

**End Semester Examination, Dec. 2019**  
B.A. (Applied Psychology) — First Semester  
**PHYSIOLOGICAL PSYCHOLOGY (BAAP-103)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **PART-B is compulsory**. Attempt any **FOUR** questions from **PART-A**. Marks are indicated against each question.

**PART-A**

- Q.1 Illustrate and describe in detail the process of action potential. **10**
- Q.2 Name and describe in detail any two major divisions of the brain along with its respective structures. **10**
- Q.3 Discuss the structure and function of auditory organs. **10**
- Q.4 Trace the history of philosophical origin of physiological psychology. **10**
- Q.5 Discuss the process and theories of hearing. **10**
- Q.6 Explain different stages of sleep. **10**

**PART-B**

- Q.7 Write short notes on (**any two**) of the following: **5×2**
- a) Hippocampus.
  - b) Hypothalamus.
  - c) Limbic system.
  - d) Sympathetic nervous systems.

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Applied Psychology – First Semester  
**BASICS OF IT (BAAP-117)**

Time: 3 hrs.

Max Marks: **50**

No. of pages: *1*

Note: *Attempt FIVE questions in all; Q.1 is compulsory. Attempt ANY TWO questions from PART-A and TWO questions from PART-B. Marks are indicated against each question.*

- Q.1
- a) What is the full form of www?
  - b) What does DBMS stand for?
  - c) What does MS in MS Office stand for?
  - d) What is hardware?
  - e) What is software?
  - f) What is the full form of OS?
  - g) What is the use of a search engine?
  - h) What is the full form of LAN?
  - i) What is a server?
  - j) What is the full form of CPU? **1×10**

**PART-A**

- Q.2 Elaborate upon the types of computers. **10**
- Q.3 Contrast in detail LAN, MAN and WAN. **10**
- Q.4 Discuss and explain the goals of an operating system. **10**

**PART-B**

- Q.5 Critically examine the uses of e-commerce and e-banking. **10**
- Q.6 Elaborate upon the tips to make better power point presentations. **10**
- Q.7 Using examples analyze the advantages of DBMS. **10**

# End Semester Examination, Dec. 2019

B.A. (Applied Psychology) – First Semester

## BASICS OF STATISTICS (BAAP-118)

Time: 3 hrs

Max Marks: **50**

No. of pages: 1

Note: Attempt any **FIVE** questions in all; attempt any **FOUR** questions from **PART-A** and **Part-B is compulsory**. All questions carry equal marks.

### **PART-A**

- Q.1 Define 'statistics'. What are the limitations of statistics? **10**
- Q.2 Write short notes on:  
a) Ogive  
b) Stem and leaf diagram **5x2**
- Q.3 a) Differentiate between discrete and continuous forms of numeric data. **5**  
b) Explain different methods of probability sampling. **5**
- Q.4 a) Explain features of correlation coefficient. **5**  
b) A University is interested in tracking the success of its graduates by measuring the length of each graduates job search before getting a position in his or her chosen field. How would you define the appropriate population? **5**
- Q.5 The following table list some of the busiest ports in the world based on the number of containers in 2010.

<b>Location of Port</b>	<b>No. of containers (in millions)</b>
Shanghai	29
Singapore	28
Hong Kong	24
Rotterdam	11
Los Angeles	07
New York	05

Construct the relative frequency distribution and pie chart to summarize the data. Approximately what percent of the total number of containers go through Hong Kong? **10**

- Q.6 Calculate the Mean and SD from the following data:

55	70	57	73	55	59	64	72
60	48	58	54	69	51	63	78
75	64	65	57	71	78	76	62
49	66	62	76	61	63	63	76
52	76	71	61	53	56	67	71

**10**

### **PART-B**

- Q.7 Answer the following questions:  
a) Define statistics.  
b) What are the types of kurtosis?  
c) Who gave the concept of Normal Distribution?  
d) The t Test was given by \_\_\_\_\_

e) Mode is \_\_\_\_\_

**2×5**

**End Semester Examination, Dec. 2019**  
B.A. (Applied Psychology) – Second Semester  
**SOCIAL PSYCHOLOGY AND ITS APPLICATIONS (BAAP-203)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **PART-B is compulsory**. Attempt any **FOUR** questions from **PART-A**. Each question carries equal marks.

**PART-A**

- Q.1 Describe the meaning and scope of social psychology. **10**
- Q.2 What is social cognition? Describe the different aspects of social cognition. **10**
- Q.3 What are the different ways people interact with each other? Please describe some of them along with appropriate examples. **10**
- Q.4 Define 'group'. Also describe the different types of group. **10**
- Q.5 What is attitude? How attitude are formed? **10**

**PART-B**

- Q.6 Write short notes on (**any two**) of the following:  
a) Social Facilitation and loafing.  
b) Prejudice and discrimination.  
c) Realistic Conflict Theory. **5x2**

**End Semester Examination, Dec. 2019**  
 B.A. / B. Sc. (Hons.) Economics – First Semester  
**MATHEMATICS FOR ECONOMICS-I (BAECO-103)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) For any two sets: A and B, show  $A \cup B$  using Venn diagram.
- b) If  $P = \{1, 4, 5, 7, 9\}$  and  $Q = \{4, 9\}$  then find out whether  $Q \subset P$  or  $P \subset Q$ .
- c) Let  $P = [6, 3, 8]$ , find out  $pp'$ .
- d) Given  $u = a^v$ . Find out  $\frac{du}{dv}$  if  $v = 2$  and  $a = 5$ .
- e) Given  $z = f(x, y) = (x + 4)(3x + 2y)$ , find out  $f_y(2, 1)$ .
- f) Find out  $\int (u^3 + 2u^2 + 1) du$ .
- g) Suppose  $X = \{4, 5\}$ ,  $Y = \{3, 6, 7\}$  and  $Z = \{2, 3\}$ . Find out  $X \cup (Y \cap Z)$ .
- h) For a function  $y = x^2 + 3x + 9$  what will be the value of  $\frac{dy}{dx}$  to reach its extremum?
- i) If  $y = \sum_{i=0}^n b_i x^i$ , express it in general form of polynomial function.
- j) If  $u = f(v_1, v_2) = 2v_1^2 + v_1 v_2 + 9v_2^2$ , find out  $f_{v_1}$ . **2×10**

**PART-A**

Q.2 a) Find out C, if  $C = A \times B$  and  $A = \begin{bmatrix} 1 & 0 & 3 \\ 2 & 1 & 5 \end{bmatrix}$ ,  $B = \begin{bmatrix} 1 & 3 \\ 2 & 5 \\ 6 & 2 \end{bmatrix}$ . **8**

b) If average cost,  $AC = 12 - Q$  and  $MC = 4$ , find out  $Q$ . **6**

c) Given that  $Q_d$  is linearly related to  $p$ . Express this relationship in exact functional form with an arbitrary slope  $\beta_1$  and constant term  $\beta_0$ . Define which is/are variable(s) and parameter(s) here. **6**

Q.3 a) Let  $A = \begin{bmatrix} 2 & 0 \\ 0 & 3 \end{bmatrix}$ ,  $B = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ , show that  $AB \neq BA$ . **6**

b) For the matrices:  $A = \begin{bmatrix} 1 & 2 \\ 0 & 1 \end{bmatrix}$ ,  $B = \begin{bmatrix} 0 & -1 \\ 3 & 2 \end{bmatrix}$ ,  $C = \begin{bmatrix} 1 & 1 \\ 2 & 1 \end{bmatrix}$ , prove associative law. **7**

c) Verify the distributive law  $P(Q + R) = PQ + PR$  when  $P = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ ,

$Q = \begin{bmatrix} 2 & -1 & 1 & 0 \\ 3 & -1 & 2 & 1 \end{bmatrix}$ ,  $R = \begin{bmatrix} -1 & 1 & 1 & 2 \\ -2 & 2 & 0 & -1 \end{bmatrix}$ . **7**

- Q.4 a) Find all partial derivatives up to second order of the function  $f(x, y) = x^4 y^2 - x^2 y^6$ . **7**  
 b) If  $u = 5v^4 - 3v^3 + 7v^2 + 2v - 4$ , find out  $f''(2)$ . **5**  
 c) Prove the Euler's Theorem for function  $f(s, t) = 3s^2 t + 7st^2$ . **8**

**PART-B**

- Q.5 a) Find out the extremum point of function  $d = p^3 - 3p^2 + 2$  by checking necessary and sufficient conditions. **10**  
 b) Find the integration by parts for  $\int x e^x dx$ . **5**  
 c) Find the integral by substitution for  $\int 4e^{2x+3} dx$ . **5**
- Q.6 Suppose an agro-based firm produces two goods:  $x$  and  $y$  using raw-materials corn, wheat and barley. To produce one unit of  $x$ , 5kg of corn, 4kg of wheat and 35kg of barley are required. To produce  $y$ , 15kg of corn, 4 kg of wheat and 20kg of barley are required. Suppose that only 480 kg of corn, 160kg of wheat and 1190 kg of barley are available. The firm makes a profit of \$13 per kg of  $x$  and \$23 per kg of  $y$ .
- a) Using the above information, formulate a standard problem of LPP. **10**  
 b) How many  $x$  and  $y$  should the firm produce in order to maximize profit? **10**
- Q.7 a) If  $P = \{3, 5\}$  and  $Q = \{\text{up, down}\}$ , then explain how do you find out  $P \times Q$ . **5**  
 b) For the sets:  $X = \{5, 6, 7, 8\}$ ,  $Y = \{4, 5, 7, 8\}$  and  $Z = \{3, 4, 7, 8\}$ , prove the distributive property. For these sets, also show union with Venn diagram. **12**  
 c) Using suitable example or diagram, explain:  
 i) disjoint set,  
 ii) complementary set, and  
 iii) null set. **1×3**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**MACRO ECONOMICS-I (BAECO-104)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define 'economics'.
- b) What is law of demand?
- c) Explain the concept of income elasticity of demand.
- d) What is the difference between normal goods and inferior goods?
- e) What are the factors of production?
- f) Explain long period cost curves of a firm.
- g) Discuss the concept of shut down point.
- h) Explain the concept of perfect competition.
- i) Define 'monopoly'.
- j) Write down some examples of monopolistic competition. **2×10**

**PART-A**

- Q.2 a) Explain the concept of price discrimination under monopoly. Also, mention its three degrees. **10**  
b) Define cross elasticity when goods are substitute goods and complementary goods. **10**
- Q.3 a) Explain the concept of scarcity. How does it give rise to economic problem? **10**  
b) What do you understand by mixed economy? Is India a mixed economy? Justify your views. **10**
- Q.4 a) Distinguish between movements along the demand curve versus shift in demand curve. **10**  
b) Discuss price elasticity of demand. What factors govern the degree of price elasticity of demand? **10**

**PART-B**

- Q.5 a) Critically examine the revealed preference theory of demand. **10**  
b) What are strong axioms of revealed preference? **5**  
c) What are preferences in economics? **5**
- Q.6 a) Explain the law of returns to scale. Describe those using ISO-quants. **10**  
b) Why is short run average cost curve U-Shaped? **10**
- Q.7 a) What are necessary and sufficient conditions for equilibrium of a firm under perfect competition? **10**  
b) What is the concept of price discrimination under monopoly? Discuss the various forms of price discrimination. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**MICRO ECONOMICS-I (BAECO-104)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) What are the three basic economic problems?
- b) Distinguish between positive and normative economics.
- c) What is the purpose of a demand schedule?
- d) How is producer surplus calculated?
- e) What do you mean by utility?
- f) What is Engel curve in economics?
- g) What is the strong axiom of revealed preference?
- h) What is meant by production function?
- i) What do you mean by cost?
- j) What are the 5 characteristics of perfect competition? **2×10**

**PART-A**

- Q.2 a) What are the factors affecting individual demand? Derive the law of demand. **10**  
b) Differentiate between cross elasticity and income elasticity of demand with the help of an example. **10**
- Q.3 a) Distinguish between income and substitution effect of fall in the price of a commodity with the help of indifference curve technique in the case of;  
i) Normal good  
ii) Giffen good **10**  
b) Why is an indifference curve convex to the point of origin? When will it be:  
i) Straight line  
ii) Right angled **10**
- Q.4 a) Explain how the law of demand can be proved with the help of revealed preference theory? **10**  
b) Define weak and strong axiom of revealed preference with the help of an example. **10**

**PART-B**

- Q.5 a) Explain the laws of returns to scales. Show the three kinds of returns to scale with the help of isoquants. **10**  
b) Explain the shapes of short run cost curves. Analyze the relationship between AC and MC curves. **10**
- Q.6 Explain the difference between short run and long run equilibrium of a firm under perfect competition. If the firm is in equilibrium in short run, will it be in equilibrium in long run also? **20**
- Q.7 a) What is discriminatory monopoly? Explain the various types of price discrimination. **10**  
b) How a discriminating monopolist reaches equilibrium? **10**

# End Semester Examination, Dec. 2019

B.A. (Hons) Economics – First Semester

## MACRO ECONOMICS–I (BAECO-105)

Time: 3 Hours

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all. **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Answer all the questions (not in more than 50 words):
- Differentiate between nominal and real variables.
  - What is potential output for an economy?
  - What do you understand by supply shock?
  - How is GDP deflator calculated?
  - Enumerate any two differences between Keynesian and classical models of income determination.
  - Briefly explain the speculative demand for money.
  - Contrast between ex-ante and ex-post variables.
  - Explain how a rise in marginal propensity to consume impacts the private savings?
  - Define 'Output gap'.
  - Enumerate determinants of transaction demand for money. **2x10**

### **PART-A**

- Q.2
- Explain the relative income hypothesis. What do you understand by paradox of thrift? **10**
  - Explain the concept of deflationary gap. Support your answer with suitable example. **10**
- Q.3
- Explain what happens to consumption, investment and interest rate when government increases taxes? **10**
  - What do you understand by psychological law of consumption? Derive Keynesian consumption function. **10**
- Q.4
- How an expansionary monetary policy does impacts aggregate demand and aggregate supply curves? **10**
  - Is monetary policy effective in taking an economy from under employment level of output to full employment level? Substantiate your answer with suitable diagrams. **10**

### **PART-B**

- Q.5
- Derive and graph savings function using absolute income hypothesis of consumption. **10**
  - Explain life cycle hypothesis of consumption. How does it solve consumption puzzle? **10**
- Q.6
- Critically evaluate the Baumol's Inventory theoretic approach. **10**
  - Explain the Cambridge quantity theory of money? How is it different from Fisher's version of it? **10**
- Q.7 Consider the economy as:
- $$Y = C + I = G$$
- $$Y = 8000$$
- $$G = 2500$$
- $$T = 2000$$
- $$C = 1000 + \frac{2}{3}(Y - T)$$
- $$I = 1200 - 100r$$
- Compute private savings.

