Laxmi Charitable Trust's
Sheth L.U.J College of Arts & Sir M.V. College of Science and Commerce Department of Information Technology
(B.Sc.I.TSemester IV)
Data Analysis with SAS/SPSS/R

Practical – VIII

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Class: SYIT	Batch: 2
Date of Assignment: 17-01-2026	Date/Time of Submission:17-01-2026

AIM:-Performing two-way ANOVA using aov() (R).

CODE:-

```
# Create data
score <- c(75, 78, 80, 82,
           70, 72, 74, 76,
           85, 88, 90, 92,
           80, 82, 84, 86)

method <- factor(rep(c("Online", "Offline"), each = 8))
gender <- factor(rep(c("Male", "Female"), times = 8))

data <- data.frame(score, method, gender)

# Two-way ANOVA with interaction
anova_result <- aov(score ~ method * gender, data = data)

# Display results
summary(anova_result)
```

OUTPUT:-

```
> # Create data
> score <- c(75, 78, 80, 82,
+            70, 72, 74, 76,
+            85, 88, 90, 92,
+            80, 82, 84, 86)
>
> method <- factor(rep(c("Online", "Offline"), each = 8))
> gender <- factor(rep(c("Male", "Female"), times = 8))
>
> data <- data.frame(score, method, gender)
>
> anova_result <- aov(score ~ method * gender, data = data)
> summary(anova_result)
             Df Sum Sq Mean Sq F value  Pr(>F)
method        1  400.0   400.0  23.358 0.00041 ***
gender        1   20.2    20.2   1.182 0.29821
method:gender 1    0.0     0.0   0.000 1.00000
Residuals    12  205.5    17.1
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
>
```