

## **Stat-416 Statistical Data Analysis IX**

**50 Marks: 02 Credits**

**Number of Class: 20-26**

### ***Group A (Multivariate Analysis): 30 Marks***

Assessing multivariate normality, Box-Cox Transformation, Test for a mean vector, Test for equality of Mean vectors, problems related on discrimination analysis, Principal component analysis, Factor Analysis, estimation of canonical varieties and canonical correlation.

### ***Group B(Bio-Statistics): 20 Marks***

Estimation of probability density function, survival function and hazard function, Non-parametric Estimation of survival probabilities and their Standard errors from ungrouped and grouped data, Construction of survival curves and their confidence belts, Graduation of life data (Censored and uncensored) by plotting procedures, Fitting of appropriate parametric model (one parameter exponential, two parameter exponential and Weibull) to observed data and testing goodness of fit of fitted models (Kolmogrov- Smirnov test, L.R. test), Construction of confidence limits for life parameters for the fitted models, problems related on logistic regression and proportional hazard model.