- b) Find equilibrium interest rate
- c) Suppose government expenditure declines by 500. Compute private saving.
- d) Find new equilibrium interest rate.

**5x4**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**MACRO ECONOMICS-I (BAECO-105)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Briefly explain under equilibrium.
  - b) Define 'inflationary gap'.
  - c) Explain macroeconomics as a branch of economics.
  - d) What are fundamental features of Keynesian school of thought?
  - e) Define 'aggregate supply'.
  - f) Evaluate Keynes psychological law of consumption.
  - g) Does national income accurately measure economic welfare? Comment
  - h) Explain consumption function.
  - i) Define Open Market operations and CRR (Cash Reserve Ration) as the instrument of monetary policy.
  - j) What is the difference between microeconomics and macroeconomics? **2×10**

**PART-A**

- Q.2 Elaborate the importance of macroeconomics. Critically evaluate classical school of thought and why it collapsed? **20**
- Q.3 Define the aggregates of national income. Also state the expenditure method to calculate the national income in the economy with hypothetical example. **20**
- Q.4 What are the determinants of investment? Also explain the concept of Investment Multiplier. **20**

**PART-B**

- Q.5 Explain the basic nature of monetary and fiscal policies. What are their objectives? **20**
- Q.6 Critically evaluate Permanent Income Hypothesis. **20**
- Q.7
- a) Explain Baumol's Inventory Theoretic Approach. **10**
  - b) Briefly define Keynesian liquidity preference theory. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Second Semester  
**MICRO ECONOMICS-II (BAECO-203)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 Briefly answer the following question (Attempt all):
- a) What is the kinked demand curve in the sticky model of duopoly?
  - b) Mention three implications of Baumol's static model without advertising.
  - c) What is the difference between TVP and TPP?
  - d) Distinguish between partial equilibrium and general equilibrium.
  - e) State the second theorem of welfare economics.
  - f) What is meant by bargaining power of the trade union?
  - g) What is meant by sales maximization?
  - h) Distinguish between price leaders and quantity leaders.
  - i) What do you understand by prisoner's dilemma?
  - j) What do you understand by simultaneous game? **2×10**

**PART-A**

- Q.2 What is meant by price rigidity? What would happen to price rigidity if the demand curve undergoes:
- a) Pivotal shift.
  - b) Parallel shift. **20**
- Q.3 How is the Cournot Nash equilibrium determined? Why is it stable? Why don't duopolists set an output at joint profit maximizing level by tacit collusion? **20**
- Q.4 Explain Baumol's static multiproduct model of sales maximisation under the presumption of advertising or selling expenditure. **20**

**PART-B**

- Q.5 "Supply curve of skilled labour by an individual worker bends backwards at high wage rates while the market supply curve steadily slopes upwards". Explain in detail. **20**
- Q.6 What are the various objectives the trade unions are formed to serve? Explain with the help of a figure how trade unions can attempt these objectives? **20**
- Q.7 Write short notes on the following:
- a) Arrow's impossibility theorem.
  - b) What is the condition of equilibrium of a producer when the factor market is competitive but the product market is not? **10×2**

**End Semester Examination, Dec. 2019**  
**B.A. / B. Sc. (Hons.) Economics – Second Semester**  
**ECONOMICS STATISTICS-I (BAECO-204)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Find the missing figure  

$$\text{Median} = \text{Mode} + \frac{\text{Mean} - \text{Mode}}{3}$$
- b) Explain a pictogram.
- c) What do you understand by 'dispersion'?
- d) What is joint probability?
- e) Define primary and secondary data.
- f) Explain the purpose of tabular presentation of statistical data.
- g) Explain the term 'mutually exclusive'.
- h) Write down the formula of median for continuous series.
- i) Find mode of the given data  
 8, 5, 9, 5, 7, 8, 5, 9
- j) Define normal distribution. **2×10**

**PART-A**

- Q.2 a) What do you mean by statistics? What are functions and scope of statistics? **5**
- b) Distinguish between primary and secondary data. Explain the various methods of collecting primary data and point out their relative merits and demerits. **10**
- c) Define tabulation. Explain different parts of table by giving an example. **5**

Q.3 a) The average stock prices, on a particular day, of some firms are mentioned below. Draw a single bar diagram from these data:

Firm:	A	B	C	D	E	F
Stock Prices:	200	165	40	92	184	160

**10**

b) Draw less than and more than ogives from the data given below:

Marks	No. of Students	Marks	No. of Students
10 – 20	6	60 – 70	16
20 – 30	8	70 – 80	8
30 – 40	12	80 – 90	5
40 – 50	18	90 – 100	2
50 – 60	25		

**10**

Q.4 a) Calculate the value of mode for the following data:

Marks:	10	15	20	25	30	35	40
Frequency:	8	12	36	35	28	18	9

**10**

- b) Find the interquartile range and the coefficient of quartile deviation from the following data:

Marks in statistics	No. of Students
Above 0	150
10	140
20	100
30	80
40	80
50	70
60	30
70	14
80	0

**10**

**PART-B**

- Q.5 a) A university has to select an examiner from a list of 50 persons, 20 of them are women and 30 men, 10 of them knowing Hindi and 40 not, 15 of them being teachers and the remaining 35 not. What is the probability of the university selecting a Hindi knowing woman teacher? **10**
- b) A bag contains 8 white and 4 red balls 5 balls are drawn at random. What is the probability that 2 of them are red and 3 white? **10**
- Q.6 State and prove the addition and multiplication theorems of probability giving one example of each. **20**
- Q.7 a) Suppose that a manufacturing product has 4 defects per unit of product inspected. Using Poisson's distribution, calculate the probability of finding a product without any defect, 2 defects and 4 defects. (Given  $e^{-4} = 0.01832$ ). **10**
- b) A problem in statistics is given to 5 students: A, B, C, D and E. Their chances of solving it are  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$  and  $\frac{1}{6}$ , what is the probability that the problem will be solved. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Second Semester  
**ECONOMICS HISTORY OF INDIA (BAECO-205)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Briefly explain the following in not more than 50 words:

- a) Mahalwari system.
- b) Composition of India's foreign trade in the early 19<sup>th</sup> century.
- c) Benefits accrued to British companies with railways in India?
- d) Zamindari system.
- e) Drain of wealth.
- f) Deindustrialization.
- g) The Guarantee given on investments in railways in India.
- h) Welter of rights.
- i) Reasons for population growth post 1920s in India.
- j) Protected forests.

**2×10**

**PART-A**

- Q.2 a) Critically explain dual mandate of British in Technological advancement in India. **5**  
b) Discuss the initiatives taken by the British in the field of technology in India. **7**  
c) How did India respond to such stimulus? **8**
- Q.3 Discuss the process of commercialization of agriculture under British rule. How did it affect India's foreign trade pattern? **20**
- Q.4 a) Analyze the different land revenue systems introduced in India under British rule. **10**  
b) How did these systems affect the peasant and tribal class? **10**

**PART-B**

- Q.5 Critically analyze the government and fiscal policy measures adopted under colonial rule. **20**
- Q.6 a) Discuss the concept of commons existing under British rule. **5**  
b) How did the British policy impact commons, peasant and tribal class? **15**
- Q.7 a) What were the benefits reaped and costs paid for establishment of railways by agricultural and industrial sector of India? Elaborate. **10**  
b) Discuss the changes brought about by railways in employment creation in Indian economy during colonial period. **10**

**End Semester Examination, Dec. 2019**  
B. A. / B. Sc. (Hons.) ECONOMICS – Second Semester  
**QUANTITATIVE REASONING (BAECO-G-206)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 5

Note: *The paper consists of **fifty** multiple questions; each question has **four** options with **one** correct answer. Select the correct answer. Attempt all questions. All questions are of **TWO** marks each.*

*Mention the correct option for each question in the blank answer key given herein below. (Answer sheets with empty answer keys despite the correct options being ticked, will not be evaluated)*

<b>1.</b>	<b>2.</b>	<b>3.</b>	<b>4.</b>	<b>5.</b>	<b>6.</b>	<b>7.</b>	<b>8.</b>	<b>9.</b>	<b>10.</b>
<b>11.</b>	<b>12.</b>	<b>13.</b>	<b>14.</b>	<b>15.</b>	<b>16.</b>	<b>17.</b>	<b>18.</b>	<b>19.</b>	<b>20.</b>
<b>21.</b>	<b>22.</b>	<b>23.</b>	<b>24.</b>	<b>25.</b>	<b>26.</b>	<b>27.</b>	<b>28.</b>	<b>29.</b>	<b>30.</b>
<b>31.</b>	<b>32.</b>	<b>33.</b>	<b>34.</b>	<b>35.</b>	<b>36.</b>	<b>37.</b>	<b>38.</b>	<b>39.</b>	<b>40.</b>
<b>41.</b>	<b>42.</b>	<b>43.</b>	<b>44.</b>	<b>45.</b>	<b>46.</b>	<b>47.</b>	<b>48.</b>	<b>49.</b>	<b>50.</b>

- Q.1 If  $7(X - 2) = 3X - 2$ , what is the value of  $X$  ?  
 a)  $-4$                       b)  $-3$   
 c)  $2$                          d)  $3$
- Q.2 If  $3x - 2 = 2x + 5$ , then  $5x =$   
 a)  $15$                         b)  $0$   
 c)  $35$                         c)  $7$
- Q.3 What number will follow the given series of numbers: 3, 6, 11, \_\_\_\_\_?  
 a)  $13$                         b)  $16$   
 c)  $18$                         d)  $22$
- Q.4 Complete the analogy:  $144 : 23 :: 169 : \underline{\hspace{2cm}}$   
 a)  $32$                         b)  $24$   
 c)  $25$                         d)  $26$
- Q.5 Guess the next number:  $19 : 361 :: 66 : \underline{\hspace{2cm}}$   
 a)  $693$                       b)  $256$   
 c)  $4356$                      d)  $5346$
- Q.6 Tomato: Beans: Cucumbers: Com  
 a) They are all vegetables.  
 b) The above are all fruits.  
 c) These are all roots.  
 d) These must be modified parts of the stem.
- Q.7 Find the missing term: AEI: LQV:: ACE: H \_\_\_\_, \_\_\_\_  
 a) OP                         b) DC  
 c) KN                         d) QW
- Q.8 Alzheimer's disease : Dementia :: food poisoning : \_\_\_\_\_  
 a) High fever                b) Bloating  
 c) Bleeding                 d) Running nose
- Q.9 DFH : FHD :: MOQ:?  
 a) MQO                      b) VXZ  
 c) OQM                      d) NPQ
- Q.10 One morning Udai and Vishal were talking to each other face to face at a crossing. If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?  
 a) East                        b) West  
 c) North                      d) South
- Q.11 If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?  
 a) Brother                    b) Sister  
 c) Nephew  
 d) Cannot be determined
- Q.12 If  $A + B$  means A is the mother of B;  $A - B$  means A is the brother B;  $A \% B$  means A is the father of B and  $A \times B$  means A is the sister of B, which of the following shows that P is the maternal uncle of Q?  
 a)  $Q - N + M \times P$   
 b)  $P + S \times N - Q$   
 c)  $P - M + N \times Q$

- d)  $Q - S \% P$
- Q.13 If in a code language. COULD is written as BNTKC and MARGIN is written as LZQFHM, how will MOULDING be written in that code? (Assistant Grade, 1997)
- a) CHMFINTK      b) LNKTCHMF  
c) LNTKCHMF      d) NTTKHCMF  
e) None of these
- Q.14 If in a certain language. GAMBLE is coded as FBLCKF, how is FLOWER coded in that code?
- a) GKPVFQ      b) EMNXDS  
c) GMPVDS      d) HNQYGT  
e) EKNVDQ
- Q.15 If blue is called green, green is called yellow, yellow is called red, red is called brown and brown is called pink, then, what is the color of the blood?
- a) Red      b) Brown  
c) Pink      d) Yellow
- Q.16 Two friends, Akash and Beenu had some candies each. One of them had 15 candies more than the other. The candies with Akash was 60% of the total candies with them. How many candies did each have?
- a) 40, 25      b) 47, 32  
c) 45, 30      d) 49, 34
- Q.17 A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets ₹1000 more than D, what is B's share?
- a) ₹500      b) ₹1500  
c) ₹2000      d) None of these
- Q.18 A creative constructor has hired some workers from Kolkata. From those newly appointed workers if 10 men working 6 hours a day can do a work in 20 days. Then 8 men working 10 hours a day can do it in how many days?
- a) 15      b) 14  
c) 17      d) 18
- Q.19 A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for ₹3200. With the help of C, they completed the work in 3 days. How much is to be paid to C?
- a) ₹375      b) ₹400  
c) ₹600      d) ₹800
- Q.20 **Assertion (A):** If the weather is hot and humid, we feel more comfortable.  
**Reason (R):** If the climate is humid, the evaporation of the sweat is faster.
- a) Both A and R are true and R is the correct explanation of A.  
b) Both A and R are true but R is NOT the correct explanation of A.  
c) A is true but R is false.  
d) A is false but R is true.  
e) Both A and R are false.



