 **(Independent University , Bangladesh**

**Mathematics**  **Part-II)** Time Allowed: 3 hours Max Marks: 35

Note: Attempt five questions. Selecting Two Question from Section-A and three question from section-B. All Question carry equal marks.

**SECTION-A**

Q.1. a) Transform the cartesian equation of ellipse to its polar form.

Q.2. Evaluate the integral √x dx , where h = 0.05 using

i. Trapezoidal rule ii. Simpson’s rule and compare with exact value.

**SECTION-B**

Q.3. a) Use the method of variation of parameters to solve y^n + y

b) Use the method of undetermined coefficient to solve y^3 – 2y^n = e^x sinx

Q.4. Let P= q= and r =

Q.5. σ = 

Q.6