

**DSM/USME**

**QUESTION PAPERS  
SUPPLEMENTARY EXAMINATION  
SEPTEMBER- 2019 .**



**MBA,EMBA, MBA (Business Analytics)  
Ph.D,BBA and BA (H) ECONOMICS  
2<sup>nd</sup> & 4<sup>th</sup> SEMESTER**

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(DSM & USME)

**QUESTION PAPERS FOR SUPPLEMENTARY EXAMINATION,  
SEPTEMBER-2019  
MBA,MBA (Business Analytics) Ph.D, BBA & BA (H) ECONOMICS  
SEMESTER : II & IV**

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[c] Explain the concept of balanced budget multiplier. [5]

Q.7 Show that when the money market dynamics are taken into account, the impact of an increase in Investment in the economy on output is less than that predicted by the traditional Keynesian framework. What policy options are available with the government to mitigate this decline in output? [15]

Total No. of Pages: 4

Roll No.....

II SEMESTER

BBA

**SUPPLEMENTARY EXAMINATION** September-2019

**BBA 111: Business Environment**

Time: 3:00 Hours

Max. Marks : 75

Note: 1. This paper contains 3 sections. All the sections are compulsory.  
2. All questions within each section are to be answered in a continuous manner on the answer sheet.  
3. Internal choice is given in Section B and Section C.

#### SECTION A

Q.1 Read the case study given below and answer the question that follows: [15]

Through its Macintosh computers and operating system, the iPad, iPhone and other products, Apple has achieved massive success as a company despite going through several up and down cycles since its establishment in 1976. In 2018, Apple achieved the notable distinction of being the first U.S. company to ever attain a market capitalization greater than \$1 trillion. Apple's success is attributed largely to its ability to innovate and bring unique products to market that have engendered substantial brand loyalty.

Apple is in direct competition with companies such as Google, Inc., the Hewlett-Packard Company, Samsung Electronics Co., Ltd. and Amazon, Inc. All these companies expend significant capital on research and development (R&D) and marketing, just like Apple. Of late, the company has seen a significant slowdown in sales across all the product segments.

P.T.O.

Going forward, while Apple's dominance in the market is unlikely to wither away in the next few years, it needs to continually develop new and innovative products to protect its turf.

[a] Analyse Apple's position in the technology market using Porter's Five Forces. [10]

[b] According to you which are the strongest and weakest elements for Apple among the five forces? How can Apple deal with the weaker forces? [5]

#### SECTION B

Attempt any two questions. Each question carries 15 marks.

Q.2 [a] "While technological changes may lead to short-term job losses, technological unemployment is unlikely to occur in the long term." Do you agree? Give reasons in support of your answer. [8]

[b] What opportunities and challenges are created for businesses due to a large influx of immigrants in a society? What are some of the economic impacts of immigration? [7]

Q.3 Explain the key provisions of the following legislations: [5x3]

[a] Consumer Protection Act, 1986

[b] Maternity Benefit (Amendment) Act, 2017

[c] Child Labour (Prohibition & Regulation) Act, 1986 and Child & Adolescent Labour (Prohibition and Regulation) Amendment Act, 2016

Q.4 [a] What is a business cycle? Explain the key phases of a business cycle? [8]

[b] Critically evaluate the impact of demographic dividend on the business environment of an economy. [7]

#### SECTION C

Attempt any two questions. Each question carries 15 marks.

Q.5 [a] Explain the determination of Investment Multiplier in a 2-sector model. [7]

[b] Suppose that the government of a country is enjoying a fat budget surplus with fixed government expenditures of  $G = 150$  and fixed taxes of  $T = 200$ . Assume that consumers of the country behave as described in the following consumption function:

$$C = 150 + 0.75(Y - T)$$

Suppose further that investment spending is fixed at 100. Calculate the equilibrium level of GDP in the country. Solve for equilibrium levels of  $Y$ ,  $C$ , and  $S$ .