- e) Both (1) and (2) follow
- Q.28 What will be the total weight of 10 poles, each of the same weight? Statements:  
One-fourth of the weight of each pole is 5 kg.  
The total weight of three poles is 20 kilograms more than the total weight of two poles.
- I alone is sufficient while II alone is not sufficient.
  - II alone is sufficient while I alone is not sufficient
  - Either I or II is sufficient
  - Neither I nor II is sufficient
  - Both I and II are sufficient
- Q.29 'Reading' is related to 'knowledge' in the same way as 'Work' is related to:
- Money
  - Employment
  - Experience
  - Engagement
- Q.30 Choose the word which is different from the rest.
- Kiwi
  - Eagle
  - Emu
  - Ostrich
- Q.31 The total of the ages of Amar, Akbar and Anthony is 80 years. What was the total of their ages three years ago?
- 71 years
  - 72 years
  - 74 years
  - 77 years
- Q.32 A pineapple costs ₹7 each. A watermelon costs ₹5 each X spends ₹38 on these fruits. The number of pineapples purchased is
- 2
  - 3
  - 4
  - Data inadequate
- Q.33 Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.  
120, 99, 80, 63, 48, ?
- 35
  - 38
  - 39
  - 40
- Q.34 Question: In which year was Rahul born? Statements:  
Rahul at present is 25 years younger to his mother.  
Rahul's brother, who was born in 1964, is 35 years younger to his mother.
- I alone is sufficient while II alone is not sufficient.
  - II alone is sufficient while I alone is not sufficient.
  - Either I or II is sufficient.
  - Neither I nor II is sufficient.
  - Both I and II are sufficient.
- Q.35 How many children does M have? Statements:  
H is the only daughter of X who is wife of M.  
K and J are brothers of M.
- I alone is sufficient while II alone is not sufficient
  - II alone is sufficient while I alone is not sufficient
  - Either I or II is sufficient

- d) Neither I nor II is sufficient
- e) Both I and II are sufficient

Q.36 The last Sunday of March, 2006 fell on which date?

The first Sunday of that month fell on 5<sup>th</sup>.

The last day of that month was Friday.

- a) I alone is sufficient while II alone is not sufficient
- b) II alone is sufficient while I alone is not sufficient
- c) Either I or II is sufficient
- d) Neither I nor II is sufficient
- e) Both I and II are sufficient

Q.37 Which one of the following is always found in 'Bravery'?

- a) Experience      b) Power
- c) Courage        d) Knowledge

Q.38 What is found necessarily in milk?

- a) Cream            b) Curd
- c) Water            d) Whiteness

Q.39 Choose the word which is different from the rest.

- a) Volume          b) Size
- c) Large            d) Shape
- e) Weight

Q.40 Choose the word which is different from the rest.

- a) Uncle            b) Nephew
- c) Brother          d) Cousin
- e) Niece

Q.41 **Statements:**

I. Standard of living among the middle class society is constantly going up since part of few years.

II. Indian Economy is observing remarkable growth.

- a) Statement I is the cause and statement II is its effect.
- b) Statement II is the cause and statement I is its effect.
- c) Both the statements I and II are independent causes.
- d) Both the statements I and II are effects of independent causes.
- e) Both the statements I and II are effects of some common cause.

Q.42 **Statements:**

I. The staff of Airport Authorities called off the strike they were observing in protest against privatization.

II. The staff of Airport Authorities went on strike anticipating a threat to their jobs.

- a) Statement I is the cause and statement II is its effect.
- b) Statement II is the cause and statement I is its effect.
- c) Both the statements I and II are independent causes.
- d) Both the statements I and II are effects of independent causes.
- e) Both the statements I and II are effects of some common cause.

- Q.43 A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :
- a)  $\frac{1}{4}$                       b)  $\frac{1}{10}$   
c)  $\frac{7}{15}$                       d)  $\frac{8}{15}$
- Q.44 Five men A, B, C, D and E read a newspaper. The one who reads first gives it to C. The one who reads last had taken from A. E was not the first or last to read. There were two readers between B and A. B passed the newspaper to whom?
- a) A                              b) C  
c) D                              d) E  
e) None of these
- Q.45 A team of five is to be selected from amongst five boys A, B, C, D and E and four girls P, Q, R and S. Some criteria for selection are:  
A and S have to be together.  
P cannot be put with R.  
D and Q cannot be together.  
C and E have to be together.  
R cannot be put with B.  
Unless otherwise stated, these criteria are applicable to all the question below : If two of the members are girls and D is one of the members, the members of the team other than D are :
- a) P Q B C                      b) P Q C E  
c) P S A B                      d) P S C E
- Q.46 If 30% of a number is 12.6, find the number.
- a) 45                              b) 38  
c) 40                              d) 42
- Q.47 What number must be added to 6, 16 and 8 to get an average of 13?
- a) 22                              b) 25  
c) 20                              d) 18

- Q.48 A father is 30 years older than his son. He will be three times as old as his son after 5 years. What is the father's present age?
- a) 35                      b) 45  
c) 40                      d) 30
- Q.49 If  $u > t$ ,  $r > q$ ,  $s > t$  and  $t > r$  which of the following must be true?  
 $u > s$ ,  $s > q$ ,  $u > r$
- a) I only                      b) II only  
c) III only                      d) I and II  
e) II and III
- Q.50 Statements: All branches are flowers. All flowers are leaves. Conclusions:
- I. All branches are leaves.  
II. All leaves are branches.  
III. All flowers are branches.  
IV. Some leaves are branches.
- a) None follows  
b) Only I and IV follow  
c) Only II and III follow  
d) All follow

**End Semester Examination, Dec. 2019**  
 B.A. / B. Sc. (Hons.) Economics – Third Semester  
**MICROECONOMICS EXTENSION AND APPLICATIONS (BAEH-C-303)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Distinguish between the net demand and gross demand.
  - b) Explain the monotonic preferences.
  - c) Define the numeraire good.
  - d) Differentiate between risk averse and risk loving consumers.
  - e) Define the indirect utility function.
  - f) Define WARP and SARP.
  - g) Define externalities with example.
  - h) What does transitivity of preference mean?
  - i) What do you understand by the maximization of utility?
  - j) Differentiate between normal and giffen goods. **2×10**

**PART-A**

- Q.2
- a) Explain the point of bliss (satiation point), with the help of suitable example and diagram. **10**
  - b) What do you understand by the consumer surplus explain with the help of hypothetical example and draw the diagram for same. **10**
- Q.3
- a) Suppose that there are two consumers A and B, who have preferences over "money" and smoke'. Both of them like money, but that A likes to smoke and B likes clean air. Depict the consumption possibilities for the two consumers in Edgeworth Box. **10**
  - b) Explain in detail all three axioms of rational choice of a consumer behaviour theory. **10**
- Q.4 A consumer is able to consume the following bundles of pizza and coke, when the price of pizza is ₹3 and price of coke is ₹4,

Pizza	Coke
12	0
6	4
0	8

Refer to the above table and answer the following questions:

- a) How much is consumer income?
- b) Draw a budget constraint with the given information and label it 'B'.
- c) Construct a new budget constraint showing the change if the price of pizza falls to ₹2 and label it C.
- d) Given the original price, construct a new budget constraint if this consumer income increased to ₹48, Label it 'D'. **5×4**

**PART-B**

- Q.5 a) Show graphically the substitution and the real income effects of a price change as per Hicks and Slutsky's versions. What is the advantage of the Slutsky's measure? **10**  
b) Explain the budget constraint in terms of buying and selling. In what case a consumer is net buyer and net seller. **10**

- Q.6 Suppose there only two goods those are sandwich and jelly. You have no exogenous income but you do own 6 jars of sandwich and 2 jars of jelly. The price of sandwich is \$4 per jar, and the price of jelly is \$6 per jar. (i) On a graph sandwich on the horizontal and jelly on the vertical axis, illustrate your budget constraint on a graph.(ii) How does your constraint change when the price of sandwich increases to \$6, show on a new graph? **20**

- Q.7 A consumer buying behavior of good X and Y in two price situations are observed as follows:

Observation	Price		Bundles	
1	6	3	6	6
2	5	5	10	0

Which consumption bundle has he revealed preferred to other? Does his buying behavior reveal violation of the Weak Axiom of Revealed Preference? **20**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Third Semester  
**MACRO ECONOMICS-II (BAEH-C-304)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) What do you understand by the term depreciation?
  - b) Explain demand-pull inflation.
  - c) What relationship is depicted by Phillips curve?
  - d) Briefly explain J curve.
  - e) What is the fundamental difference between the balance of trade and balance of payments?
  - f) Explain liquidity trap.
  - g) What do you understand by crowding out effect?
  - h) Explain golden rule level of capital of solow model.
  - i) Explain the slope of LM curve.
  - j) What is the difference between fixed and flexible exchange rate? **2×10**

**PART-A**

- Q.2
- a) Mathematically derive IS curve. Demonstrate the same graphically. **10**
  - b) Explain the interaction of IS and LM curve in determining exchange rate. **10**
- Q.3
- a) Define Aggregate Supply. Mathematically derive the same. **10**
  - b) Explain the case of Long run supply curve under Keynesian and classical model. **10**
- Q.4
- What do you understand by unemployment? What are its causes and types? **20**

**PART-B**

- Q.5
- a) Critically evaluate Donbush's overshooting model. **10**
  - b) Explain purchasing power parity theory in detail. Support your answer with suitable example. **10**
- Q.6
- Construct the solow model. Explain the steady state equation of solow model. Demonstrate the same graphically. **20**
- Q.7
- a) Explain the structure of Balance of trade and balance of payments, with hypothetical example. **10**
  - b) What are the approaches to correct balance of payment disequilibrium? **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Fourth Semester  
**PUBLIC ECONOMICS (BAEH-C-404)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) Why revenue deficit is important in public budget?
- b) Why the NITI Aayog differs from erstwhile Planning Commission?
- c) Differentiate global and local public goods.
- d) What do you mean by tax base?
- e) Distinguish private and social benefits.
- f) What is cooperative fiscal federalism?
- g) What do you mean by incidence of a tax?
- h) Why horizontal equity is relevant in fiscal federal structure of India?
- i) Give two important reasons for the importance of finance commission in India.
- j) Why GST Council has been formed in India? **2×10**

**PART-A**

- Q.2
- a) Lack of property right may cause 'free-riding' in the use of public goods – justify it. **5**
  - b) How the government determines equilibrium in public goods in a Lindahl economy. **7**
  - c) Write a brief note on the 'distribution' and 'stabilization' roles of government in economy. **8**
- Q.3
- a) Why presence of externalities causes inefficiency in the private market solution? **4**
  - b) Diagrammatically explain the economic impact of negative externality. **8**
  - c) Using a suitable example, explain Coase theorem for a successful private bargaining solution to the externalities. **8**
- Q.4
- a) Distinguish impact of a tax from its incidence. How the impact and incidence of tax can use to differentiate direct and indirect taxes? **4**
  - b) Explain the Benefit Principle of taxation. **8**
  - c) Suppose the government imposes  $t$  amount of unit tax on production of a commodity which caused price of the commodity to increase from  $p_0$  to  $p_1$  such that  $p_1 = p_0 + t$ . Explain the situation using suitable diagrams from both consumer and producer sides. **8**

**PART-B**

- Q.5
- a) Write a concise note on federal power of taxation in India. **7**
  - b) What are the main differences between GST and VAT? **7**
  - c) Let a producer charged ₹1000 for the product along with 12% excise duty and 15% VAT. Now, the same in GST regime, there are 9% CGST and 9% SGST. Justify whether the GST is beneficial or detrimental. **6**
- Q.6
- a) Write a short note on 'Peacock-Wiseman hypothesis'. **6**
  - b) Systematically present the broad heads of public budget at national or state level. **8**

- c) Briefly explain the role of three key funds in federal fiscal structure as per Constitution of India. **6**
- Q.7 a) Why the Finance Commission is constituted in India? What is the role of State Finance Commissions? **8**
- b) Briefly explain the key channels of vertical devolution in India. **6**
- c) What are the major recommendations of Fourteenth Finance Commission of India? **6**

## End Semester Examination, Dec. 2019

B.A. / B. Sc. (Hons.) Economics – Fifth Semester

### MONEY AND BANKING (BAEH-C-501)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- What is meant by the term money supply?
- What is bank rate?
- State two functions of money.
- What is meant by credit creation?
- What do you understand by legal reserve ratio?
- What is demand deposit by banks?
- State two monetary measures of credit control by central banks.
- What are the various money stock measures?
- Explain the acceptance of deposit function of Commercial Bank.
- Find the simple interest on ₹68,000 at  $16\frac{2}{3}\%$  per annum for a period of 9 months. **2×10**

#### **PART-A**

Q.2 a) There are three goods produced in an economy by three individuals:

Good	Producer
Apples	Orchard owner
Bananas	Banana grower
Chocolate	Chocolatier

If the orchard owner likes only bananas, the banana grower likes only chocolate, and the chocolatier likes only apples, will any trade among these three persons take place in a barter economy? **10**

b) Explain the Gurley and Shaw approach of the money. **10**

Q.3 Suppose that the money market of Econometallica has the following money supply and demand equations:

Money Supply:  $M = 8000$

Money Demand:  $M = 10,000 - 40,000r$

Where money is in billions of dollars and interest rates,  $r$ , is written as a decimal (e.g., an interest rate of 10% would be written as .1 in the equation).

