

(Pages : 2)

R – 6722

Reg. No. :

Name :

Second Semester M.A. Degree Examination, April 2023

Behavioural Economics and Data Science

BEDS 524 – BASIC ECONOMETRICS AND RESEARCH METHODOLOGY

(2020 Admission onwards)

Time : 3 Hours

Max. Marks : 75

PART – I

Answer **all** questions. **Each** question carries **1** mark.

1. Time series data
2. Random walk
3. Durbin-Watson test
4. Errors in variables
5. Non-stationarity
6. Null and alternative hypothesis
7. Random variable
8. Dummy variables
9. Theoretical framework
10. Forecasting

(10 × 1 = 10 Marks)

P.T.O.



PART – II

Answer any **seven** questions in less than 400 words. **Each** question carries **5** marks.

11. Write a short note on Specification bias.
12. Explain the significance of Random error term in regression analysis.
13. Explain in detail of Methodology of Econometric research.
14. What are the important remedial measures of Multicollinearity?
15. Write a short note on Dummy dependent variables.
16. Explain the meaning and scope of social science research.
17. Distinguish between R^2 and Adjusted R^2 .
18. Describe the various methods of Sampling.
19. Elaborate the main objectives of studying Time series Econometrics.
20. Write a short note on detection methods of Heteroscedasticity.

(7 × 5 = 35 Marks)

PART – III

Answer any **three** questions in less than 1200 words. **Each** question carries **10** marks.

21. Briefly explain the assumptions and estimation procedure of Ordinary Least Squares.
22. Discuss in detail the steps in Hypothesis testing.
23. Briefly explain the causes, consequences, detection and remedial measures of Autocorrelation.
24. State and prove the properties of OLS estimators.
25. Briefly explain the basic concepts of ARMA and ARIMA Process.

(3 × 10 = 30 Marks)



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R – 6720

Reg. No. :

Name :

Second Semester M.A. Degree Examination, APRIL 2023

Behavioural Economics and Data Science

BEDS 522 : FOUNDATIONS IN BEHAVIOURAL MACRO ECONOMICS

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. What are the central ideas of monetarism?
2. Representative agent.
3. The advantages of adding a dumb consumer.
4. DSGE.
5. Serial correlation.
6. Inertial in behavioral economics.
7. Stagflation
8. Negative demand shock
9. Inflation inertia.
10. Impulse responses.

(10 × 1 = 10 Marks)

P.T.O.



SECTION – B

Answer **any seven** questions. **Each** question carries **5** marks.

11. Explain the trade-off between inflation and unemployment when we assume the prevalence of adaptive expectation?
12. Point out the importance of output stabilization by the central bank.
13. What are serially correlated shocks.
14. Discuss the link between central bank strict inflation targeting and chaotic situation.
15. What do you mean by real rigidities? Why do real rigidities occur in the credit market?
16. Discuss dynamically stable and dynamically unstable models.
17. Evaluate the heuristic approach in forecasting.
18. Discuss 'animal spirits' in economics.
19. Distinguish between rational and dumb Consumers.
20. Give an outlook of the theory of rational expectations?

(7 × 5 = 35 Marks)

SECTION – C

Answer **any three** questions. **Each** question carries **10** marks.

21. The intellectual history of macroeconomic theories has been subjected to long cyclical movements - Discuss
22. Evaluate the role of rational expectations in labour market equilibrium?
23. What are the problems with the DSGE-Model and how these are addressed in the Behavioural Economics?
24. Elucidate the serial correlation in behavioural macroeconomic model?
25. How exogenous shocks are transmitted into the macro economy?

(3 × 10 = 30 Marks)



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R – 6719

Reg. No. :

Name :

Second Semester M.A. Degree Examination, April 2023

Behavioural Economics and Data Science

BEDS 521 : FOUNDATIONS IN BEHAVIOURAL MICRO ECONOMICS

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. Rational choice
2. State-dependent utility.
3. Time inconsistency.
4. Happiness economics.
5. Behavioural game theory.
6. Mental accounting.
7. Implicit biases.
8. Pay-off.
9. Saddle point.
10. Altruism.

