Roll No. .....

Question Booklet Number

O. M. R. Serial No. | | | | | | | | |

M. Sc. (Ag.) Agricultural Economics (Third Semester)

EXAMINATION, 2021-22

ECONOMETRICS

Paper Code				
AGECON	5	0	0	7

Questions Booklet Series
A

Time : 1:30 Hours] [*Maximum Marks : 100*

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 60 questions. Examinee is required to answer any 50 questions in the OMR Answer-Sheet provided and not in the question booklet. If more than 50 questions are attempted by student, then the first attempted 50 questions will be considered for evaluation. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 60 प्रश्न हैं। परीक्षार्थी को किन्हीं 50 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। यदि छात्र द्वारा 50 से अधिक प्रश्नों को हल किया जाता है तो प्रारम्भिक हल किये हुए 50 उत्तरों को ही मूल्यांकन हेतु सम्मिलित किया जाएगा। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, तो उसे तुरन्त बदल लें।

(Remaining instructions on the last page) (शेष निर्देश अन्तिम पृष्ठ पर)

(Only for Rough Work)

1. The data collected by the investigator directly from the sample farmers represents :

   (A) Primary data

   (B) Time series data

   (C) Secondary data

   (D) Cross-section data

2. The term 'regression' was first developed by :

   (A) Pearson

   (B) Spearman

   (C) Fisher

   (D) Galton

3. In the equation $Y = a + bX$, 'a' represents :

   (A) Dependent variable

   (B) Independent variable

   (C) Intercept

   (D) Slope

4. The data collected by the investigator from the authentic published sources represents :

   (A) Primary data

   (B) Cross-section data

   (C) Time series data

   (D) Secondary data

5. The term 'correlation coefficient' is given by :

   (A) Fisher

   (B) Spearman

   (C) Pearson

   (D) Galton

6. The value of correlation coefficient ranges between :

   (A) – 1 to + 1

   (B) – 10 to + 10

   (C) – 100 to + 100

   (D) None of the above

7. Which of the following represents a mathematical model ?

   (A) $Y = a + bX$

   (B) $Y = a + bX + u$

   (C) Both (A) and (B)

