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1B3N20163

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Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BA Degree Examination, November 2020

BEC3B03 – Quantitative Methods for Economic Analysis I

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks : 80

Section A

**Short answer questions: maximum mark in this section is 25. Student can attend all questions.
Each question carries 2 marks.**

1. Find $\frac{x-1}{x} \times \frac{3x^2}{x^2-1}$
2. Solve the following simultaneous equations
$$4x + 3y = 7,$$
$$3x - 2y = 9$$
3. What is Rational Function ?
4. Define Doman and Range?
5. What is vertical line test?
6. What is meant by Sample?
7. What is Likert Question ?
8. Distinguish between Primary and secondary method of data collection?
9. What are the various types of classification
10. Explain Central Tendency?
11. What is Kurtosis ?
12. What is Rank Correlation?
13. Evaluate the exponent $(\frac{1}{3})^{-4}$
14. Obtain the equation of a line joining the points (2,2) and (4,8)
15. Solve the quadratic equation $3x^2 - 4x + 1 = 0$

Section B

Paragraph type questions. Maximum mark in this section is 35. Student can attend all questions. Each question carries a maximum of 5 marks.

16. Solve

$$x + y = 7$$

$$y + z = 9$$

$$z + x = 8$$

17. Solve

$$x + 2y + 3z = 11$$

$$2x + 4y - z = 13$$

$$3x + 4y - 5z = 3$$

18. Discuss various types of Function?

19. Discuss applications of Functions and Graphs to economics?

20. Define statistics? What are the basic characteristics?

21. Explain the main limitations of Statistics?

22. From the following data, find out the average using step deviation method?

Marks	No of students
0-10	20
10-20	24
20-30	40
30-40	36
40-50	20

23. Discuss the method of least square ?

Section C

Essay type questions. Answer any 2 questions. Each question carries a mark of 10.

24. Discuss various types of Function? And its applications to economics?

25. What are the various probability and non probability sampling method

26. Consider the following 10 values of X and Y, calculate the coefficient of rank correlation?

X	36	56	20	65	42	33	44	50	15	60
Y	50	35	70	25	58	75	60	45	80	38

27. Taking a hypothetical example prove that $r = \sqrt{b_{yx} b_{xy}}$

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BA Degree Examination, November 2020

BEC3B04 – Macro Economics - I

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks : 80

Section A

Short answer questions: maximum mark in this section is 25. Student can attend all questions. Each question carries 2 marks.

1. What is meant by monetarism?
2. Define Macroeconomic model.
3. What is meant by ex-post?
4. What is meant by withdrawals from circular flow?
5. Define GDP.
6. What is GDP growth rate?
7. Define intermediate good?
8. What are transfer payments.
9. What you mean by the assumption of full employment?
10. Describe neutrality of money.
11. State classical theory of interest.
12. What you mean by invisible hand?
13. Define aggregate supply function
14. What is dissaving?
15. Define relative income hypothesis of consumption.

Section B

Paragraph type questions. Maximum mark in this section is 35. Student can attend all questions. Each question carries a maximum of 5 marks.

16. Briefly discuss the scope of macroeconomics.
17. Discuss the comparative static analysis with an example.
18. Explain the components of aggregate expenditure.

19. Explain the value added method of estimating national income.
20. Discuss the classical theory of interest.
21. Explain Keynesian theory of demand for money.
22. Briefly Explain permanent income hypothesis.
23. Write a note on aggregate supply function.

Section C

Essay type questions. Answer any 2 questions. Each question carries a mark of 10.

24. Discuss the difference between static and dynamic analysis.
25. Explain the various methods to estimate national income.
26. Explain classical theory of employment and output determination.
27. Examine how the changes in government expenditure affects the equilibrium level of income and output using Keynesian cross diagrams.

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester BA Degree Examination, November 2020

BEC3C04 – Mathematical Methods for Economics - III

(2019 Admission onwards)

Time: 1 ½ hours

Max. Marks : 40

Part A

(Very Short Answer Type Questions. Each question carries 2 Marks)

- 1 Find the stationary point of the function $y = x^3 - 12x^2 + 36x + 10$
- 2 Distinguish between I Class and II class inflection point
- 3 How to find maximum profit through TR-TC approach
- 4 How does AR and MR is related to elasticity? Calculate elasticity from the following demand function $P = 50 - 3q$ at $p=5$
- 5 Given $P = \frac{3}{4}Q + 300$. Find Total revenue and Marginal revenue at $Q=12$
- 6 $Z = (2x^3 + 8xy^2 + y^3)^3$. Find f_1
7. What is the significance of Lagrange multiplier?

(Ceiling 10 Marks)

Part B

(All questions may be answered. Each question carries 5 marks)

8. Determine whether the following functions are increasing or decreasing at $x=2$

a) $\frac{14x-18}{4x}$ b) $(6x-9)^2$

9. Optimize the function $y = x^3 - 12x^2 + 140$
10. Given $Q = 160 - 0.5p$. Find revenue maximizing level of output
11. $y = (2x_1^3 + x_1^2x_2^2 - x_1x_2)(2x_1^2 + x_2^2 + 1)$ Find f_1 and f_2
- 12 $y = 3x_1^3 + 24x_1x_2 - 6x_1^2 + 6x_2^2$ Find the value of x_1 and x_2

(Ceiling 20 Marks)

Part C (Short Answer Questions)

Answer any one of the following questions

13. Optimise the function $y = 9x_1^2 - 12x_1x_2 + 6x_2$ subject to $3x_1 + 3x_2 = 66$. Find the value of x_1 and x_2
14. Discuss the uses of derivatives in Economics. Give suitable example

(1×10=10 Marks)