- Sketch the money supply and demand curves, putting the quantity of money on the horizontal axis and the interest rate (in percent) on the vertical axis. Indicate the slope and intercept of each curve.
- Calculate the equilibrium interest rate and amount of money.
- Give a brief explanation as to why the interest and prices of bonds are negatively related.
- Suppose the interest rate in the money market in Econometallica is currently at 10%. What is the amount of excess supply of or excess demand for money? How will the market adjust back to the equilibrium?
- Suppose that the government of Econometallica likes the interest rate at 10%. What is the amount of increase or decrease in its money supply that will allow it to reach such an interest rate in equilibrium? **4×5**

- Q.3 a) What is a yield curve and what does it represent? **7**
- b) ₹5887 is divided between Shyam and Ram, such that Shyam's share at the end of 9 years is equal to Ram's share at the end of 11 years, compounded annually at the rate of 5%. Find the share of Shyam. **6**
- c) A sum of money invested for a certain number of years at 8% p.a. simple interest grows to ₹180. The same sum of money invested for the same number of years at 4% p.a. simple interest grows to ₹120 only. For how many years was the sum invested. **7**

**PART-B**

- Q.5 a) Differentiate between capital market and money market on the basis of the following
- i) Meaning
  - ii) Liquidity
  - iii) Safety
  - iv) Expected return **10**
- b) What do you understand by the segmented market hypothesis and preferred habitat hypothesis? **10**
- Q.6 a) What is a commercial bank? Discuss the Role and functions of commercial banks. **10**
- b) What are the different types of deposits accepted by banks? What is credit creation in banks and write the process of credit creation in banks. **10**
- Q.7 a) What is monetary policy? How are monetary tools used to combat unemployment and inflation? **10**
- b) Discuss full employment and price stability as objectives of monetary policy. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Fifth Semester  
**DEVELOPMENT ECONOMICS (BAEH-C-502)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Explain head count ratio.
  - b) What do you understand by relative poverty?
  - c) In what ways India is working towards achieving sustainable development goals?
  - d) How economic growth differs from economic development?
  - e) What do you understand by transfer principle?
  - f) What is Effective labor as per the Solow mode of growth?
  - g) Explain actual, warranted and natural growth rates.
  - h) Explain ecological globalization.
  - i) Differentiate between luxury goods and necessary goods.
  - j) Define 'sustainable development'. **2×10**

**PART-A**

- Q.2
- a) What are the characteristics of a developing nation? **14**
  - b) Explain how nations are classified? **6**
- Q.3
- a) Critically evaluate the interdependence between poverty, inequality and development. **8**
  - b) Explain Kuznet's curve and also mention its criticisms. **12**
- Q.4
- Explain the versions of theory of balanced growth given by Nurkse and Rosenstein-Rodan. **20**

**PART-B**

- Q.5
- a) Explain the steady state in Solow growth model. **6**
  - b) Explain what impact increases in savings and population growth will have on growth? **7**
  - c) Explain what factor will bring an economy out of the steady state? **7**
- Q.6
- a) Explain in detail different aspects of sustainable development. How sustainable development can help in the economy's growth? **10**
  - b) Mention the four approaches to the sustainable development in an economy. **10**
- Q.7
- a) 'Globalization has worsened inequality.' Do you agree or disagree? Give reasons. **10**
  - b) Highlight the 1991 reforms in India which have led to globalization. Elaborate its impact on the Indian economy. **10**

**End Semester Examination, Dec. 2019**  
 B.A. / B. Sc. (Hons.) Economics – Third Semester  
**INTRODUCTION TO ECONOMETRICS (CODE: BAEH-C-503)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) What are the main goals of econometrics?
- b) Briefly explain the Specification stage in econometric modeling.
- c) Differentiate estimates and estimators.
- d)  $R^2$  varies between 0 to 1. Do you agree?
- e) If  $Q_i = \alpha L_i^\beta$  then prove that its elasticity is  $\beta$  for the log-log transformation of model.
- f) How the dummy variable is constructed?
- g) Define the distributive lag model and autoregressive model.
- h) Justify the value of D-W statistics for positive and negative autocorrelation.
- i) Why multicollinearity is a matter of concern in construction of dummy variable model.
- j) Suppose price-demand relationship is required to analyze for Faridabad using relevant information from 1981 to 2019. Since there was a structural change happened in 1991, researcher keeps it in mind and considers the same in regression model. How to deal it? **2×10**

**PART-A**

- Q.2 a) What are the desirable properties of an econometric model? [CO-2][L-4] **5**  
 b) For the given data for  $S_i = \alpha + \beta P_i$ , calculate  $\hat{\beta}$ .

n	1	2	3	4	5	6	7	8	9	10	11	12
S	69	76	52	56	57	77	58	55	67	53	72	64
P	9	12	6	10	9	10	7	8	12	6	11	8

- c) Prove that  $\text{var}(aZ + b) = a^2 \text{var}(Z)$ . **5**  
 d) Explain the sources of multicollinearity. **5**
- Q.3 a) Explain how do you decide on the goodness of fit in a regression model. **14**  
 b) Outline the main propositions of Gauss-Markov principles? **6**
- Q.4 a) Show that least square estimate is the best. **6**  
 b) Formulate the k-variate general regression model, and explain its main CLRM assumptions. **14**

**PART-B**

- Q.5 a) Find out the  $\hat{\alpha}$  and  $\hat{\beta}$  for a model  $S_i = \alpha + \beta P_i + u_i$  using least square technique. **12**  
 b) Determine the  $\hat{\beta}$  for above regression model if it passes through origin. **8**
- Q.6 a) Construct a regression model using dummy variable technique to adjust structural break (slope change). **14**  
 b) Explain a regression model with qualitative dependent variable. **6**

- Q.7 a) What is heteroscedasticity and how it is detected? In presence of heteroscedastic variance, how do you estimate the model? **14**
- b) State the main causes for:
- i) Autocorrelation.
  - ii) Multicollinearity in regression model. **3×2**

# End Semester Examination, Dec. 2019

B.A. / B. Sc. (Hons.) Economics – Fifth Semester

## FINANCIAL ECONOMICS (BAEH-D-505)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in total from **Part-A, Part-B and Part-C. Q.1 (Part-A) and Q.2 (Part-B) are compulsory.** Attempt any **THREE** questions from **Part-C.** Marks are indicated against each question.

### **PART-A**

- Q.1
- Define the term 'corporate Finance'.
  - Why is the analysis of trends in financial ratios important?
  - Explain Indgentes bills and Accommodation bills.
  - Differentiate between certificate of deposits and commercial bills.
  - What do you understand by intrinsic value?
  - What is mutually exclusive investment project and dependent project?
  - If capital rationing is not optimal, any company use it?
  - Define project financing.
  - What is Risk Analysis?
  - Explain Agency cost of debt.

**2×10**

### **PART-B**

- Q.2 Attempt (**any four**) of the following:
- Give a detail comparison between profit maximization decision criteria and wealth maximization decision criteria.
  - Explain the difference between hedging, speculation and arbitrage. Also define hedges and speculators.
  - What are options? Explain the different types of options. When is a call option in the money, out of the money and at the money, explain with the help of example.
  - In trying to judge whether a company has too much debt, what financial ratios would you use and for what purpose?
  - Carbide Chemical company is considering the replacement of two old machines with a new, more efficient machine. It has determined that the relevant after-tax incremental operating cash flows of this replacement proposal are as follows:

End of the year

	0	1	2	3	4	5	6	7	8
Cash flows in \$	404,424	86,890	106,474	91,612	84,801	84,801	75,400	66,000	92,400

What is the project's net present value if the required rate of return is 14 percent?  
Is the project acceptable?

**5×4**

### **PART-C**

- Q.3
- Select the alternative from the four options given below that give the highest return:
    - 7,50,000 available today.
    - 1,810,000 to be received after 8 cycles.
    - 1,00,000 per annum in perpetuity.
    - 30,000 per month for a year and Rs 50,000 at the end of the year.

- Assume that the opportunity cost of capital is 11.5%. **12**
- b) What do you understand by the time value of money? **2**
- c) Explain compounding and discounting Techniques. **6**

- Q.4 a) How do you think the value of bond would change with (i) increasing face value; (ii) increasing coupon rate; (iii) increasing the periodicity of coupon; (iv) increasing the term of maturity. **4**
- b) Government of India is planning to issue a deep discount (zero coupon) bond with the face value of Rs 25,000 payable at the end of 10 years. The planned yield for investor is 12%
- i) What would be the issue price of the deep discount bond?
- ii) If the proposed issue price of the bond is 7500 what yield would it offer to the subscribers of the bond if they hold it till the redemption on the bond, i.e. YTM of zero coupon bond. **16**

- Q.5 a) What do you understand by intrinsic value? How is it related to or different from market value? **5**
- b) A stock paid a \$ 10 dividend last year. Dividends are expected to grow 30% of year 1 and 2; 15% for years 3 to 5; and 5% from year 6. The required rate of return on equity is 10%. Calculate the intrinsic value of stock based upon multi stage dividend discount model. **15**

Q.6 Using the following information complete the balance sheet:

Long term debt to equity	.5 to 1
Total asset turnover	2.5 times
Average collection period*	18 days
Inventory turnover	9 times
Gross profit margin	10%
Acid test ratio	1 to 1

\* Use a 360 day year and all sales on credit.

Cash	\$ _____	Notes and payables	\$100,000
Account Receivable	_____	Long term debt	_____
Inventory	_____	Common stock	\$100,000
Plant and equipment	_____	Retained earnings	\$100,000
Total assets	\$ _____	Total liabilities and shareholders' equity	\$ _____

**20**

- Q.7 a) Define Bonds. **4**
- b) Explain the different types of Bonds. **8**
- c) Differentiate between Bonds and Debentures. **8**

## End Semester Examination, Dec. 2019

B.A. / B. Sc. (Hons.) Economics – Fifth Semester

### FINANCIAL ECONOMICS (BAEH-D-505)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Explain systematic risk vs. unsystematic risk.
  - b) What is security market line?
  - c) Differentiate between hedging and speculation.
  - d) Define hedgers and speculators.
  - e) Define call option and put option.
  - f) What do you understand by clearing house?
  - g) Define flat yield curve.
  - h) What do you understand by sources of cash and uses of cash?
  - i) What do you understand by immunization?
  - j) Differentiate between payback period and NPV. **2×10**

#### **PART-A**

- Q.2
- a) Differentiate between profit maximisation and wealth maximisation. According to you which out of both should be primary goal of an organisation and why? **10**
  - b) Mention the assumptions of MM theory when there are no taxes imposed. And analyse the operational justification of the MM theory. **10**
- Q.3
- a) The following ratios are given for the mintex company: Net profit margin ratio = 4%, current ratio = 1.25, return on net worth = 15.23 %, total debt on total assets ratio = 0.40, inventory turnover ratio = 25. Complete the following table

Profit and Loss account	
	<input type="checkbox"/>
Sales	
Cost of goods sold	
Operating expenses	700
PBIT	
Interest	45
Profit before tax	
Tax provision (50%)	

Balance Sheet			
Net worth		Fixed assets	
Lon term debt (15% interest)		Current assets	180
Accounts payable		Cash	
		Receivables	60
		Inventory	

- 10**
- b) What re the objectives of reporting financial statements? State the limitations on the use of financial statements? **10**
- Q.4
- a) At 100 par value bond bears a coupon rate of 14% and matures after 5 years. Interest is payable semi annually. Compute the value of the bond if the required rate

of return is 16 percent. **6**

- b) A promise to pay  $\square 1000$  a year for three years annuity. If you were to receive such an annuity and were to deposit each annual payment at the end of each year in a savings account paying 8% interest how much would you have at the end of three years? **8**
- c) What do you understand by the term structure of interest rate, explain the yield curves associated with it? **6**

**PART-B**

- Q.3 a) Explain the Beta's Role in CAPM. **5**
- b) The CAPM and SML make a connection between a stock's beta and its expected risk. **5**
- c) The following information about a stock is known:
- i) It trades on the NYSE and its operations are based in the United States
  - ii) Current yield on a U.S. 10-year treasury is 2.5%
  - iii) The average excess historical annual return for U.S. stocks is 7.5%
  - iii) The beta of the stock is 1.25
- What is the expected return of the security using the CAPM formula? **10**

- Q.6 a) What do you understand by financial derivatives? **5**
- b) What do you understand by the Swaps? Elaborate its various types in detail with suitable examples. **10**
- c) Differentiate between short straddle and long straddle. **5**

- Q.7 a) The company is considering investment of  $\square 1,00,000$  in a project. The following are the income forecasts, after depreciation and tax, 1<sup>st</sup> year  $\square 10,000$ , 2<sup>nd</sup> year  $\square 40,000$ , 3<sup>rd</sup> year  $\square 60,000$ , 4<sup>th</sup> year  $\square 20,000$  and 5<sup>th</sup> year  $\square$  Nil. From the above information you are required to calculate its pay back period. **7**
- Period at 10% interest factor.
- b) A project has an initial outlay of \$100,000, a cash flow of \$133,000 at the end of three years (year 1, year 2 and \$0) and an IRR of 10%. At a discount rate of 10% what is the NPV? **7**
- c) Mr. A is considering investing \$250,000 in a business. The cost of capital for the investment is 13%. Following cash flows are expected from the investment:

Year	\$
0	(250,000)
1	50,000
2	100,000
3	200,000

Calculate the IRR for the proposed investment and interpret your answer. **6**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Fifth Semester  
**COMMUNICATION AND WRITING SKILLS (BAEH-F-401)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 3

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part A** and **TWO** questions from **Part B**. Each question carries equal marks.

