

National University of Computer and Emerging Sciences

Instructors: Dr. Imran Shehzad, Ahtsham ul Haq

MT1003 Calculus and Analytical Geometry

Homework 07

Q.1 Evaluate the integral

$$\int \sin^5 x \cos^{27} x \, dx.$$

Q.2 Evaluate the integral

$$\int \sin^{20} x \cos^5 x \, dx.$$

Q.3 Evaluate the integral

$$\int \sin^4 x \cos^2 x \, dx.$$

Q.4 Evaluate the integral

$$\int \cot^4 x \, dx.$$

Q.5 Evaluate the integral

$$\int \operatorname{cosec}^3 x \, dx.$$

Q.6 Evaluate the integral

$$\int \tan^{120} x \sec^4 x \, dx.$$