NAAHAR PUBLIC SCHOOL (CBSE) SENIOR SECONDARY
ACADEMIC YEAR(2022-2023)
MICRO REVISION -6

GRADE: XII DATE:17.11.2022
SUBJECT: MATHS MARKS:30
TEACHER'S INITIAL: Mr.RAMACHANDRAN DUR: 45MINS

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1. We have $\frac{d}{dx}(3x^2 + \sin x - e^x) = 6x + \cos x - e^x$. Represent the expresion in the form of anti derivative. 1

2. Find $\int \sec x\,(\sec x + \tan x)\,dx$. 1

3. Evaluate $\int \frac{1}{\sqrt{4-x^2}}dx$ 1

4. Evaluate the following integral $\int_2^3 \frac{1}{x}dx$ 1

5. Find $\int (\cos x - \sin x)^2 dx$ 2

6. Evaluate $\int_0^2 \sqrt{4-x^2}\,dx$ 2

7. Evaluate $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \sin^5 x\,dx = 0$ 2

8. Find the following integral $\int \frac{10x^9 + 10^x \log_e 10}{x^{10} + 10^x}\,dx$ 4

9. Find the following integral $\int \frac{6x+7}{\sqrt{(x-5)(x-4)}}dx$ 4

10. Evaluate the following integral $\int \frac{x^2+1}{(x-1)^2(x+3)}dx$ 4

11. Evaluate the following integral $\int \tan^{-1}\left(\frac{2x}{1-x^2}\right)dx$ 4

12. Prove that $\int_0^a f(x)\,dx = \int_0^a f(a-x)\,dx$ and hence, prove that $\int_0^{\frac{\pi}{2}} \frac{\sin x}{\sin x + \cos x}dx = \frac{\pi}{4}$. 4