   (D) None of the above

8. In the MLR model, we assume that the variance of U_i is constant for all values of X_i and it is called as :

   (A) Autocorrelation

   (B) Heteroscedasticity

   (C) Homoscedasticity

   (D) Multicollinearity

9. Autocorrelation is also known as :

(A) Simple correlation

(B) Partial correlation

(C) Serial correlation

(D) Unit correlation

10. Multicollinearity in general is more common in :

(A) Time series data

(B) Cross-section data

(C) Secondary data

(D) Primary data

11. If the explanatory variables in the MLR model are correlated, it is termed as :

(A) Homoscedasticity

(B) Multicollinearity

(C) Autocorrelation

(D) Heteroscedasticity

12. ANOVA is a statistical tool developed by :

(A) Pearson

(B) Spearman

(C) Fisher

(D) None of the above

13. The term 'multicollinearity' is coined by :

(A) Ragner Frisch

(B) R. A. Fisher

(C) Spearman

(D) None of the above

14. The tests to study the presence of multicollinearity problem are :

(A) Conditional index number

(B) Eigen values

(C) Variance inflation factor

(D) All of the above

15. Orthogonals are the variables whose covariance is :

(A) Positive

(B) Negative

(C) Zero

(D) None of the above

16. Heteroscedasticity problem is more common in :

(A) Time series data

(B) Cross-section data

(C) Secondary data

(D) None of the above

17. The autocorrelation coefficient ranges between :

(A) $-\infty + \infty$

(B) –1 to + 1

(C) 0 to 1

(D) None of the above

18. Which of the following tests are employed to detect autocorrelation problem ?

(A) Von-Neumann ratio

(B) Run's test

(C) Durbin-Watson *d*-test

(D) All of the above

19. Principal component analysis is employed to overcome ..... problem.

(A) Multicollinearity

(B) Autocorrelation

(C) Heteroscedasticity

(D) None of the above

20. Breusch-Godfray test is used to detect :

(A) Autocorrelation

(B) Multicollinearity

(C) Homoscedasticity

(D) Heteroscedasticity

21. Durbin-Watson *d*-test the *d* value ranges between :

(A) 0 to 4

(B) 0 to + 1

(C) –1 to + 1

(D) None of the above

22. The closer the Durbin-Watson *d* value towards four there is :

(A) Perfect positive autocorrelation

(B) Perfect negative autocorrelation

(C) Stronger negative autocorrelation

(D) None of the above

23. Multicollinearity is a :

(A) Problem

(B) Test

(C) Both (A) and (B)

(D) None of the above

24. The OLS estimates are obtained by minimizing :

(A) TSS

(B) ESS

(C) Both (A) and (B)

(D) None of the above

25. The error term in econometric model is :

(A) Economic variable

(B) Random variable

(C) Explanatory variable

(D) None of the above

26. The econometric model is different from a mathematical model due to :

(A) Presence of error term

(B) Absence of error term

(C) Method of estimation

(D) None of the above

27. Dummy variable is a :

(A) Problem

(B) Qualitative variable

(C) Both (A) and (B)

(D) None of the above

28. Cochrane-Orcutt iterative method is used to overcome :

(A) Homoscedasticity

(B) Heteroscedasticity

(C) Autocorrelation

(D) Multicollinearity

29. Measure to tolerance is used to detect :

(A) Autocorrelation

(B) Heteroscedasticity

(C) Multicollinearity

(D) None of the above

30. If the explanatory variables are not correlated at all, they are said to be :

(A) Dummy variables

(B) Orthogonals

(C) Both (A) and (B)

(D) None of the above

31. The presence of outliers in the data may lead to :

(A) Multicollinearity

(B) Autocorrelation

(C) Heteroscedasticity

(D) None of the above

32. The heteroscedasticity problem can be rectified by :

(A) Durbin-Watson test

(B) Chow test

(C) Transforming the variables

(D) All of the above

33. For testing the significance of overall regression we compute :

(A) F-test

(B) *t*-test

(C) Chi-square test

(D) None of the above

34. Which of the following tests are employed to detect heteroscedasticity problem ?

(A) Park test

(B) Glejser test

(C) Spearman rank correlation test

(D) All of the above

35. Autocorrelation is a :

(A) Problem

(B) Test

(C) Both (A) and (B)

(D) None of the above

36. Which of the following is a powerful tool in studying experimental data ?

(A) ANOVA

(B) Correlation analysis

(C) Regression analysis

(D) None of the above

37. An estimate is said to be ..... when it has the smallest variance.

(A) Biased

(B) Unbiased

(C) Best

(D) Serially correlated

38. Autocorrelation in general is more common in :

(A) Time series data

(B) Cross-section data

(C) Primary data

(D) None of the above

39. In the MLR model, the variance of U_i is not constant for all values of X_i, it is termed as :

(A) Autocorrelation

(B) Heteroscedasticity

(C) Multicollinearity

(D) None of the above

40. Which of the following represents an econometric model ?

(A) $Y = a + bX + u$

(B) $Y = a + bX$

(C) Both (A) and (B)

(D) None of the above

41. In the equation Y = a + bX, b implies :

(A) Slope of regression line

(B) Independent variable

(C) Dependent variable

(D) None of the above

42. The value of the dependent variable, when no independent variables are taken into consideration is called :

(A) Dependent variable

(B) Independent variable

(C) Intercept

(D) None of the above

43. The value of regression coefficient ranges between :

(A) – 1 to + 1

(B) 0 to + 1

(C) – 10 to + 10

(D) $-\infty$ to $+\infty$

44. The presence or absence of correlation between the variables can be best studied with the help of :

(A) Pie diagram

(B) Scatter diagram

(C) Bar diagram

(D) None of the above

45. In the equation Y = a + bX + u, u represents :

(A) Intercept

(B) Error term

(C) Both (A) and (B)