Next, assume that the opposition in the country succeeds in reducing taxes by 20 to a new fixed level of 180. Recalculate the equilibrium level of GDP using the tax multiplier. Solve for equilibrium levels of  $Y$ ,  $C$ , and  $S$  after the tax cut and check to ensure that the multiplier worked. What arguments are likely to be used in support of such a tax cut? What arguments might be used to oppose such a tax cut? [8]

Q.6 [a] Consider the following three-sector model:

$$C = 100 + 0.75Y_d, \text{ where } Y_d \text{ is the disposable income}$$

$$G = 100; I = 100 \text{ and } T = -200 + \left(\frac{1}{3}\right)Y$$

Calculate the equilibrium level of income. [5]

[b] Explain why the demand for money is inversely related with the rate of interest. [5]

Q.6(b) Calculate median, quartiles, 4<sup>th</sup> decile and 27<sup>th</sup> percentile from the following data :

x	0	1	2	3	4	5	6	7	8
f	3	8	26	50	9	18	47	36	8

Q.7: Use simplex method to maximize the following LPP

$$\text{Maximize } z = 5x_1 + 3x_2$$

Subject to

$$2x_1 + x_2 \leq 1, \quad x_1 + 4x_2 \geq 6,$$

$$x_1 \geq 0 \text{ and } x_2 \geq 0.$$

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Roll No. ....

BBA

Second Semester

Third Semester BBA  
Supplementary Examination 2019

Paper Code: BBA-112  
Paper Title: Business Statistics & Operations Research

Max. Marks: 75

Time: 3:00 Hours

General Instructions:

- 1) Attempt five questions out of seven questions and question No. 1 is compulsory.
- 2) Question 1 contains six parts and each part is of 2.5 marks.
- 3) Each question from two to six contains two parts and (7.5 X 2=15) marks each.
- 4) Question 7 have only one part and is of 15 Marks.
- 4) Assume suitable missing data, if any.
- 5) Simple calculator is allowed.

Q.1 Define the following definition with example:

- (i) Difference between Correlation and Regression
- (ii) Coefficient of Determination and Correlation
- (iii) Duality and its Significance
- (iv) Linear Programming Problem
- (v) Transportation problem
- (vi) Deciles, percentiles, Quartiles

Q.2(a) A firm manufactures two products A and B on which the profits earned per unit are Rs. 3 and Rs. 4 respectively. Each product is processed on two machines  $M_1$  and  $M_2$ . Product A requires one minute of processing time on  $M_1$  and two minutes on  $M_2$ , while product B requires one minute of processing time on  $M_1$  and one minute on  $M_2$ . Machine  $M_1$  is available for not more than 7 hours and 30 minutes, while machine  $M_2$  is available for 10 hours during any working day. Find the number of units of products A and B to be manufactured to get maximum profit.

Q.2(b)) Solve the following transportation problem with the help of Vogel Approximation Method (VAM):

Origin	Destination				Total $s_i$
	3	15	13	4	
1	12	5	7	10	550
2	14	16	8	9	700
3	13	15	10	17	250
Total $d_j$	6	450	275	150	15,00
	2				5
	5				

Q.3(a) Calculate the standard deviation and also show that S.D is independent of change of origin but not of scale for the following table :

Age (in years)	0-20	20-40	40-60	60-80	80-100	100-120	120-140	140-160
No. of members	6	52	132	160	140	51	2	

Q.3(b) Calculate the coefficient of correlation, using Karl-Pearson method between supply and stock of an item for a ten year period as given below:

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Supply	125	160	164	174	155	170	165	162	172	175
Stock	115	125	192	190	165	174	124	127	152	169

Q.4 (a) Define Business Statistics and Operations Research and explain their applications in business.

Q.4(b) Write the dual of the following LPP:

$$\text{Minimize } z = 5X_1 + 3X_2$$

Subject to

$$X_1 + 5X_2 \leq 15$$

$$5X_1 + 3X_2 \leq 10$$

$$X_1, X_2 \geq 0$$

Q.5(a) Explain Gantt Chart and construct a Gantt Chart for the following data and also obtain idle time for machine A and B :

Machine	Job timings data in number of days		
	Job 1	Job 2	Job 3
A	5	3	2
B	7	6	8

Q.5 (b) The following table gives the ages & blood pressure of 10 women.

Age(X)	56	42	36	47	79	42	60	72	63	55
Blood Pressure	147	125	118	128	145	140	155	160	149	150

(i) Find the regression coefficients & correlation coefficient and comment on the result.

(ii) Determine the least square regression equation of Y on X

(iii) Estimate the blood pressure of women whose age is 45 years.

Q.6(a) A departmental head has four subordinates, and four tasks to be performed. The subordinates differ in efficiency, and the tasks differ in their intrinsic difficulty. His estimate, of the time each man would take to perform each task, is given in the matrix below:

Tasks	Men			
	E	F	G	H
A	18	26	17	11
B	13	28	14	26
C	38	19	18	15
D	19	26	24	10

How should the tasks be allocated one to a man, so as to minimize the total man-hours ?

