.</b>	<b>Attempt 2 out of 4</b>	<b>10</b>		
1.A	find the value of $y = x^2$ where $x=4$ A)1 B)4 C)9 D)16	3	CO2	3
1.B	find out the area of triangle with base =3cm and height =4cm. A)6 B)12 C)5 D)4	3	CO1	2
1.C	What is the Volume of Cylinder which has radius=4cm and height and 6 cm . $\pi =3.14$ . A)25 B)32 C)25 D)30	3	CO5	4
1.D	$\frac{1-\cos a}{\sin a}$ equals to: A) $\frac{\sin a}{1-\cos a}$ B) $\frac{\sin a}{1+\cos a}$ C) $\frac{\cos a}{1-\cos a}$ D) $\frac{\cos a}{1+\cos a}$	3	CO1	2
<b>2.</b>	<b>Attempt 2 out of 2</b>	<b>10</b>		
2.A	Derive $\pi$ as a ratio of circumference and diameter.	3	CO2	4
2.B	Rank of the matrix $\begin{matrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 1 \end{matrix}$	3	CO1	1
<b>3.</b>	<b>Attempt 1 out of 2</b>	<b>10</b>		
3.A	Evaluate the following $\int_2^5 \sqrt{\frac{5x}{2}} dx$	3	CO3	3
3.B	Differentiate $x^3 dx$	3	CO3	1