Unit - 5

Curve fitting

Straight line
parabola
Exponential curves $\left< \begin{array}{l} y = ae^{bx} \\ y = ab^x \end{array} \right.$
Power curve $\quad y = ax^b$
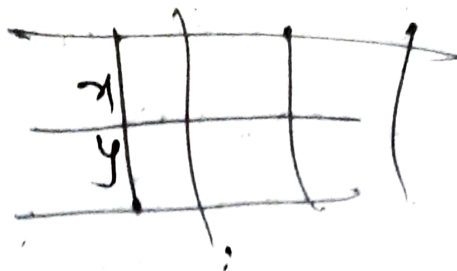
$\left. \begin{array}{l} \\ \\ \\ \\ \\ \\ \end{array} \right\}$ 4 7 M
either 1
or 2
question

correlation coefficient
① rank correlation $\left< \begin{array}{l} \text{not repeated} \\ \text{repeated ranks} \end{array} \right.$ $\left. \begin{array}{l} \\ \\ \\ \end{array} \right\}$ 7M

√ ② Karl pearson

Regression lines

$b_{xy} = \quad\quad b_{yx} =$

Y on x $\quad y - \bar{y}_a = byx (x - \bar{x})$
X on y. $\quad x - \bar{x} = bxy (y - \bar{y})$

$\left. \begin{array}{l} \\ \\ \\ \end{array} \right\}$ 7M

Unit IV

$z = \dfrac{\bar{x} - \mu}{\left(\frac{\sigma}{\sqrt{n}} \right)}$

① chisquare single mean $\quad > 30$
② z-test $\left< \begin{array}{l} \text{Diff of of means} \\ \text{single proportion} \end{array} \right.$
means
comparision
Diff of proportion
③ t-test $\left< \begin{array}{l} \text{single mean} \quad \dfrac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}} < 30 \\ \text{Diff of means} \end{array} \right.$

2 Que

⑤ Hypothesis., its type
  one tailed, Two tailed test
  . Errors in Sampling
  . Critical region, level of significance

Unit III :–

with replacement
without replacement & } &   17M
population mean & S.D of sampling
distribution.
central limit theorem

$$z = \frac{\bar{x} - \mu}{\left(\frac{\sigma}{\sqrt{n}}\right)}$$ 7M

Estimation   4 formulas.

$$E = z_{\alpha/2} \frac{\sigma}{\sqrt{n}}$$ 7M

                              2 questions

Unit II

Baye's theorem   7M 1Q

Normal distribution   7M 1Q

Binomial & poisson   7M 1Q

Discrete, Continu
          Find k, mean   7M 1Q
              variance

Unit I

AM, GM, median, Mode, standard deviation } 2