

List of Tables

2.1	Expected Experiment time $E[X_m]$ under PT-II CBRs.	48
2.2	The -log-L, K-S, p-value and the AIC and BIC values for the W), EP and Weibull fitted distributions.	52
2.3	PT-II CBR samples under different censoring scheme $(S_{n:m})$ for fixed $n = 128, p = 0.5$	53
2.4	Mean and 95 % predictive bounds for future ordered observations from the bladder cancer data set.	55
2.5	Bayes and ML estimates, CI/HPD interval for WPD parameters α, β and λ with pre-defined censoring schemes for the bladder cancer data set.	56
3.1	Real data analysis of various schemes to obtain estimates of parameter, log-L, K-S distance, p-value.	89
3.2	Risks and different estimators, CI and HPD interval for parameters λ and θ under SELF for fixed $\lambda = 1.1, \theta = 0.8, \delta = 0.1, p = 0.05, c = 4, \gamma = 3$	94
3.3	Risks and different estimators, CI and HPD interval for parameters λ and θ under SELF for fixed $\lambda = 1.1$ and $\theta = 0.8, \delta = -0.1, p = 0.05, c = 4, \gamma = 3$	102
3.4	Risks of estimators of λ and θ under GELF and LINEX with fixed value $\lambda = 1.1, \theta = 0.8, \delta = 0.1, p = 0.05, c = 4, \gamma = 3$	110

3.5	Risks of estimators of λ and θ under GELF and LINEX with fixed value $\lambda = 1.1, \theta = 0.8, \delta = -0.1, p = 0.05, c = 4, \gamma = 3$	115
3.6	PT-II CBRs under different censoring schemes (n, m) with fixed $n = 48, p = 0.05$ for the survival time of multipal myeloma patients.	120
3.7	Bayesian and E-Bayesian estimates of θ, λ under SELF, GELF and LINEX loss function for the survival time of multipal myeloma patients in presence of PT-II CBRs under different censoring schemes (n, m) with fixed $p = 0.05, c = 3, \gamma = 2$, & $\delta = 1.5$	121
3.8	Bayesian and E-Bayesian estimates of θ, λ under SELF, GELF and LINEX loss function for the survival time of multipal myeloma patients in presence of PT-II CBRs under different censoring schemes (n, m) with fixed $p = 0.05, c = 4, \gamma = 3$ & $\delta = 1.5$	123
3.9	Bayesian and E-Bayesian estimates of θ, λ under SELF, GELF and LINEX loss function for the survival time of multipal myeloma patients in presence of PT-II CBRs under different censoring schemes (n, m) with fixed $p = 0.05, c = 3, \gamma = 2$, & $\delta = -1.5$	125
3.10	Bayesian and E-Bayesian estimates of θ, λ under SELF, GELF and LINEX loss function for the survival time of multipal myeloma patients in presence of PT-II CBRs under different censoring schemes (n, m) with fixed $p = 0.05, c = 4, \gamma = 3$ & $\delta = -1.5$	127
3.11	Quantiles and estimate of λ, θ are obtained for fixed value of $\delta = 0.1$	133
3.12	Quantiles and estimate of λ, θ are obtained for fixed value of $\delta = -0.1$	135
4.1	Risks of the estimators of λ, R and h under LINEX loss function for fixed $\alpha = 2, \lambda = 2$ and $t = 0.2$ under PT-II CBR.	154

4.2	Risks of the estimators of λ , R and h under LINEX loss function for fixed $\alpha = 2, \lambda = 2$ and $t = 0.2$ under Type-II censoring.	155
4.3	The -log-L values and the AIC and BIC values for the KD, EED and WD fitted distributions.	156
4.4	Bayes and empirical Bayes estimates of λ , $R()$ and $h()$ under LINEX loss function for an ulcer patient with different ages $((10^{-2}) * age)$ for the primary disease with fixed $n = 43, p = 0.5$, and $t = 0.5074419$ under PT-II CBR.	158
4.5	Bayes and empirical Bayes estimates of λ , $R()$ and $h()$ under LINEX loss function for an ulcer patient with different ages $((10^{-2}) * age)$ for the primary disease with fixed $n = 43$ and $t = 0.5074419$ under Type-II censoring.	159
4.6	PT-II CBR under different censoring schemes $(S_{n:m})$ for fixed $n = 43$ and $p = 0.5$ for an ulcer patient with different ages $((10^{-2}) * age)$ for the primary disease.	160
4.7	Summary of the different censoring schemes $(S_{n:m})$ for PT-II CBR.	161
5.1	ML estimate and 95% CI of parameter S obtained with profile likelihood θ_p and conditional likelihood θ_c	177
5.2	Summary statistics for posterior $\pi(S x)$ with PLJ and PLR.	177
5.3	DIC for PJ: Poisson model with Jeffrey's prior; PR: Poisson model with Bernardo's reference prior; EJ: exponential-mixed Poisson model with Jeffrey's prior; ER:exponential-mixed Poisson model with Bernardo's reference prior; PLJ and PLR.	178
5.4	ML estimates and Bayes estimates of number of species S and square root of average risk $R(S)$ for Poisson Lindley Model with fixed $\theta = 0.5$	182
5.5	ML estimates and Bayes estimates of number of species S and square root of average risk $R(S)$ for Poisson Lindley Model with fixed $\theta = 1.2$	187