Q.1 Answer the following questions according to instructions:

- a) Change from direct speech to indirect speech using appropriate reporting verbs:  
Ali told me "I am going on a holiday, would you like to come?" I replied "I want to go but I have several meetings this week."
- b) Change from active to passive voice:
  - i) The villagers were hunting the tigers.
  - ii) The teacher was teaching the undergraduate class.
- c) Pick the appropriate transition and rewrite the correct sentence:
  - i) Priya really enjoys watching horror films. Also, her sister likes to watch comedies.  
Priya really enjoys watching horror films. On the contrary, her sister likes to watch comedies.
  - ii) London was his favourite city. So, it was not a surprise when he decided to settle down there after retirement.  
London was his favourite city. Also, it was not a surprise when he decided to settle down there after retirement.
- d) Complete the sentences using the correct indefinite pronouns.
  - i) I don't think \_\_\_\_\_ went to the event last night.
  - ii) They were behaving curiously, I sensed \_\_\_\_\_ was fishy.
- e) Fill in the correct form of adverbs
  - i) Though everyone thought that she was very lazy, Radha was working on \_\_\_\_\_ the assignment (hard/hardly).
  - ii) He drives very \_\_\_\_\_ (carefully/caring).
- f) Fill in the blanks with the correct form of the verb:
  - i) Trusting someone after a betrayal \_\_\_\_\_ (is/are) not easy.
  - ii) Nobody \_\_\_\_\_ (know/knows) where they might end up.
- g) Rewrite the sentences given below in the tense indicated:
  - i) Sita goes to her mother's house. (past perfect)
  - ii) I eat lunch at the café near my house. (present continuous)
- h) Complete the sentence by picking the correct preposition:  
Go \_\_\_\_\_ the stairs and \_\_\_\_\_ the door.
- i) Pick the correct homophone:  
People were received a lot of junk \_\_\_\_\_ (mail/male). So, the office \_\_\_\_\_ (banned/ band) any communication that was not related to work.
- j) Fill in the blanks with the antonym of the words in the brackets:  
Since fossil fuels are \_\_\_\_\_ in the world, one must be very careful about their usage. (abundant). The way human beings are using the non-renewable resources can turn out to be extremely \_\_\_\_\_ for the future generations. (safe)

**2×10**

**PART-A**

- Q.2 a) Write an article for your college magazine in 150-200 words about the importance of introducing sports as part of the curriculum. **10**

- b) Put the following book in the correct APA style citation and put them in the right order for a reference list:

The Argumentative Indian, written by Amartya Sen, in 2005. Published by Penguin Books in New Delhi.

Hindi as Link Language. Article written in the 3rd Volume and 6th issue of Economic and Political Weekly by Baldev Raj Nayar in the year 1968, month of February. Pages 57 to 67.

The Philosophy of Money. Book written by Georg Simmel and David Frisby in 2004. Published in London by Routledge. **6**

- c) Join the given sentences into a single sentence which means the same.

i) Stop jumping on your bed. Sit quietly.

ii) Raman was too tired. He couldn't get out of the bed.

iii) They had made plans for a vacation. They had to cancel their plans.

iv) Raj is a slow runner. He came first in the race. **1×4**

- Q.3 a) Write a report in 150-200 for your university newsletter regarding an academic seminar held in the department of economics. **10**

- b) Identify whether the underlined words form a phrase or a clause:

i) With extreme patience, the teacher explained the concepts to him.

ii) Tamanna was eating her dinner when the doorbell suddenly rang.

iii) Anam likes to paint, but mother got her into a singing class instead.

iv) The river charts a long course, through the mountains, across the plains, and falls into the sea. **1×4**

- c) Rearrange the sentences in the given below to form a cohesive paragraph:

No one could see him.

He was a bad sickness.

He walked around touching one person here and another there with his icy fingers.

On the east side of the city he hurried, touching many people; but in the narrow streets of Greenwich Village he did not move so quickly.

Toward winter a cold stranger entered Greenwich Village.

Doctors called him Pneumonia. **6**

- Q.4 a) Prepare a cover letter and resume applying for the job advertised below:

Advertisement No. Fhsb4459 Date: 10/10/2019
<b>Terry Normandy Financial Services</b>
Inviting applications for the post of junior consultant in banking services. Candidates must hold a Bachelors degree in Commerce or Economics with a first division. Salary negotiable. Interested candidates may send in your brief resume to <a href="mailto:TNFinance@abc.com">TNFinance@abc.com</a> .

**10**

- b) Find mistakes in the given paragraph and rewrite the corrected one:

Corporate tax reduction are credit positive for companies, but raises government's fiscal risks, said Moody's Investors Service. The rating agency doesn't expected the tax rate cut reviving growth such that stronger tax buoyancy compensates for the loss in revenue. Finance Minister Nirmala Sitharaman on Friday announced a deduction in the base corporate tax rate to 22% from 30% as part of stimulus measures to adverse slowing economic growth. **5**

- c) Rewrite the sentences by underlining the clauses and putting the phrases in brackets:

i) After a long drawn battle, over several days, the Pandavas won the war.

- ii) I really like the songs from the new animated movie we went to watch, the Lion King.
- iii) He gets all his brilliant ideas while taking a shower
- iv) Slapping him hard, mother said that she was disappointed in him.
- v) Ravi was the newest boy in class, but he made friends with everyone immediately.

**1×5**

### **PART-B**

Q.5 Read the passage and answer the questions given below:

There is a reason Gogol doesn't want to go to kindergarten. His parents have told him that at school, instead of being called Gogol, he will be called by a new name, a good name, which his parents have finally decided on, just in time for him to begin his formal education. The name, Nikhil, is artfully connected to the old. Not only is it a perfectly respectable Bengali good name, meaning "he who is entire, encompassing all," but it also bears a satisfying resemblance to Nikolai, the first name of the Russian Gogol. Ashoke had thought of it recently, staring mindlessly at the Gogol spines in the library, and he had rushed back to the house to ask Ashima her opinion. He pointed out that it was relatively easy to pronounce, though there was the danger that Americans, obsessed with abbreviation, would truncate it to Nick. She told him she liked it well enough, though later, alone, she'd wept, thinking of her grandmother, who had died earlier in the year, and of the letter, forever hovering somewhere between India and America, containing the good name she'd chosen for Gogol. Ashima still dreams of the letter at times, discovering it after all these years in the mailbox on Pemberton Road, opening it up only to find it blank.

But Gogol doesn't want a new name. He can't understand why he has to answer to anything else. "Why do I have to have a new name?" he asks his parents, tears springing to his eyes. It would be one thing if his parents were to call him Nikhil, too. But they tell him that the new name will be used only by the teachers and children at school. He is afraid to be Nikhil, someone he doesn't know. Who doesn't know him. His parents tell him that they each have two names, too, as do all their Bengali friends in America, and all their relatives in Calcutta. It's a part of growing up, they tell him, part of being a Bengali. They write it for him on a sheet of paper, ask him to copy it over ten times. "Don't worry," his father says. "To me and your mother, you will never be anyone but Gogol."

— *Excerpt from the Namesake by Jhumpa Lahiri*

- a) Why did Gogol not want to go to kindergarten? **2**
- b) Why did Gogol's father choose the name Nikhil? **2**
- c) Was Ashima happy about Gogol's chosen name? Why? **2**
- d) "Gogol being unhappy about his name indicates a deeper conflict of identity". Elaborate. **4**
- e) Find words in the passage that mean the following and make sentences:  
Likeness, shorten, floating **6**
- f) Pick the correct words from the passage and fill in the blanks:  
Mr. Kothari was a very \_\_\_\_\_ man in the industry. He was well known for his integrity in the way he conducted business. Though he was generally a very \_\_\_\_\_ man to work with, his intolerance of corruption was well-known. His employees were \_\_\_\_\_ of committing any fraud. However, all was about to change as a \_\_\_\_\_ employee joined his company. **4**

Q.6 Write a speech in 350-400 words on the topic – Development of the nation is not possible unless it comes from the local communities themselves. **20**

Q.7 "This house believes that India today stands poised to become the next superpower."  
Write a debate either for or against the given motion in 350-400 words. **20**

**End Semester Examination, Dec. 2019**  
**B.A. / B. Sc. (Hons.) Economics – Third Semester**  
**MATHEMATICS FOR ECONOMICS-II (BAEH-G-305)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **2**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 First question will be conceptual covering entire syllabus and will be compulsory to attempt.

- a) Write the equivalent Leibniz notation,  $D_x$  notation and  $y$  notation for  $f'''$  and  $f^{(6)}$
- b) Given  $x = b^y$ . Find out  $dx/dy$  at  $x = 3$  and  $b = 6$ .
- c) Given  $x = f(z_1, z_2) = (z_1^2 + 3)(2z_1 + 5z_2)$ , find out  $f_{z_1}(2, 1)$ .
- d) If  $f(t) = t^8$  find out  $f^{(9)}$  and comment on the result.
- e) Find out  $y''$  for  $y = x^5 e^x$ .
- f) What do you understand by 'saddle point' of a function?
- g) If  $f(x) = 3x^5 - 9x^4$  find out  $f^{(4)}$ .
- h) If  $x = f(y, z) = 3y^3 + y^2z + 7z^2$ , find out  $f_z$ .
- i) With an example of *intertemporal* choice, formulate the present value of a sum.
- i) Let  $Q = f(K, L)$  be the production function when  $K$  unit of capital and  $L$  unit of labour are used. How do you interpret  $f'_L(4, 9) = 15$ ? **2×10**

**PART-A**

- Q.2
  - a) Find out first derivative of (i)  $y = x^{-0.33}$  and (ii)  $y = \frac{A}{\sqrt{x}}$ . **6**
  - b) Derive up to third derivative of (i)  $y = \sqrt{x}$  and (ii)  $r = 3t^2 + 8t^{\frac{1}{2}} + e^t$ . **8**
  - c) Determine second derivative of (i)  $y = x^5 e^x$  and (ii)  $y = \frac{x^2+2}{x-1}$ . **6**
  
- Q.3
  - a) How the Hessian matrix is constructed? For a function  $z = f(y_1, y_2)$ , what will be the form of Hessian matrix? **10**
  - b) Justify when the Hessian matrix requires to convert into bordered Hessian matrix. **5**
  - c) Illustrate the theoretical proposition to determine convex and concave points of a multivariate function. **5**
  
- Q.4
  - a) Find out optimal value(s) of function:  $w = 2u^2 + vu + 4v^2 + ux + x^2 + 2$ . **7**
  - b) Find out the extremum of  $r = s^2 + t^2$  subject to  $s + 4t = 2$  and identify whether it has minimum or maximum point. **5**
  - c) State the necessary and sufficient conditions for optimization. Find out the direction of optimal point for  $y = x^3 - 3x^2 + 2$ . **8**

**PART-B**

- Q.5
  - a) Solve equation  $\frac{dy}{dt} + 3y = 0$  with initial condition  $y(0)=5$ . **8**
  - b) Find out  $\partial y / \partial x_1$ ,  $\partial y / \partial x_2$  and  $\partial^2 y / \partial x_1 x_2$  for  $y = 5x_1^3 - 10x_1^2 x_2^2 + 15x_2^2$ . **8**
  - c) Suppose  $p = f(q) = q^5$ , explain that it has an inflection point. **4**
  
- Q.6
  - a) Explain the second derivative test for convexity/concavity of a function. **6**
  - b) Is it possible to determine all the extremums using first derivative test only – explain it with a standard example. **8**
  - c) Let  $D(X, Y) = X + 20Y$  with constraint  $B = \sqrt{X} + Y$ , find out the optimal value of  $X$  and  $Y$ . **6**

- Q.7
- a) Letan economy faces long run monthly inflation at 1.5%. Explain the future value of \$22350 in 9 year-time. **4**
  - b) Siddhi created a saving account with \$150. But it has been converted afterward into monthly recurrent deposit for 6 years. The bank is offering a flat compound interest rate 9% p.a. How much will have the future value? **6**
  - c) Robin invests \$800 each month as an annuity at interest 20% p.a. for twenty years. What will be his future value at end? **4**
  - d) While making choices for present or future, people face constraint on how much to use today and how much to keep for the future. Explain it in two-period intertemporal framework and link it for the present value criterion. **6**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Third Semester  
**FINANCIAL SYSTEM (BAEH-G-306)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

- Q.1
- a) Show the direct and indirect flow of funds through the financial.
  - b) Differentiate between 91- Day and 364-Day T-bill, through relevant example.
  - c) Define participating preference shares.
  - d) Distinguish between Secured and Unsecured Debentures.
  - e) What do you understand by LIC and GIC?
  - f) Define 'underwriting'.
  - g) Explain promissory note.
  - h) What do you understand by corporate bond and government bond?
  - i) Distinguish between FDI and FN.
  - j) Explain scheduled bank and non-scheduled bank. **2×10**

