

12. (a) Three varieties A, B, C of a crop are tested in a randomized block design with 4 replications. The plot yields in pounds are as follows.

A 6 C 5 A 8 B 9
C 8 A 4 B 6 C 9
B 7 B 6 C 10 A 6

Analyze experimental yield and start your conclusion.

Or

- (b) The following table gives the number of refrigerators sold by 4 salesmen in 3 months May, June, July.

Month	Salesman			
May	50	40	48	39
June	46	48	50	45
July	39	44	40	39

Is this a significant difference in the sales made by 4 salesmen?

Is this a significant difference in the sales during different month?

13. (a) Solve the system of equations by Gauss elimination method
 $x + 2y + z = 3$, $2x + 3y + 3z = 10$, $3x - y + 2z = 13$.

Or

- (b) Find the real positive root $3x - \cos x - 1 = 0$ by Newton Raphson method. Correct to three decimal places.

14. (a) Evaluate $\int_0^1 \frac{dx}{1+x^2}$ using trapezoidal rule with $h = 0.2$. Hence obtain an approximate value of π .

Or

- (b) From the following table find $f(x)$ using Newton's interpolation formula

$x :$	1	2	7	8
$f(x) :$	1	5	5	4

15. (a) Apply fourth order R-K method to find $y(0.2)$ given $y' = x + y$, $y(0) = 1$.

Or

- (b) Given $y' = y$ and $y(0) = 1$ determine the values of y at $x = 0.01(0.01)(0.04)$ by Euler method.