(10 × 1 = 10 Marks)

P.T.O.



SECTION – B

Answer **any seven** questions in less than 400 words. **Each** question carries **5** marks.

11. Point out the Individual effects of Hyperbolic discounting.
12. Write a note on social preferences.
13. Low-income persons have high time preference for money-Discuss.
14. Explain the concept of projection bias.
15. Discuss the usefulness of intertemporal choices in comparing returns of two periods?
16. Explain the importance of happiness economics.
17. What are the practical difficulties of deriving social choice?
18. Define 'prisoner's dilemma'.
19. Explain heuristic method.
20. Explain the concept The belief-bias effect using appropriate examples

(7 × 5 = 35 Marks)

SECTION – C

Answer **any three** questions in less than 1200 words. **Each** question carries **10** marks.

21. Write an essay on Behavioural Economics.
22. Critically examine the prospect theory.
23. Discuss the basic concepts of game theory and its applications in economic decisions with appropriate examples.
24. Discuss the significance of happiness in assessing economic progress. What are the important elements deciding the economic happiness of individuals and society?
25. Discuss the recent developments in the theory of nudging. Discuss the role of nudging in implementing economic policies for better results in Indian context.

(3 × 10 = 30 Marks)



Reg. No. :

Name :

Second Semester M.A. Degree Examination, April 2023

Behavioural Economics and Data Science

BEDS 523 – FOUNDATIONS OF DATA SCIENCE

(2020 Admission onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **all** questions from this section. **Each** question carries **1** mark.

1. What is Data Science?
2. What is meant by hypothesis testing?
3. _____ Routines attempt to fill in missing values, smooth out noise while identifying outliers, and correct inconsistencies in the data.
4. _____ combines data from multiple sources into a coherent store
5. Using a decision tree, only categorical variables would be modeled. (True/False).
6. _____ Regression involves finding the “best” line to fit two variables so that one variable can be used to predict the other.
7. K-means is not deterministic and it also consists of number of iterations. (True/False).
8. Which clustering algorithm follows a top to bottom approach?

P.T.O.



9. Which visualization plot helps in determining outliers?
10. Which plot is appropriate to graph a single categorical variable?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **seven** questions. **Each** question carries **5** marks.

11. What are the five Vs of big data?
12. How PCA is useful for attribute reduction?
13. How do you fit a data model? Explain.
14. Explain in detail about the process of binning. Smooth the below given data using median binning technique.
3050,210, 350, 533,490, 533, 574, 625, 666, 697, 779,738, 943, 910, 984, 1025, 1068, 2007
15. What is exploratory data analysis? Explain
16. What is meant by logistic regression? Give suitable example.
17. Explain about Decision trees.
18. Explain how the value of k the number of clusters is determined in K means algorithm.
19. What is the difference between agglomerative clustering and divisive clustering?
20. Explain in detail about different tools used for data visualization.

(7 × 5 = 35 Marks)

SECTION – C

Answer any **three** questions. **Each** question carries **10** marks.

21. Use these methods to normalize the following sample of data:
350,450,550,750,1500
 - (a) min-max normalization setting min=0 and max = 1
 - (b) z-score normalization
 - (c) z-score normalization using the mean absolute deviation instead of standard deviation.



22. What is the need of data reduction process? Explain the different techniques used for data reduction.
23. Draw the optimal decision tree model that can predict whether a student will pass the examination based on the given instance of dataset. The sample dataset contains 3 fields: CGPA (Low, Medium or High), Revised (Yes or No) and Passed (Yes or No). Explain the step-by-step process of optimal decision tree construction with calculations based on the sample dataset.