**PART-A**

- Q.2 What are financial markets? What function do they perform? How would an economy be worse off without them? **20**
- Q.3
- a) 'Money market is essentially a market for short-term funds'. In the light of this statement state any three features of money market. **10**
  - b) Define certificate of deposit, call money market and treasury bills. In what ways are they similar, and in what ways are they different? **10**
- Q.4 Define the capital market and discuss its complete structure of equity securities and debt securities in detail. **20**

**PART-B**

- Q.5
- a) What do you understand by issue management? Explain in detail Pre and Post issue management. **10**
  - b) Give a brief account on IDBI and IFCI. How are they important for the nation's development? **10**
- Q.6
- a) Define merchant banking and explain classification of merchant bankers. **10**
  - b) What are the functions of EXIM Bank and SIDBI? **10**
- Q.7
- a) Define Commercial paper and give a brief account on structure of commercial paper. **10**
  - b) Explain the various types of commercial papers. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Fourth Semester  
**GOVERNMENT AND POLITICAL IN INDIA (BAEH-G-405)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) Explain August Declaration 1917.
- b) What are the objectives of Indian state according to the preamble?
- c) Why is Cripps Mission, 1942 important?
- d) Explain the immunities of the Governor.
- e) What is the Human Rights Council?
- f) Write a short note on judicial functions of gram panchayat.
- g) Explain Indian judicial system.
- h) What are the four characteristics of human rights?
- i) Differentiate between fundamental rights and directive principles.
- j) Write briefly about how the president of India is elected? **2×10**

**PART-A**

- Q.2 a) Discuss the provisions related to the right to equality and right to religion as provided by the constitution of India. **10**
- b) What are the directive principles of state policy and what is their significance? **10**
- Q.3 a) Discuss the composition of the Indian parliament and examine the relation between the two houses? Do you think the Loksabha to be more powerful than the Rajyasabha? Argue. **10**
- b) Write short note on the following:
- i) Question hour,
  - ii) Zero hour. **5×2**
- Q.4 a) Do you think that the Preamble embodies the philosophy of the constitution of India? Argue. **10**
- b) Discuss the demand for a constituent assembly and its formation. **10**

**PART-B**

- Q.5 a) Discuss the civil and political rights and economic, social and cultural rights under UDHR. **10**
- b) Analyze human rights (amendment) act, 2006 **10**
- Q.6 a) Explain the actual position of chief minister of a state by bringing in example of actions of the chief minister which shows that at the time he can assert himself with real powers. **10**
- b) Discuss the composition, powers and functions of Union council of ministers. **10**
- Q.7 a) Discuss the composition and function of State Human Rights Commission. **10**
- b) Write short notes on the following:
- i) Gram panchayat

ii) Panchayat samiti

**5×2**

# End Semester Examination, Dec. 2019

B.Sc. – First Semester

## EARTH SYSTEM SCIENCE - (BAG-DS-101)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Give short answers to the following.

- a) Asteroid belt.
- b) Carbon dating.
- c) Non-renewable earth resources.
- d) Volcanic crater.
- e) Mid-oceanic ridge.
- f) Subduction zone.
- g) P. Waves.
- h) Green house gases.
- i) LGM.
- j) Radiometric dating.

**2x10**

### **PART-A**

Q.2 Describe various constituents of our solar system. What are the main differences between the inner and outer planets? **20**

Q.3 Which geophysical methods you will use for locating ground water and mineral deposits below the ground? Discuss two such methods in detail. **20**

Q.4 Evaluate the process of new oceanic crust formation at mid-oceanic ridges. Where the older crust is destroyed? **20**

### **PART-B**

Q.5 Explain the concepts of ecstacy. What are the main causes of sea level changes in geological past? What do you understand by LGM? **20**

Q.6 Briefly outline various divisions of the geological time scale. Discuss one mass extinction event which occurred during the evolution of earth. **20**

Q.7 With the help of a neat diagram describe the internal structure of earth giving composition, thickness and seismic behavior of each layer. **20**

**End Semester Examination, Dec. 2019**  
B.Sc. – First Semester  
**COMPUTER PROGRAMMING (PYTHON) - (BAG-DS-102)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Define 'Queue'.
- b) Explain HTTP.
- c) List the features of nslookup tool.
- d) Explain slicing operation in python.
- e) What is IP address?
- f) List the features of LAN.
- g) Write a note on Wi-Fi.
- h) Differentiate between public and private cloud.
- i) What is NIC?
- j) What is open source? Discuss the advantages of open source software. **2x10**

**PART-A**

- Q.2 a) Write a program in python to make a simple calculator. **10**  
b) Define 'recursion'. Formulate a program to find factorial of a number using recursion. **10**
- Q.3 a) Formulate the binary search algorithm using python. **10**  
b) Illustrate with suitable examples the operations that can be performed on stack data structure. **10**
- Q.4 a) Discuss how the collision is handled in wireless networks. **10**  
b) Explain the working in email in detail with suitable diagram. **10**

**PART-B**

- Q.5 a) Why Django framework is popular. Elaborate the steps to create a project in Django. **10**  
b) Create a table named 'Customers' in MySQL with fields name and address. Illustrate insertion, deletion and sorting operation on the created table. **10**
- Q.6 a) Summarize different licensing techniques. **10**  
b) Illustrate the terms: scams, illegal downloads, cyber forensics. **10**
- Q.7 a) Illustrate different salient features of IT Act 2000. **10**  
b) Outline different ways for proper disposal of used electronic gadgets. **5**  
c) Explain Copyright in IPR. **5**

# End Semester Examination, Dec. 2019

B.Sc. Applied Geology – First Semester

## PHYSICS (GEOLOGY) (BAG-DS-103)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- State Zeroth law of thermodynamics.
- State Carnot's theorem.
- Give two applications of satellites.
- What do you understand by law of time periods?
- Describe any one characteristics of simple harmonic motion.
- What do you understand by resonance?
- Give two examples each of crystalline and amorphous materials.
- Draw sketches illustrating (123) and (222) planes in simple cubic.
- State Gauss's law in magnetism.
- What is the difference between Inertial and Gravitational Mass?

**2x10**

### **PART-A**

- Q.2
- What is Carnot Cycle? Describe the four processes which constitute the cycle. **10**
  - How will you classify reversible and irreversible process? Give suitable examples. **5**
  - An internal combustion engine takes a mixture of fuel air at 27°C and the highest temperature after combustion is 427°C. Calculate the Carnot efficiency of an engine working between these two limits of temperature. **5**
- Q.3
- What is a satellite? Derive expressions for orbital velocity and time period of a satellite. **10**
  - State and prove law of conservation of energy. **5**
  - Explain in brief the following: momentum, kinetic energy, angular velocity, torque and angular momentum. **5**
- Q.4
- Obtain an expression for the apparent frequency of a note heard by an observer when:
    - Observer alone is in motion towards the source.
    - Observer alone is in motion away from the source.**10**
  - Write a short note on 'damped oscillations'. **5**
  - A body of mass 4.9kg hangs from a spring and oscillates with a period of 0.6 seconds. How much will the spring shorten when the body is removed? **5**

### **PART-B**

- Q.5
- What are defects in crystals? Explain in detail various types of point defects. **10**
  - Derive an expression for inter planer spacing between two parallel planes in a simple cubic crystal. **5**
  - Give a brief account of powder method for crystal structure analysis. **5**
- Q.6
- Explain the formation of core, mantle and crust in connection with geomagnetism. **10**
  - Discuss briefly Diamagnetic, Paramagnetic and Ferromagnetic material. **10**
- Q.7
- What is gravity? Derive expressions for the variation of 'g' with respect to height and depth from the surface of earth. **10**

**50/5**

- b) State and explain State Newton's law of universal gravitation. **5**
- c) A body weighs 63 N on the surface of the earth. What is the gravitational force on it due to the earth at a height equal to half the radius of the earth? **5**

**End Semester Examination, Dec. 2019**  
 B. Sc. – First Semester  
**MATHEMATICS FOR GEOLOGY (BAG-DS-104)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Marks are indicated against each question.

- Q.1 a) Give the domain of the function:  $y = \frac{2x}{2x+7}$
- b) Find the rank of the matrix  $A = \begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$
- c) Find the sum and product of the eigen values of  $\begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$
- d) Expand  $\cos x$  in powers of  $x$ .
- e) Find the maxima and minima for the curve  $f(x) = x^3 - 3x + 2$ .
- f)  $u = \sin^{-1} \left( \frac{x+2y+3z}{\sqrt{x^8+y^8+z^8}} \right)$ , show that  $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + z \frac{\partial u}{\partial z} + 3 \tan u = 0$ .
- g) Verify that  $\frac{\partial^2 u}{\partial x \partial y} = \frac{\partial^2 u}{\partial y \partial x}$ , where  $u(x, y) = \log \left( \frac{x^2+y^2}{xy} \right)$
- h) If  $\vec{V} = e^{xyz} (i + j + k)$ . Find  $\nabla \times \vec{V}$ .
- i) Find  $\nabla \phi$ , if  $\phi = \log(x^2 + y^2 + z^2)$ .
- j) Change the Order of Integration:  $\int_0^1 \int_x^{\sqrt{1-x^2}} f(x, y) dy dx$  **2x10**

**PART-A**

- Q.2 a) Draw the graph of  $y = \cos x$  and  $y = \cos^{-1} x$ . Also write its domain and range. **10**  
 b) Draw the graph of  $y = |x|$  **10**

- Q.3 a) Find the Eigen values and Eigen vectors of the matrix:  $A = \begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$  **10**

- b) Investigate the value of  $\lambda$  and  $\mu$  so that the equations:

$$x + y + z = 6; x + 2y + 3z = 10; x + 2y + \lambda z = \mu$$

Have

- i) No solution,  
 ii) Unique solution and  
 iii) An infinite number of solutions.

**10**

- Q.4 a) Find the expansion of  $y = (\sin^{-1} x)^2$  upto  $x^5$  term by forming differential equation. **10**  
 b) Find the maximum and minimum values of the following polynomial function by using second order derivative test:  $f(x) = 8x^5 - 15x^4 + 10x^2$ . **10**

**PART-B**

- Q.5 a) If  $u = \log(x^3 + y^3 + z^3 - 3xyz)$ , show that  $\left(\frac{\partial}{\partial x} + \frac{\partial}{\partial y} + \frac{\partial}{\partial z}\right)^2 u = \frac{-9}{(x + y + z)^2}$  **10**
- b) Find the extreme value of the function  $x^3 + y^3 - 3axy$ . **10**
- Q.6 a) Sketch the region of integration and evaluate:  $\int_0^1 \int_{x^2}^{2-x} xy \, dy \, dx$  **10**
- b) Find the volume of the sphere  $x^2 + y^2 + z^2 = 1$  by double integration. **10**
- Q.7 a) If the vector  $\vec{F} = (ax^2y + yz)\hat{i} + (xy^2 - xz^2)\hat{j} + (2xyz - 2x^2y^2)\hat{k}$  is solenoidal, find the value of  $a$ . Find also the curl of this solenoidal vector. **10**
- b) Find the directional derivative of the function  $f(x, y, z) = xy^2 + yz^3$  at the point  $(2, -1, 1)$  in the direction of the vector  $\hat{i} + 2\hat{j} + 2\hat{k}$ . **10**

**End Semester Examination, Dec. 2019**  
**B.A. / B. Sc. (Hons.) Economics – Second Semester**  
**ELEMENTARY STATISTICS (BECO-C-205)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Briefly answer the following questions: (attempt all questions)
- What are the prerequisites of a good measure of central tendency?
  - Explain weighted average.
  - Distribution of 100 workers according to their monthly salary is moderately skewed. It showed an average salary of 4500 per month. If the median salary is 4900, find the mode salary.
  - Interpret 'r' in the cases: when  $r = + 0.97$ ,  $r = - 0.04$ ,  $r = + 1$ ,  $r = - 1$
  - Explain the usefulness of diagrams in presenting statistical data.
  - What is skewness?
  - Write the types of diagrams and graphs.
  - Find the mode. 2, 8, 5, 12, 5, 7, 1, 10, 5, 6.
  - Define range and co-efficient range.
  - Define standard deviation and co-efficient standard deviation. **2×10**

**PART-A**

- Q.2
- Explain in brief the meaning of primary and secondary data. State their sources. **5**
  - Distinguish between classification and tabulation. Describe the purpose, methods and importance of classification. **5**
  - Draw the frequency polygon and the histogram for this distribution:

Expenditure	Frequency per □50
0-10	4
20-30	6
20-40	14
40-50	16
50-60	14
60-70	8
70-90	16
90-100	5

**10**

- Q.3 Find the mean, median, 20<sup>th</sup> percentile and 8<sup>th</sup> decile of heights from the following data:

Profit per Shop	0-10	10-20	20-30	30-40	40-50	50-60
No. of Shops	12	18	27	20	17	6

**20**

- Q.4
- What is quartile deviation? Find out the value of quartile deviation and its coefficient from the following data:

Marks	10	20	30	40	50	60
No. of students	4	7	15	8	7	2

**10**

- b) Calculate the mean deviation and its coefficient of the two income groups of five and seven members given below:

Group I	14,000	14,800	15,200	16,000	18,800		
Group II	15,500	16,000	16,200	17,000	17,500	18,000	19,000

**10**

**PART-B**

- Q.5 a) Calculate the Karl Pearson's coefficient of skewness from the following data:

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No. of students	2	5	7	13	21	16	8	3

**10**

- b) Calculate the value of the Bowley's coefficient of skewness from the following series:

Wages (in ₹)	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of Persons	1	3	11	21	43	32	9

**10**

- Q.6 Calculate the first four moments about the mean from the following data

X (Mid-point of the class interval)	1	2	3	4	5	6	7	8	9
F (Frequency)	1	6	13	25	30	22	9	5	2

**20**

- Q.7 a) Find rank correlation:

Prices of Tea (₹)	75	88	95	70	60	80	81	50
Prices of Coffee (₹)	120	134	150	115	110	140	142	100

**10**

- b) Calculate Karl Pearson's Coefficient of correlation from the following data and interpret its value:

Roll No. of Students	1	2	3	4	5
Marks in Accountancy	48	35	17	23	47
Marks in Statistics	45	20	40	25	45

**10**

**End Semester Examination, Dec. 2019**  
**B.A. / B. Sc. (Hons.) Economics – Third Semester**  
**MICROECONOMIC EXTENSIONS (BECO-C-302)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Justify the asymmetric information issue among economic agents.
  - b) Why market failure happens?
  - c) Define the Pareto efficiency of an economy.
  - d) State the meaning of iterative eliminations in game strategy.
  - e) Explain mark up principle.
  - f) Explain factor share of capital.
  - g) Define rent.
  - h) What is point of bliss?
  - i) Describe the meaning of partial equilibrium.
  - j) Define contact curve for consumer.

