



Symbol of Secularism
& National Integration

ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL

School of Pharmacy

Approved & Recognised by: All India Council for Technical Education and Council of Architecture, New Delhi
Directorate of Technical Education, Govt. of Maharashtra Affiliated to: University of Mumbai

S. Y. B. Pharm. (Semester –III)
Periodic Theory Examination (2013 – 2014)

Subject: Mathematics-I

Marks: 15 M

Date: - 7/9/2013

Time: - 11.00 am-12.00 pm

Solve any five Questions

[15 M]

Q.1 Find A^{-1} if $A = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 4 & 5 \\ 3 & 5 & 6 \end{pmatrix}$

Q.2 If $f(x) = 3x^2 + 2x + 1$ find

a. $\Delta^2 f(x)$

b. $E^2 f(x)$ take $h=1$

Q.3 Using suitable interpolation formulae estimate $f(12)$ from the following table.

x	5	10	15	20
f(x)	8	34	44	64

Q.4 Find $\int_{-3}^3 x^n dx$ using

a. Trapezoidal Rule

b. Simpson's $\frac{1}{3}$ rd Rule

c. Simpson's $\frac{3}{8}$ th Rule

Dividing into 6 equal intervals

Q.5 Verify Cayley Hamilton theorem for

$A = \begin{pmatrix} 1 & 3 & 7 \\ 4 & 2 & 3 \\ 1 & 2 & 1 \end{pmatrix}$ Hence find A^{-1}

Q.6 Find eigen values and eigen vectors of

$A = \begin{pmatrix} 4 & 1 & -1 \\ 6 & 3 & -4 \\ 1 & 2 & -3 \end{pmatrix}$ Hence find A^{-1}