**Name:**

**Enrolment No:**

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**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**
**End Semester Examination, May, 2020**

**Course: Financial Econometrics** **Semester: IV**
**Program: MBA General (Finance)** **Time: 03 Hours**
**Course code: FINC 8009** **Max. Marks: 100**
**Instructions:**

**SECTION -A** **(30 Marks)**
**This section is compulsory**

| | | Marks | CO |
|---|---|---|---|
| 1 | The numerical score assigned to the credit rating of a bond is best described as what type of number?<br><br>(a) Continuous<br>(b) Cardinal<br>(c) Ordinal<br>(d) Nominal | 5 | CO 1 |
| 2 | Suppose that we wanted to sum the 2020 returns on ten shares to calculate the return on a portfolio over that year. What method of calculating the individual stock returns would enable us to do this?<br><br>(a) Simple<br>(b) Continuously compounded<br>(c) Neither approach would allow us to do this validly<br>(d) Either approach could be used and they would both give the same portfolio return | 5 | CO 1 |
| 3 | Consider a bivariate regression model with coefficient standard errors calculated using the usual formulae. Which of the following statements is/are correct regarding the standard error estimator for the slope coefficient?<br><br>(i) It varies positively with the square root of the residual variance ($s$)<br>(ii) It varies positively with the spread of $X$ about its mean value<br>(iii) It varies positively with the spread of $X$ about zero<br>(iv) It varies positively with the sample size $T$<br>(a) (i) only<br>(b) (i) and (iv) only<br>(c) (i), (ii) and (iv) only<br>(d) (i), (ii), (iii) and (iv). | 5 | CO 1 |

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| 4 | In a time series regression of the excess return of a mutual fund on a constant and the excess return on a market index, which of the following statements should be true for the fund manager to be considered to have "beaten the market" in a statistical sense?<br><br>A) The estimate for $\alpha$ should be positive and statistically significant<br>B) The estimate for $\alpha$ should be positive and statistically significantly greater than the risk-free rate of return<br>C) The estimate for $\beta$ should be positive and statistically significant<br>D) The estimate for $\alpha$ should be negative and statistically significant | **5** | **CO 1** |
| 5 | Which of the following is NOT correct with regard to the *p*-value attached to a test statistic?<br><br>(a) *p*-values can only be used for two-sided tests<br>(b) It is the marginal significance level where we would be indifferent between rejecting and not rejecting the null hypothesis<br>(c) It is the exact significance level for the test<br>(d) Given the *p*-value, we can make inferences without referring to statistical tables | **5** | **CO 1** |
| 6 | What result is proved by the Gauss-Markov theorem?<br><br>(a) That OLS gives unbiased coefficient estimates<br>(b) That OLS gives minimum variance coefficient estimates<br>(c) That OLS gives minimum variance coefficient estimates only among the class of linear unbiased estimators | **5** | **CO 1** |
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| | **SECTION-B**<br>**Answer any five** | | **( 50 Marks)** |
| 7 | Give examples of various financial data and their application in Financial Econometrics. | **10** | **CO 3** |
| 8 | What do you mean by linear regression model? | **10** | **CO 3** |
| 9 | As an analyst, How do you use Financial Econometric, Explain | **10** | **CO 2** |
| 10 | How do you compare between different regression models? | **10** | **CO 2** |
| 11 | What do you mean by stationarity test? | **10** | **CO 3** |
| 12 | What different descriptive statistics used for summarizing financial time series data? | **10** | **CO 3** |
| | **SECTION-C**<br>**This section is compulsory** | | **( 20 Marks)** |
| 13 | What are the various steps of financial econometric model building? Explain. | **20** | **CO 4** |