**2×10**

**PART-A**

- Q.2 a) Two computer firms A and B are planning to market network systems for office information management. Each firm can develop either a fast and high quality system (HIGH) or a slower and low quantity system (LOW). Resulting profits to each firm for the alternative strategies are given by following payoff matrix:

		FIRM B	
		HIGH	LOW
FIRM A	HIGH	50, 40	60, 45
	LOW	55, 55	15, 20

If both firms make their decisions at the same time and follow maxmin strategies, what will the outcome be? **8**

- b) Suppose A and B have been caught for a robbery and prosecution has no enough evidence for their crime. Both are interrogated and given choices to each accused to be kept in jail depending upon their decision to confess and not to confess. Pay-off matrix which refers here is their years of imprisonment as follows:

		A's Choice	
		Confesses	Doesn't Confess
B's Choice	Confesses	5, 5	10, 1
	Doesn't Confess	1, 10	2, 2

What will be the decision of each prisoner to be the best solution for them? **8**

- c) Differentiate between co-operative and non co-operative game with a suitable example. **4**
- Q.3
- a) Formulate the principle of full cost pricing. **5**
  - b) Briefly explain any two important criticisms of neoclassical theory of firm. **6**
  - c) Outline the Bain's limit pricing theory. **9**

- Q.4 a) Derive demand curve for a single variable factor say labour to firm which is operating under:  
 i) perfectly competitive market and **10**  
 ii) imperfectly competitive market? **7**  
 b) VMPL curve is not the demand curve for a firm when operates in long run – justify it. **7**  
 c) Why the backward bending supply curve is found in market? **3**

**PART-B**

- Q.5 a) Using Edgeworth box analysis, critically evaluate the general equilibrium theory. **13**  
 b) Write a short note on Arrow’s impossibility theorem. **7**
- Q.6 a) Briefly explain how an economy can reach at the social optimum point? **14**  
 b) How the theory of Second Best works if the economy can’t attain all marginal conditions simultaneously? **6**
- Q.7 a) Explain the problem of moral hazard with reference to the insurance market. **7**  
 b) What do you understand principal agent problem arise? How exaggerated form of it leads to the market failure? **7**  
 c) Explain in detail hidden type model, where agent has private information before signing a contract with the principal”. **8**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**ECONOMIC GROWTH AND DEVELOPMENT (BECO-C-303)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following:

- a) Explain the term shocks in real business cycle model.
- b) What do you understand by the term factor accumulation?
- c) Explain the characteristic of 'Essentiality' in neoclassical production function of Solow-swan.
- d) What are the criticisms of rational expectation?
- e) What do you understand by representative agent?
- f) Differentiate between embodied and disembodied technological progress.
- g) Define capability approach of Amartya Sen.
- h) What do you understand by the occupational structure?
- i) What is the equilibrium condition of the Domar model?
- j) How is labor force growth and technological progress presented in the Harrod Domar growth model? **2×10**

**PART-A**

- Q.2
- a) What do you understand by the vicious circle of poverty as stated by Nurkse in growth model. **4**
  - b) Briefly explain the complete balanced growth theory of A.O Hirschman. Also explain substitution and postponed choice as given in the theory. **10**
  - c) Explain which is more important, economic development or economic growth for the development of an economy? Why? **6**
- Q.3
- a) Explain how growth theories emerged since 1950 till date? Throw light on the linear stages of growth theories and patterns of structural change, international dependence revolution, the neo-classical economic thought and the eclectic approach. **10**
  - b) Explain the knife edge equilibrium of Harrod-Domar growth mode. **10**
- Q.4 Critically evaluate the concept of 'Markets' in Solow swan model. How household and firms interact in the model? **20**

**PART-B**

- Q.5
- a) Explain the steady state equation of Solow model. Demonstrate the same graphically. **10**
  - b) Define the Golden rule level of capital in Solow Model. How it is different from steady state? **10**
- Q.6
- a) Critically evaluate the concept of sticky prices (menu cost) given by the new Keynesian model. **10**
  - b) Explain Random walk of GDP model. **10**

- Q.7 a) Explain in detail how bubble bust added to the global recession of 2008. **8**
- b) Explain the various components of goods market and money market with the help of graphs. Also derive the interaction of IS-LM curves. **12**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**PRINCIPLES OF ECONOMICS (BECO-DS-102)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) Explain GDP as a measure of wellbeing.
- b) What is a histogram?
- c) What do you mean by pie diagramme?
- d) Discuss statistical tools used in economic analysis.
- e) Derive the demand curve for infinitely inelastic demand case.
- f) For the sequence  $= 3n + 5$ , find its third term.
- g) Distinguish nominal and real variables.
- h) Derive the demand curve for infinitely inelastic demand case.
- i) Explain any four determinants of supply.
- j) What are the assumptions of law of demand?

**2×10**

**PART-A**

- Q.2
- a) Briefly explain the two expected behaviours of economic agents. **6**
  - b) Water is demanded by everyone but extremely cheap. Diamond is demanded by the few but incredibly expensive. Justify it. **6**
  - c) Define:
    - i) Opportunity costs.
    - ii) Marginal change.
    - iii) Productive efficiency.
    - iv) Invisible hand.**2×4**

- Q.3
- a) Distinguish stock and flow concepts for the economic variables. **4**
  - b) Suppose at initial price ₹5/kg. demand was 3 kg. and after the price change to ₹4/kg. demand changes to 4 kg. Estimate the price elasticity when demand curve is
    - i) linear and
    - ii) non-linear. **10**
  - c) Write the brief notes on the following:
    - i) static versus dynamic variables.
    - ii) comparative statics in economics. **3×2**

- Q.4
- a) Suppose the following demand function for coffee in terms of price of tea is given. Find out the cross elasticity of demand when price of tea rise from ₹50 to ₹55 per 250gms. **8**
  - b) Differentiate between
    - i) Stable and Unstable equilibrium.
    - ii) dynamic and stable equilibrium.
    - iii) partial and general equilibrium. **2×3**
  - c) Explain any four determinants of supply. **6**

**PART-B**

- Q.5 a) Define National Income? Differentiate between GDP MP and NNP FC. How is National income different from personal income? **10**  
 b) Explain the four sector model of circular flow of income. **10**

- Q.6 a) Draw:  
 i) less than and  
 ii) more than ogives from the data given below:

Profits (₹ Lakhs)	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
No. of companies	5	9	12	20	25	16	8	5	2

**10**

- b) The following table gives data regarding leading sources of technology transfer (in percentage):

Countries:	UK	Denmark	Canada	US	Spain	Japan	Germany	Other developed countries	Developing countries
Percentage:	4	10	5	14	6	10	17	19	15

Represent the data by suitable pie diagram.

**10**

- Q.7 a) Solve the recurrence relation  $F_n = 10F_{n-1} - 25F_{n-2}$  where  $F_0 = 3$  and  $F_1 = 17$ . **6**  
 b) If  $y = \sum_{i=0}^n b_i x^i$  is a polynomial function, symbolize it in mathematical form and represent geometrically for  
 i) linear and  
 ii) quadratic functions. **6**  
 c) For the sets  $X = \{4, 5\}$ ,  $Y = \{3, 6, 7\}$  and  $Z = \{2, 3\}$  prove associative and distributive properties. **8**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**INTRODUCTORY MICROECONOMICS (BECO-DS-103)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **2**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Explain the concept of SARP.
  - b) What is a production function? How does a long-run production function differ from a short-run production function?
  - c) Explain the term "marginal rate of technical substitution"? What does a  $MRTS = 4$  mean?
  - d) Explain elasticity of substitution.
  - e) Differentiate between the inferior goods and giffen goods.
  - f) How does the shape of the average product curve differ from that of marginal product curve?
  - g) Distinguish between short run and long run production.
  - h) Define consumer surplus.
  - i) Explain Engel curve using suitable diagram.
  - j) What is the shape of the income consumption curve for inferior goods? **2×10**

**PART-A**

- Q.2
- a) Explain the meaning of utility. What is the difference between total utility and marginal utility? Explain the law of diminishing marginal utility with the numerical example. **10**
  - b) i) Given: The price of a unit of Good 1 is \$20. The price of a unit of Good 2 is \$5. The consumer's income is \$100. 1. Sketch the consumer's budget constraint (with Q1 on the horizontal axis.) Indicate the intercepts and slope.  
ii) Go back to the original prices and income. Suppose income falls by 10%. What is the effect on the intercepts and slope of the budget constraint? Provide a sketch of new constraints. **5×2**
- Q.3
- a) Explain the basic assumptions of consumer preferences? **5**
  - b) Explain the concept of Indifference curves? Describe their characteristics. What will be the shape of indifference curves for perfect substitutes and perfect compliments? Use suitable diagrams. **10**
  - c) Explain consumer equilibrium using indifference curves. **5**
- Q.4
- a) A consumer spends whole of his income, ₹1000 on two goods X and Y. the price of good Y is fixed at ₹50 per unit while that of X varies. The current price of X is ₹20 per unit and it falls to ₹10 per unit after a week. The quantity demanded of X given as a function of its own price and consumer income as  $x = M/5P_x$ . Determine the substitution and income effect. **8**
  - b) Outline the assumptions of the revealed preference theory of demand. Distinguish between the weak axiom of revealed preference and strong axiom of revealed preference theory. **12**

**PART-B**

- Q.3 a) The marginal product of the variable input at different level of its employment is as given:

Input	0	2	<b>3</b>	4	5	6	7	8	9	10	11	12
MP	0	3	9	11	13	15	16	10	2	0	-2	-4

Determine total and average product of the input and graph them. Distinctly mark-off different stages of production on graph and outline their distinctive feature. **12**

- b) Explain the three stages of production and which of the three stages of production do the producer like to operate and why? **8**
- Q.6 a) Draw the marginal-cost and average-total-cost curves for a typical firm. Explain why the curves have the shapes that they do and why they intersect where they do? **10**
- b) Explain the average and marginal revenue in the imperfect market competition with the help of suitable schedule and diagrams. Also explain the relationship between AR and MR curves. **10**
- Q.7 a) What are isoquants? Explain their essential features. **4**
- b) Under what conditions would  $Q = AL^\alpha K^\beta$  lead to
- i) increasing
  - ii) constant
  - iii) decreasing returns to scale? Explain. **8**
- c) The iso-quant curves can be classified on the basis of the substitutability of factors of production. Explain. **8**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – First Semester  
**INTRODUCTORY MACROECONOMICS (BEC0-DS-104)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) What do you understand by Residential Investment?
- b) How unemployment insurance affects the frictional unemployment.
- c) Define the term Job finding.
- d) What is meant by the 'ratchet effect'?
- e) What is absolute income theory of consumption?
- f) What are ex- ante saving and ex- post saving?
- g) Differentiate between nominal and real output.
- h) Explain the Kuznets puzzle on consumption.
- i) What is meant by Random Walk Consumption?
- j) Explain the cost of deflation for an economy.

