

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

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

Day and Date :

PRN:

Time :

Max Marks:30

Instructions:

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

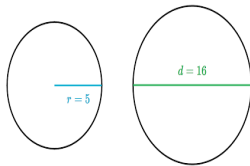
- i) All Questions are Compulsory
- ii) Figure to right indicate full marks
- iii) Assume suitable data wherever necessary

QNo	Question	Marks	CO	BL
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1.	Attempt 1 out of 2	10		
1.A	$\frac{1-\cos a}{\sin a}$ equals to: A) $\frac{\sin a}{1-\cos a}$ B) $\frac{\sin a}{1+\cos a}$ C) $\frac{\cos a}{1-\cos a}$ D) $\frac{\cos a}{1+\cos a}$	4	CO1	2
1.B	find out the area of triangle with base =3cm and height =4cm. A)6 B)12 C)5 D)4	4	CO1	2

2.	Attempt 1 out of 2	10		
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2.A	Add the following matrices $\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 6 & 4 \end{bmatrix} + \begin{bmatrix} 4 & 5 & 6 \\ 7 & 8 & 9 \\ 5 & 4 & 4 \end{bmatrix}$	4	CO1	3
2.B	Evaluate the following $\int_2^5 \sqrt{\frac{5x}{2}} \, dx$	4	CO3	3

3.	Attempt 1 out of 2	10		
3.A	Difference between area of 2 circles  <p style="text-align: center;">Figure 3.A</p>	4	CO5	1
3.B	Derive the following equation $y = x^4$	4	CO2	1