CGPA	REVISED	PASSED
LOW	NO	NO
LOW	YES	YES
MEDIUM	NO	NO
MEDIUM	YES	YES
HIGH	NO	YES
HIGH	YES	YES

24. Explain in detail DBSCAN algorithm.
25. Explain different methods used for visualization.

(3 × 10 = 30 Marks)



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R – 7587

Reg. No. :

Name :

Third Semester M.A. Degree Examination, July 2023

Behavioural Economics And Data Science

BEDS 531 : APPLIED BEHAVIOURAL ECONOMICS

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

- I. Explain the following in **one** or **two** sentences
1. Public Good
 2. Status Quo Bias
 3. Autokinetic effect
 4. Rational addiction
 5. Transactional leadership
 6. Self-serving bias
 7. Profit maximization model of Physician Behavior
 8. Corporate Socialism
 9. Managerial overconfidence
 10. Idea of regret

(10 × 1 = 10 Marks)

P.T.O.



II. Answer any **seven** of the following, each not exceeding **400** words

11. How behavioural economics Conceptualizing and Measuring Welfare?
12. Examine the policy issues on the neoclassical perspective on saving.
13. Illustrate the problematic observations of saving behavior conforms reasonably well to the predictions of the Life-Cycle Hypothesis.
14. Financial institutions do not simply help savings through their commitment value, also affect behavior simply through the defaults they produce. Elaborate.
15. Write a note on Hyperbolic Discounting and illustrate the same with the help of an example.
16. "Market-clearing wages should be little more than the workers' reservation level". Explain.
17. Write a note on the agency problem.
18. Examine the demand for medical care.
19. Distinguish between empire building and capital suppression in the sphere of behavioural economics.
20. How organizations train and choose managers who are expert at exploiting mistakes by consumers and their own workers?

(7 × 5 = 35 Marks)

III. Answer any **three** questions. Each should not exceed **1200** words.

21. Behavioral Public Economics has enormous potential by making important contributions to serious policy discussions. Critically explain.
22. Several stylized facts emerge from empirical literature on diffusion of innovations. Explain.
23. As far as wage rigidity is concerned, why firms lay off workers rather than reduce their pay?



24. "Economists have long been concerned with the nature of the trade-off between moral hazard and risk spreading." Justify the statement in the light of health insurance markets.
25. Discuss how psychology complicates the simple risk- incentive model of principal – agent relations?

(3 × 10 = 30 Marks)



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R – 7589

Reg. No. :

Name :

Third Semester M.A. Degree Examination, July 2023

Behavioural Economics and Data Science

BEDS 533 : GAME THEORY

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **all** questions in **one** or **two** sentence. Each question carries **1** mark.

1. Dominant strategy.
2. Game theory.
3. Pay off.
4. Symmetric Games.
5. Outcomes.
6. Duopoly Market.
7. Saddle Point.
8. Sequential game.
9. Minimax Strategy.
10. Information set.

(10 × 1 = 10 Marks)

P.T.O.



SECTION – B

Answer any **seven** questions. Each answer should not exceed 500 words.

11. Point out the basic assumptions underlying game theory.
12. Briefly explain Prisoner's Dilemma.
13. Distinguish between Two Person Zero Sum and Two Person Non Zero Sum Game
14. Write a note on Ultimatum Game?
15. What do you mean by war of Attrition?
16. Distinguish between Pure and Mixed strategy in game theory.
17. Explain randomized strategy in game theory.
18. Write a short essay on Sub game Perfect Nash equilibrium
19. How is game theory used in auctions?
20. How far game theory made applicable in Cournot Model of duopoly.

(7 × 5 = 35 Marks)

SECTION – C

Answer any **three** questions. Each question Should not exceed 1200 words.

21. Write an essay on the main features Nash Equilibrium?
22. Briefly explain about Extensive games.
23. Diagrammatically explain Bertrand Model of duopoly.
24. Write an essay on the theory of rational choice?
25. Point out the main applications in game theory.

(3 × 10 = 30 Marks)

