

**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

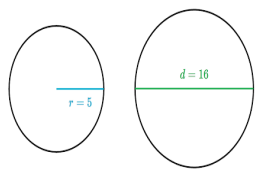
---

**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
<b>1.</b>	<b>Attempt 2 out of 3</b>	<b>8</b>		
1.A	find the value of $y = x^2$ where $x=4$ A)1 B)4 C)9 D)16	4	CO2	3
1.B	$\frac{1-\cos a}{\sin a}$ 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.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	4	CO5	4

<b>2.</b>	<b>Attempt 2 out of 2</b>	<b>8</b>		
2.A	Evaluate the following $\int_2^5 \sqrt{\frac{5x}{2}} \, dx$	4	CO3	3
2.B	Evaluate $\sum_3^5 (x + x^4)$	4	CO1	1
<b>3.</b>	<b>Attempt 1 out of 2</b>	<b>8</b>		
3.A	Evaluate $\int \sqrt{5 + 3x} \, dx$   <p style="text-align: center;"><b>Figure 3.A</b></p>	4	CO3	1
3.B	Difference between area of 2 circles	3	CO5	1