

CLASS TEST (SSIT POLYTECHNIC) 2023-2024(SUMMER)

SUBJECT- Engineering Mathematics-II

BRANCH-Civil Engg/ EE Engg/ EE(I&C) Engg/Mech Engg (2ndsem)

TIME:1 HOURS

MAXIMUM MARKS:15

1. Answer all the question

2×5 =10

(a) Find the value of $\lim_{x \rightarrow 1} \frac{x^3 - 2x^2 + x}{x^2 - 1}$.

(b) Evaluate the value $\int e^x \operatorname{cose}^x dx$.

(c) Show that $(\vec{a} \times \vec{b})^2 = a^2 b^2 - (\vec{a} \cdot \vec{b})^2$.

(d) Solve the value of $x dx - y dy = 0$.

(e) Evaluate the value of matrix $\begin{bmatrix} 1 & w \\ -1 & w \end{bmatrix}$.

2. Answer Below the question

5×1=5

(a) Find the Integration

$$I = \int \frac{\sin^2 x}{1 + \cos x} dx$$

*****ALL THE BEST*****