(D) None of the above

46. In the equation Y = a + bX, Y implies :

(A) Dependent variable

(B) Independent variable

(C) Intercept

(D) None of the above

47. The variable that we are trying to predict is called :

(A) Explanatory variable

(B) Independent variable

(C) Dependent variable

(D) All of the above

48. An estimate is said to be ..... when it has the properties of unbiasedness and minimum variance.

(A) Biased

(B) Unbiased

(C) Best

(D) Efficient

49. In the equation $Y = a + bX$, X implies :

(A) Independent variable

(B) Intercept

(C) Dependent variable

(D) None of the above

50. Which of the following is a powerful tool in studying economic relationship ?

(A) RBD techniques

(B) CRD techniques

(C) ANOVA

(D) Regression analysis

51. Which of the following is/are the remedy(ies) to overcome autocorrelation problem ?

(A) Include the omitted variable

(B) Transforming the data

(C) Both (A) and (B)

(D) None of the above

52. Multicollinearity arises due to :

(A) Use of lagged variables

(B) Less number of observations

(C) Less number of variables

(D) None of the above

53. When compared to time series data, cross-section data is :

(A) More reliable

(B) Less reliable

(C) Easy to collect

(D) None of the above

54. When we say, a regression model in linear, it means :

(A) Linearity with reference to variable

(B) Linearity with reference to parameter

(C) Linearity with reference to error term

(D) None of the above

55. One of basic assumptions of MLR model is that :

(A) Mean value of error is zero

(B) Variance of error is zero

(C) Strong correlation between error

(D) All of the above

56. If the observations of random error term in the MLR model are correlated, it is called as :

(A) Heteroscedasticity

(B) Autocorrelation

(C) Homoscedasticity

(D) None of the above

57. The square of multiple correlation coefficient is called :

(A) Linear estimate

(B) Best estimate

(C) Coefficient of multiple determination

(D) None of the above

58. When there are two variables in a regression model it implies :

(A) Simple regression model

(B) Multiple regression model

(C) Both (A) and (B)

(D) None of the above

59. The degree of freedom for residual source of variation is given by :

(A) N – K

(B) K – 1

(C) N – 1

(D) None of the above

60. The minimum variance property of an estimate is otherwise called as :

(A) Unbiased

(B) Best

(C) Biased

(D) None of the above

(Only for Rough Work)

4. Four alternative answers are mentioned for each question as—A, B, C & D in the booklet. The candidate has to choose the most correct/appropriate answer and mark the same in the OMR Answer-Sheet as per the direction :

Example :

Question :

Q. 1 (A) ● (C) (D)
Q. 2 (A) (B) ● (D)
Q. 3 (A) ● (C) (D)

Illegible answers with cutting and over-writing or half filled circle will be cancelled.

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.

6. All answers are to be given on OMR Answer sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.

7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.

8. After the completion of the examination candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.

9. There will be no negative marking.

10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.

11. To bring and use of log-book, calculator, pager and cellular phone in examination hall is prohibited.

12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. : On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is ny discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर— A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से एक सबसे सही अथवा सबसे उपयुक्त उत्तर छाँटना है। उत्तर को OMR आन्सर-शीट में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ● (C) (D)
प्रश्न 2 (A) (B) ● (D)
प्रश्न 3 (A) ● (C) (D)

अपठनीय उत्तर या ऐसे उत्तर जिन्हें काटा या बदला गया है, या गोले में आधा भरकर दिया गया, उन्हें निरस्त कर दिया जाएगा।

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।

6. सभी उत्तर केवल ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।

7. ओ. एम. आर. उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।

8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।

9. निगेटिव मार्किंग नहीं है।

10. कोई भी रफ कार्य, प्रश्न-पुस्तिका के अन्त में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।

11. परीक्षा-कक्ष में लॉग-बुक, कैलकुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।

12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण : प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्न-पुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्न-पुस्तिका प्राप्त कर लें।