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Roll No.....

II SEMESTER

BBA

September

**SUPPLEMENTARY EXAMINATION, 2019**

**BBA 113**

**BUSINESS LAW**

*Time: 3:00 Hours*

*Max. Marks : 75*

**Note :** Q.8. is compulsory. Attempt any four out of the remaining questions.  
All questions carry equal marks.

Q1. What do you understand by express conditions and implied conditions? Discuss in detail with suitable examples.

Q2. Define the meaning of "pledge". Is bailment and pledge same? If not, what are the difference between the two?

Q3. Throw light on legal rules for a valid consideration with suitable examples.

Q4. Distinguish between a "holder" and a "holder in due course". Explain fully the privileges granted to a "holder in due course" under the Negotiable Instruments Act.

Q5. Define Company. What are the various types of companies as per Companies Act 2013?

Q6. "A seller cannot convey a better title to the buyer than he himself has." Discuss this rule of law and point out the exceptions.

Q7. What are the provisions with respect to the appointment of Directors in Companies Act 2013?

Q8. a) S delivered his car to M for repairs. M completed the work, but did not return the car to S within reasonable time, though S repeatedly reminded M for the return of the car. In the meantime a big fire occurred in the neighbourhood and the car was destroyed. Decide whether M can be held liable under the provisions of the Indian Contract act?

- b) R sells by auction to S, a horse which R knows to be unsound. R says nothing to S about the horse's unsoundness. Can S avoid the contract on discovering the horse to be unsound?
- c) A had offered a prize of ₹ 1 lac to anyone who finds his lost educational certificates. B who was unaware of the prize, found the certificates and gave to A. Can b thereafter claim the prize from A?
- d) X invites his friend Y to lunch. Y accepts the invitation. X makes elaborate arrangements but y could not make it for lunch. Can X sue Y for the loss he suffered?
- e) U offered to sell his estate for ₹1 crore. V offered ₹ 95 lacs which U refused. After some time, V wrote to U accepting the original offer of ₹ 1 crore. U refused to sell the property, V sued for specific performance. Decide.

\_\_\_\_\_ X X \_\_\_\_\_



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Roll No.....

II SEMESTER

BBA

END SEMESTER EXAMINATION (Supplementary) <sup>September</sup> -2019

PAPER CODE BBA 114

TITLE OF PAPER: E-Commerce

Time: 3:00 Hours

Max. Marks : 60

**Note :** Answer all question by Selecting any two parts from each questions.

All questions carry equal marks. (6x2=12marks)

Assume suitable missing data, if any.

- Q.1[a] Explain how e-commerce influences an industry's structure(Using Porter's Model)
- [b] Discuss the different business models used in e-commerce arena. Give the suitable example of each of them.
- [c] What is EDI? How is it a better technology than the traditional method.
- Q.2[a] Discuss the elements of a E-Business Model.
- [b] Define the term Supply Chain Management. Discuss the components of e-SCM. (Give diagram)
- [c] What is data encryption. Explain the difference between Private Key and Public Key by giving example.
- Q.3[a] Discuss the various types of cyber-crimes that prevail in today's world. Give suitable example for each of them.
- [b] What are E-commerce Enablers? Explain the various types of e-commerce enablers. How important is their role in making up the e-commerce industry.
- [c] Explain the various revenue models available in E-commerce (Give examples).

- Q.4[a] Discuss the evolution of e-commerce.
- [b] What is e-Money? Discuss the various types of electronic payment systems.
- [c] What are the unique features of E-Commerce and their potential ethical, social and/or political implications.
- Q.5[a] Discuss the benefits and barriers to E-Commerce sales.
- [b] What are the unique features of E-Commerce and their potential ethical, social and/or political implications.
- [c] Write short notes on the following:
- i) JIT
  - ii) Digital Signature
  - iii) Intranet vs Extranet

Total No. of Pages: 01  
Second Semester

PAPER CODE: GE-006  
Time: 03:00 Hours

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Roll. No.....

BBA (USME)  
SUPPLEMENTARY EXAMINATION- SEPT 2019

TITLE OF PAPER- Digital Marketing Analytics

Max. Marks: 75

Note: Write your Roll no. on the top immediately on receipt of this question paper.  
Marks are indicated against each question. Parts of a question must be answered together.

