WALCHAND COLLEGE OF ENGINEERING

(Government Aided Autonomous Institute)
Visharambag, Sangli – 416415

First Year B.Tech. Computer Science & Information Technology
MSE, EVEN SEMESTER, AY 2023-24
Engineering Mathematics-II (7MA104)

MSE

PRN: _____

y & Date: Monday, 26/02/2024 Time: 11.30 am to 01.00 pm

Max Marks: **30**

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

nstructio ns

a) All questions are compulsory.
b) Writing question number on answer book is compulsory otherwise, answers may not be assessed.
c) Assume suitable data wherever necessary.
d) Figures to the right of question text indicate full marks.
e) Mobile phones, smart gadgets and programmable calculators are strictly prohibited.
f) Except PRN, anything else writing on question paper is not allowed.
g) Exchange/Sharing of stationery, calculator etc. not allowed.

		Marks	
ext on the right of marks indicates course outcomes (Only for faculty use)			
1 A)	Change the order of integration and Evaluate: $\int_0^1 \int_{x^2}^{2-x} xy \; dy \; dx$	6	CO3
B)	Evaluate using Beta-Gamma function: $\int_0^1 \left(\frac{x^3}{1-x^3}\right)^{1/2} dx$	5	CO1
C)	Trace the curve: $r = a \cos 3\theta$	6	CO2
2 A)	Calculate $\iint r^3 \, dr \, d\theta$ over the area included between the curves $r = 2 \sin\theta$ and $r = 4 \sin\theta$	4	CO3
B)	Trace the curve: $y^2(2a - x) = x^3$	6	CO2
C)	Evaluate: $\int_0^\infty e^{-x^2} \, dx$	3	CO1

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