

ATOMIC ENERGY EDUCATION SOCIETY (AEES)

WORKSHEET

INTEGRATION – MODULE 6

INTEGRATE FOLLOWING FUNCTIONS:

$$1. \int_0^1 \log \left(\frac{1}{x} - 1 \right) dx$$

$$2. \int_{\frac{\pi}{2}}^{\pi} \frac{dx}{1 + \sqrt{\cot x}}$$

$$3. \int_0^{\pi} \frac{4x \sin x}{1 + \cos^2 x}$$

$$4. \int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \cos^2 x \sin^3 x dx$$

$$5. \int_{-1}^0 |x^3 - 1| dx$$

$$6. \int_0^{\pi} \frac{x \tan x}{\sec x \operatorname{cosec} x} dx$$

$$7. \int_0^1 \frac{\log |1+x|}{1+x^2}$$

$$8. \int_0^{\pi} \frac{xdx}{a^2 \cos^2 x + b^2 \sin^2 x}$$