

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS-2022

PhD – HSS (June 2022)

COURSE CODE (CREDITS): 21P1WHS132 (3)

MAX. MARKS: 35

COURSE NAME: ECONOMETRICS

COURSE INSTRUCTORS: Dr. Amit Srivastava

MAX. TIME: 2 Hours

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*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

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1. Write short notes on the following (max 50 words) [5x3=15] (CO3)
  - a) Overfitting Vs Underfitting a model
  - b) Ramsey's RESET test
  - c)  $R^2$  Vs Adjusted  $R^2$
  - d) Logit Vs Probit Model
  - e) Advantages of Panel Data
2. What do you understand by "Model Selection Criterion"? What are its steps? Briefly discuss any one model studied by you. [5] (CO4)
3. Suppose the true model is:  $Y_i = \beta_1 + \beta_2 X_{2i} + u_i$ , but you added an irrelevant variable  $X_3$  and estimated the given model:  $Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \lambda_i$ .  
What changes will you observe? [5] (CO5)
4. "Tobit model is also called as Censored Regression Model". Discuss the reason and underlying feature of the same. [5] (CO5)
5. What do you mean by "Fixed Effect Model"? Since panel data have both time and space dimensions, how does it allow for both the dimensions? [5] (CO4)