Mahatma Gandhi Mission's College of Engineering and Technology
Kamothe,Navi Mumbai

Branch: FE (ALL) **Academic Year: 2020-2021**

Course Code: FEC 201 **Course Name: Engineering Mathematics II [Choice Based]**

Tutorial 6

Ques. No.	Question	Module	Level*	PI	CO
1	Evaluate $\int_0^{\pi} \frac{dx}{a-cosx}$,a>0. Hence, find $\int_0^{\pi} \frac{dx}{(a-cosx)^2}$	3	2	1.1.1	3
2	Evaluate $\int_0^{\pi/2} \frac{dx}{(a^2\sin^2 x+b^2 cos^2 x)}$,a>0. Hence, find $\int_0^{\pi/2} \frac{dx}{(a^2\sin^2 x+b^2 cos^2 x)^2}$	3	3	1.1.1	3
3	Evaluate $\int_0^{\pi} \frac{\log(1+\alpha cosx)dx}{cosx}$, $\lvert\alpha\rvert < 1$,	3	3	1.1.1	3
4	Prove that $\int_0^1 \frac{(x^a-x^b)dx}{logx} = \log(\frac{a+1}{b+1})$	3	3	1.1.1	3
5	Find the length of the curve $x = \frac{y^3}{3} + \frac{1}{4y}$ $from\ y = 1\ to\ y = 2$	3	3	1.1.1	3
6	Find the length of the arc of the parabola $y^2 = 8x$ cut off by the latus rectum.	3	2	1.1.1	3

***As per Bloom's Taxonomy**