- Q1. Attempt any seven questions out of the following: [35 marks]
- What is meant by Return on Engagement (ROE)? How it can be calculated for Facebook and Twitter? Write any two issues with ROE. (5)
  - Explain Sysomos along with its two variants. (5)
  - Differentiate between digital marketing and traditional marketing. (5)
  - What do you understand by conversion? Give examples. (5)
  - Discuss the functionalities available in the YouTube Trends tool? (5)
  - How can we evaluate an Easy-to-Navigate User Interface? (5)
  - What are different pricing models for display ads? (5)
  - Describe the earned social media metrics. (5)
- Q2. Attempt any two questions out of the following: [20 marks]
- Explain the features that must be considered while selecting a social media listening tool. (10)
  - Describe the social analytics lifecycle for discovering business intelligence. (10)
  - Discuss the search analytics for digital strategy based on brand associations. (10)
- Q3. Answer all the following questions: [12 marks]
- Explain the three bottom-up revenue measurement approaches along with the issues associated with each of these approaches. (6)
  - Discuss owned social metrics for any three social media channels. (6)
- Q4. Write short note on any four out of the following: [8 marks]
- Message Resonance (2)
  - Content Audits (2)
  - Woopra (2)
  - Affiliate Marketing (2)
  - Bounce Rate (2)

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Roll No.....

II SEMESTER

**BA (H) Economics**

**SUPPLEMENTARY EXAMINATION**

*September-2019*

**BA 111: Introductory Macroeconomics**

*Time: 3:00 Hours*

*Max. Marks : 75*

**Note :** Answer five questions in all. Each question carries equal marks.  
Make neat diagrams. Only simple calculator allowed.

Q.1 “Circular flows of income can be explained by the behaviour of Household & Firms.” Explain (with diagrams) in a three sector economy.

Q.2 Define and explain the concept of National Income with exclusions. Derive the relationship between National Income Aggregates.

Q.3 Explain Balance of Payments Account. Give details of various accounts with the Balance of Payments Account.

Q.4 Discuss two definitions of money. Explain various functions of money in an economy.

Q.5 Explain the debate between Micro and Macroeconomics.

Q.6 What causes inflation in an economy? Explain with diagrams.

Q.7 How is National Income determined in a closed economy? Derive and discuss.

Q.8 Short notes on **any two**

(i) Money Supply

(ii) Consequences of Inflation

(iii) Keynesian Multiplier

Total No. of Pages 4

II SEMESTER

(Supply.)

END SEMESTER EXAMINATION

BA(H) Economics

Sept. 2019

PAPER CODE BA 112

TITLE OF PAPER Mathematical Methods for Economics II

Time: 3:00 Hours

Max. Marks: 75

Note : Use of simple calculator is allowed.

Section A

Attempt any 15 questions.

Q1. Find the equation of plane through the points (1, -2, 0), (3, 1, 4) and (0, -1, 2). (5)

Q2. Solve the system of Equations using Cramer's Rule or inverse method: (5)

$$\begin{aligned}
 x_1 + x_2 - x_3 &= 6 \\
 3x_1 - 2x_2 + x_3 &= -5 \\
 x_1 + 3x_2 - 2x_3 &= 14
 \end{aligned}$$

Q3. Find the rank of the following matrix: (5)

$$\begin{bmatrix}
 1 & -1 & 1 & -1 \\
 -1 & 1 & -1 & 1 \\
 1 & -1 & 1 & -1 \\
 -1 & 1 & -1 & 1
 \end{bmatrix}$$

Q4. Find the eigenvalues and eigenvectors for the following:

$$\begin{pmatrix}
 -2 & -4 & 2 \\
 -2 & 1 & 2 \\
 4 & 2 & 5
 \end{pmatrix}$$

Q5. If  $f(x, y) = x^9y^8 + 2x + y^3$ , find all of the first and second-order partial derivatives at  $(x, y) = (1, -1)$ . (5)

**Q6** Find the maximum and minimum value of following defined in given region

$$\max f(x, y) = 9x + 8y - 6(x + y)^2 \text{ subject to } 0 \leq x \leq 5; 0 \leq y \leq 3, -x + 2y \leq 2$$

**Q7** Compute the elasticity of substitution for

$$F(K, L) = A(aK^{-\gamma} + bL^{-\gamma})^{-\frac{m}{\gamma}}$$

Where A, a, b are positive constants, and  $\gamma \neq 0$  with  $\gamma > -1$ .

