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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » [Regression analysis \(course\)](#)
[Announcements \(announcements\)](#)
[About the Course \(https://swayam.gov.in/nd1_noc19_ma32/preview\)](https://swayam.gov.in/nd1_noc19_ma32/preview) [Ask a Question \(forum\)](#)
[Progress \(student/home\)](#) [Mentor \(student/mentor\)](#)

Unit 7 - Week 5

Course
outline

How to access
the portal

Pre-requisite
Assignment

Week 1

Week 2

Week 3

Week 4

Week 5

- [Selecting the BEST Regression Model \(Part C\) \(unit? unit=31&lesson=32\)](#)
- [Selecting the BEST Regression Model \(Part D\) \(unit? unit=31&lesson=33\)](#)

Assignment 5

The due date for submitting this assignment has passed. Due on 2019-09-04, 23:59 IST. As per our records you have not submitted this assignment.

1) A hospital surgical unit was interested in predicting survival time in patients under going a particular type of liver operation. A random selection of 54 patients was available for analysis, that is $n = 54$. From each patient record, the following information was extracted from pre operation evaluation: X_1 =blood clotting score, X_2 =prognostic index, X_3 = enzyme function test score, X_4 =liver function test score. The $2^4 = 16$ different possible subset models that can be formed from the pool of four X variables are listed in the table below. First, there is the regression model with no X variables, that is, the model $Y = \beta_0 + \epsilon$. Then there are the regression models with one regressor variable, with two regressor variables, and so on. **1 point**

WEEK 5 -
FEEDBACK -
Regression
analysis (unit?
unit=31&lesson=34)

Assignment 5
Solution (unit?
unit=31&lesson=35)

Quiz :
Assignment 5
(assessment?
name=88)

Week 6

Week 7

Week 8

Week 9

Week 10

Week 11

Week 12

VIDEO
DOWNLOAD

Regressors in Model	SS_{Res}
None	12.808
X_1	12.031
X_2	9.979
X_3	7.332
X_4	7.409
X_1, X_2	9.443
X_1, X_3	5.781
X_1, X_4	7.299
X_2, X_3	4.312
X_2, X_4	6.622
X_3, X_4	5.130
X_1, X_2, X_3	3.109
X_1, X_2, X_4	6.570
X_1, X_3, X_4	4.968
X_2, X_3, X_4	3.614
X_1, X_2, X_3, X_4	3.084

Consider $\alpha = 0.05$. The regressor variable that will be added at the first step of forward selection is

- X_1
- X_2
- X_3
- X_4

No, the answer is incorrect.

Score: 0

Accepted Answers:

X_3

2) Consider the data in Problem 1. Consider $\alpha = 0.05$. The regressor variable that will be added **1 point** at the second step of forward selection is

- X_1
- X_2
- X_3
- X_4

No, the answer is incorrect.

Score: 0

Accepted Answers:

X_2

3) Consider the data in Problem 1. Consider $\alpha = 0.05$. The regressor variable that will be added **1 point** at the third step of forward selection is

 X_1  X_2  X_3  X_4

No, the answer is incorrect.

Score: 0

Accepted Answers:

 X_1

4) Consider the data in Problem 1. Consider $\alpha = 0.05$. The best regression model obtained by forward selection involves the following regressor variables: **1 point**

 X_1, X_2, X_3  X_2, X_3, X_4  X_1, X_3 

none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

 X_1, X_2, X_3

5) Consider the data in Problem 1. The value of the partial F statistic $F_{1|234}$ is approximately **1 point**



8.42



7.88



6.682



3.925

No, the answer is incorrect.

Score: 0

Accepted Answers:

8.42

6) Consider the data in Problem 1. The value of the partial F statistic $F_{2|13}$ is approximately **1 point**



10.53



19.34



17.84



42.97

No, the answer is incorrect.

Score: 0

Accepted Answers:

42.97

7) Consider the data in Problem 1. Consider $\alpha = 0.05$. The regressor variable that will be eliminated at the first step of backward elimination is **1 point**

 X_1

X_2 X_3 X_4

No, the answer is incorrect.

Score: 0

Accepted Answers:

X_4

8) Consider the data in Problem 1. The regressor variable that will be eliminated at the second step of backward elimination is **1 point**

 X_1 X_2 X_4 none of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

none of the above