**Q8.** Classify the stationary points of the following:

$$\begin{aligned} f(x_1, x_2, x_3, x_4) \\ = 20x_2 + 48x_3 + 6x_4 + 8x_1x_2 - 4x_1^2 - 12x_3^2 - x_4^2 \\ - 4x_2^3 \end{aligned}$$

**Q9. A)** Find the directional derivatives:

$$f(x, y) = 2x + y - 1 \text{ at } (2, 1) \text{ in the direction of } (1, 1) \quad (2)$$

**B)** Describe chain rule of differentiation with  $z = f(x, y)$  and  $x = g(t, s)$  and  $y = h(t, s)$ . Use chain rule to find  $dz/dt$  for the following:

$$F(x, y) = x + y^2 \text{ and } x = t^2 \text{ and } y = t^3 \quad (3)$$

**Q10.** In a growth model studied by N. Kaldor and J. A. Mirrlees, a function N is defined by

$$N(t) = \int_{t-T(t)}^t n(\tau) e^{-\delta(t-T(\tau))} d\tau$$

Where  $T = T(t)$  is a given differentiable positive function. Compute  $\dot{N}(t)$ .

**Q11** For what values of u and v are the following two matrices equal?

$$\begin{bmatrix} (1-u)^2 & v^2 & 3 \\ v & 2u & 5 \\ 6 & u & -1 \end{bmatrix} = \begin{bmatrix} 4 & 4 & u \\ v & -3v & u-v \\ 6 & v+5 & -1 \end{bmatrix}$$

**Q12** Compute the expression  $KY'_K + LY'_L$  if

$$Y = Ae^{\lambda t} [\delta K^{-\rho} + (1-\delta)L^{-\rho}]^{-m/\rho}$$

**Q13** For the function  $f(x, y) = x^2y^3 - 4y$ , find the gradient at the point  $(2, -1)$ . Hence, find the directional derivative in the direction of  $(2, 5)$ .

**Q14** Determine values of the constants  $a, b$ , and  $c$  such that  $f(x, y) = ax^2y + bxy + 2xy^2 + c$  has a local minimum at the point  $(2/3, 1/3)$  with local minimum value  $-1/9$ .

**Q15** Determine the definiteness of the following quadratic forms:

(i)  $q = -x_1^2 - x_2^2$

(ii)  $q = u^2 - 2uv + v^2$  subject to  $u + v = 0$

**Q16** Consider a discriminating monopolist selling a product in two markets, with inverse demand curves being given by

$$P_1 = a_1 - b_1Q_1 \text{ and}$$

$$P_2 = a_2 - b_2Q_2$$

Suppose the total cost of the firm is directly proportional to sum of the quantities sold in the two markets i.e.  $C(Q) = \alpha Q = \alpha(Q_1 + Q_2)$ .

Calculate the value of quantity and price in the two markets at which firm maximises its profit and also calculate the value of maximum profit.

**Q17** (i) Find the linear approximation of  $f(x, y) = xe^{xy}$  at  $(1, 0)$ . Use it to approximate  $f(1.1, -0.1)$

(ii) Check the concavity/convexity of the following function  $f(x, y) = x^4 + x^2y^2 + y^4 - 3x - 8y$  for  $(x, y) \neq (0, 0)$ .

**Q18** An individual has a utility function  $U = (x_1x_2)^2$  with  $x_1 > 0$  and  $x_2 > 0$ . The prices of goods  $x_1$  and  $x_2$  are Rs 2 per unit and Rs 4 per unit respectively while her total income is Rs 400. If she tries to get maximum utility within the budget, then what quantities of  $x$  and  $y$  should she purchase?

**Q19.** (i) Solve the following differential equation

$$\dot{x} = \frac{(\beta - \alpha x)(x - a)}{x} \quad (3)$$

(ii) Categorise the equilibrium points of the following equation using slope field and phase diagram.

$$\dot{x} = x(x - 2) \quad (2)$$

**Q20.** A firm wants to minimize its cost function given by  $x^2 + y^2 + z^2$ . The firm has to deal with two constraints given by  $x + 2y + z = 1$  and  $2x - y - 3z = 4$ . Find the value of  $x$  and  $y$  that optimizes the cost function subject to the constraints. (5)