**2×10**

**PART-A**

- Q.2 a) What do you mean by trade/business cycles? What are the four cycles of business/trade cycles? **10**
- b) Elaborate the schools of economic thought from Classical and Keynesian to New Classical and New Keynesian. **10**
- Q.3 a) What is the basic premise of the relative income hypothesis? What are the weaknesses of the relative income hypothesis mode? **10**
- b) Differentiate between the Permanent income hypothesis and the lifecycle hypothesis. **10**
- Q.4 a) What do you understand by the term 'capital'? Mention the properties of capital. **6**
- b) Discuss the paradox of thrift. Why does it occur? **7**
- c) Explain the relevance of marginal efficiency of investment. **7**

**PART-B**

- Q.5 a) Compare the transaction, precautionary and speculative demand for money. In a neatly labeled diagram, show the Keynesian liquidity preference theory. **10**
- b) What are the various measures of money supply? Which one is more frequently used and why? **10**
- Q.6 a) Explain Fischer's effect. If inflation rate rises from 6 to 8 per cent what happens to real and nominal interest rate according to Fischer effect? **10**
- b) Explain how the current rate of inflation depends on current money supply as well as on expected growth of money supply. **5**
- c) What are the major weaknesses of the demand pull theory of inflation? **5**

- Q.7 a) Critically evaluate 'Real-wage rigidity and structural unemployment' model. Mention the causes of this wage rigidity. **10**  
 b) Elaborate the concept of Frictional Unemployment. **10**

**End Semester Examination, Dec. 2019**  
 B.A. / B. Sc. (Hons.) Economics – Third Semester  
**MATHEMATICAL ECONOMICS (BECO-E-304)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 a) Suppose a general polynomial function  $isu = f(v)$ , there are five different components required to study about its optima and curvature. What are those components?  
 b) Differentiate global and local minima.  
 c) What do you understand by 'saddle point' of a function?  
 d) There are two conditions require to realize an optimum w.r.t. function  $z = f(x, y)$ . What are those conditions?  
 e) Formulate a Lagrange function for constrained optimization.  
 f) Define Hawkins-Simon condition for input-output model.  
 g) With an example of intertemporal choice, formulate the present value of a sum.  
 h) Find out  $\frac{dy}{dt}$  when  $y = p^2 + q^3$  with  $p = t^2$  and  $q = 2t$ .  
 i) Illustrate the role comparative statics in economics.  
 j) Formulate a homogeneous function with an example. **2×10**

**PART-A**

- Q.2 a) How the Hessian matrix is constructed? For a function  $z = f(y_1, y_2)$ , what will be the form  
 b) Using only first derivative test, how the neighborhood points help determine a minima? **6**  
 c) Justify when the Hessian matrix requires to convert into bordered Hessian matrix. **4**  
 d) Illustrate the theoretical proposition to determine convex and concave points of a multivariate function. **5**
- Q.3 a) Find out optimal value(s) of function:  $w = 2u^2 + vu + 4v^2 + ux + x^2 + 2$ . **7**  
 b) Find out the extremum of  $r = s^2 + t^2$  subject to  $s + 4t = 2$  and identify whether it has minimum or maximum point. **5**  
 c) State the necessary and sufficient conditions for optimization. Find out the direction of optimal point for  $y = x^3 - 3x^2 + 2$ . **8**
- Q.4 a) Find the elasticity of substitution w.r.t. a standard CES type function. **5**  
 b) Show that  $f(x, y) = 3x^2y - y^3$  is homogeneous of degree 3. **3**  
 c) Consider the following macroeconomic system-equations:  
 i)  $Y = C + I + G$   
 ii)  $C = f(Y - T)$   
 iii)  $I = g(r)$

iv)  $r = h(M)$

where  $f$ ,  $g$  and  $h$  are given functions, and  $Y$  is national income,  $C$  is consumption,  $I$  is investment,  $G$  is public expenditure,  $T$  is tax,  $r$  is interest rate,  $M$  is money supply. Justify the degrees of freedom in this model. **3**

d) Define homothetic functions with an example. **3**

e) Briefly explain the main proposition of envelope theorem. **6**

**PART-B**

Q.5 a) Use the graphical method to solve the following Linear Programming problems:

Maximize  $3x_1 + 4x_2$

subject to  $3x_1 + 2x_2 \leq 6$

$x_1 + 4x_2 \leq 4$

$x_1 \geq 0, x_2 \geq 0$  **14**

b) Write the dual of the following Linear Programming equations

Maximize  $z = 5x_1 + 7x_2 + 12x_3 \leq 7$

Subject to constraints:  $3x_1 + 7x_2 + 12x_3 \leq 7$

$4x_1 + 12x_2 + 2x_3 = 30$

$x_1 \geq 0, x_2 \geq 0, x_3 \geq 0$  **6**

Q.6 Suppose the input-output coefficients for inter industry flow of the product of 2 industries are given as under:

Industry	Inputs	
	Industry 1	Industry 2
Industry 1	1/4	1/2
Industry 2	1/3	1/4

a) Check whether Hawkin Simon condition is satisfied or not. **10**

b) Find the gross output for each industry for the final demands 1000 and 3000 respectively. **10**

Q.7 a) Anchal begins with an account for her future expenditure. While opening the account, she deposits ₹900 and then obliges to carry on a regular monthly payment of same amount at end of each month for 5 years with interest rate of 10% p.a. compounded monthly. Determine how much will have to accrue at end of the investment period. **6**

b) Suppose a person invests ₹100 each month into an annuity at interest 10% p.a. for one year. What will be the Future Value at end of the agreed investment period? **8**

c) Calculate the Future Value of ₹200 in 10 years' time if fixed inflation rate prevails at 5% p.a. **6**

**End Semester Examination, Dec. 2019**  
**B.A. / B. Sc. (Hons.) Economics – Third Semester**  
**BASIC STATISTICAL METHODS (BECO-G-305)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Answer the following questions:

- a) What do you understand by the term event?
- b) Briefly explain mutually exclusive events?
- c) What is meant by dependent and independent variables?
- d) What is meant by time series analysis?
- e) Define sampling.
- f) State the merits and limitations of random sampling.
- g) What do you mean by index number?
- h) What are regression coefficients?
- i) Define probability.
- j) What is a normal distribution? State its main properties.

**2×10**

**PART-A**

Q.2 a) The following data relate to the scores obtained by 9 salesman of a company in an intelligence test and their weekly sales in thousand rupees:

Salesmen Intelligence	A	B	C	D	E	F	G	H	I
Test Scores	50	60	50	60	80	50	80	40	70
Weekly Sales	30	60	40	50	60	30	70	50	60

- i) Obtain the regression equation of sales on intelligence test scores of the salesmen
  - ii) If the intelligence test score of a salesman is 65, what would be his expected weekly sales?
- b) What do you understand by regression? What are the important properties of regression coefficients?

**15**

**5**

Q.3 The PDF of continuous random variable is as following:

a)  $f(x) = c(6x - 3x^2), 0 < x < 3$   
 $= 0, \text{ otherwise}$

- i) For this to be proper function what must be the value of 'c'.
  - ii) Find  $p(1 < x < 3)$
  - iii) Find  $p(x > 4)$
- b)  $F(x) = \begin{cases} 7x & \text{where } 0 < x < 2 \\ \text{Find } E(X^2) \end{cases}$

**15**

**5**

Q.4 The incidence of a certain disease is such that on the average 20% of workers suffer

from it. If ten workers are selected at random, find the probability of the following using Binomial distribution:

- a) Exactly two workers suffer from the disease  
 b) Not more than two workers suffer from the disease. **20**

**PART-B**

- Q.5 a) Calculate the three yearly moving averages of the production figures given below and draw the trend:

Year	2000	2001	2002	2003	2004	2005	2006	2007
Production	15	21	30	36	42	46	50	56
Year	2008	2009	2010	2011	2012	2013	2014	
Production	63	70	74	82	90	95	102	

**15**

- b) Distinguish between seasonal and cyclical fluctuations with suitable examples. Give any one method of measuring seasonal fluctuations. **5**

- Q.6 a) What is sampling? What are the essentials of a good sample? Name the various methods of sampling and explain them with the help of examples. **15**

- b) Why a confidence interval better than a point estimate. **5**

- Q.7 a) A certain drug is claimed to be effective in curing cold. In an experiment on 500 persons with cold, half of them were given the drug and half of them were given the sugar pills. The patients' reactions to the treatment are recorded in the following table:

	Helped	Harmed	No effect	Total
Drug	150	30	70	250
Sugar pills	130	40	80	250
Total	280	70	150	500

On the basis of the data can it be concluded that there is a significant difference in the effect of the drug and sugar pills?

(Given for degree of freedom=2, chi square 5 per cent =5.99).

**15**

- b) What is the relation between type I and type II error? **5**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) Economics – Third Semester  
**COMMUNICATION AND WRITING SKILLS FOR ECONOMIST**  
**(BECO-S-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 3

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Answer the following questions according to instructions:

- a) Change from direct speech to indirect speech using appropriate reporting verbs:  
Ali told me "I am going on a holiday, would you like to come?" I replied "I want to go but I have several meetings this week."
- b) Change from active to passive voice:
  - i) The villagers were hunting the tigers.
  - ii) The teacher was teaching the undergraduate class.
- c) Pick the appropriate transition and rewrite the correct sentence:
  - i) Priya really enjoys watching horror films. Also, her sister likes to watch comedies.  
Priya really enjoys watching horror films. On the contrary, her sister likes to watch comedies.
  - ii) London was his favourite city. So, it was not a surprise when he decided to settle down there after retirement.  
London was his favourite city. Also, it was not a surprise when he decided to settle down there after retirement.
- d) Complete the sentences using the correct indefinite pronouns.
  - i) I don't think \_\_\_\_\_ went to the event last night.
  - ii) They were behaving curiously, I sensed \_\_\_\_\_ was fishy.
- e) Fill in the correct form of adverbs
  - i) Though everyone thought that she was very lazy, Radha was working on the assignment (hard/hardly).
  - ii) He drives very \_\_\_\_\_ (carefully/caring).
- f) Fill in the blanks with the correct form of the verb:
  - i) Trusting someone after a betrayal \_\_\_\_\_ (is/are) not easy.
  - ii) Nobody \_\_\_\_\_ (know/knows) where they might end up.
- g) Rewrite the sentences given below in the tense indicated:
  - i) Sita goes to her mother's house. (past perfect)
  - ii) I eat lunch at the café near my house. (present continuous)
- h) Complete the sentence by picking the correct preposition:  
Go \_\_\_\_\_ the stairs and \_\_\_\_\_ the door.
- i) Pick the correct homophone:  
People were received a lot of junk \_\_\_\_\_. (mail/ male). So, the office \_\_\_\_\_ (banned/ band) any communication that was not related to work.
- j) Fill in the blanks with the antonym of the words in the brackets:  
Since fossil fuels are \_\_\_\_\_ in the world, one must be very careful about their usage. (abundant). The way human beings are using the non-renewable resources can turn out to be extremely \_\_\_\_\_ for the future generations. (safe) **2×10**

## **PART-A**

- Q.2 a) Write an article for your college magazine in 150-200 words about the importance of introducing sports as part of the curriculum. **10**
- b) Put the following book in the correct APA style citation and put them in the right order for a reference list:  
The Argumentative Indian, written by Amartya Sen, in 2005. Published by Penguin Books in New Delhi.  
Hindi as Link Language. Article written in the 3rd Volume and 6th issue of Economic and Political Weekly by Baldev Raj Nayar in the year 1968, month of February. Pages 57 to 67.  
The Philosophy of Money. Book written by Georg Simmel and David Frisby in 2004. Published in London by Routledge. **6**
- c) Join the given sentences into a single sentence which means the same.  
i) Stop jumping on your bed. Sit quietly.  
ii) Raman was too tired. He couldn't get out of the bed.  
iii) They had made plans for a vacation. They had to cancel their plans.  
iv) Raj is a slow runner. He came first in the race. **1×4**
- Q.3 a) Write a report in 150-200 for your university newsletter regarding an academic seminar held in the department of economics. **10**
- b) Identify whether the underlined words form a phrase or a clause:  
i) With extreme patience, the teacher explained the concepts to him.  
ii) Tamanna was eating her dinner when the doorbell suddenly rang.  
iii) Anam likes to paint, but mother got her into a singing class instead.  
iv) The river charts a long course, through the mountains, across the plains, and falls into the sea. **1×4**
- c) Rearrange the sentences in the given below to form a cohesive paragraph:  
No one could see him.  
He was a bad sickness.  
He walked around touching one person here and another there with his icy fingers.  
On the east side of the city he hurried, touching many people; but in the narrow streets of Greenwich Village he did not move so quickly.  
Toward winter a cold stranger entered Greenwich Village.  
Doctors called him Pneumonia. **6**
- Q.4 a) Prepare a cover letter and resume applying for the job advertised below:
- Advertisement No. Fhsb4459  
Date: 10/10/2019

**Terry Normandy Financial Services**

Inviting applications for the post of junior consultant in banking services. Candidates must hold a Bachelors degree in Commerce or Economics with a first division. Salary negotiable. Interested candidates may send in your brief resume to [TNFinance@abc.com](mailto:TNFinance@abc.com).
- b) Find mistakes in the given paragraph and rewrite the corrected one:  
Corporate tax reduction are credit positive for companies, but raises government's fiscal risks, said Moody's Investors Service. The rating agency doesn't expected the tax rate cut reviving growth such that stronger tax buoyancy compensates for the loss in revenue. Finance Minister Nirmala Sitharaman on Friday announced a

deduction in the base corporate tax rate to 22% from 30% as part of stimulus measures to adverse slowing economic growth. **5**

- c) Rewrite the sentences by underlining the clauses and putting the phrases in brackets:
- After a long drawn battle, over several days, the Pandavas won the war.
  - I really like the songs from the new animated movie we went to watch, the Lion King.
  - He gets all his brilliant ideas while taking a shower.
  - Slapping him hard, mother said that she was disappointed in him.
  - Ravi was the newest boy in class, but he made friends with everyone immediately. **1×5**

### **PART-B**

Q.5 Read the passage and answer the questions given below:

There is a reason Gogol doesn't want to go to kindergarten. His parents have told him that at school, instead of being called Gogol, he will be called by a new name, a good name, which his parents have finally decided on, just in time for him to begin his formal education. The name, Nikhil, is artfully connected to the old. Not only is it a perfectly respectable Bengali good name, meaning "he who is entire, encompassing all," but it also bears a satisfying resemblance to Nikolai, the first name of the Russian Gogol. Ashoke had thought of it recently, staring mindlessly at the Gogol spines in the library, and he had rushed back to the house to ask Ashima her opinion. He pointed out that it was relatively easy to pronounce, though there was the danger that Americans, obsessed with abbreviation, would truncate it to Nick. She told him she liked it well enough, though later, alone, she'd wept, thinking of her grandmother, who had died earlier in the year, and of the letter, forever hovering somewhere between India and America, containing the good name she'd chosen for Gogol. Ashima still dreams of the letter at times, discovering it after all these years in the mailbox on Pemberton Road, opening it up only to find it blank.

But Gogol doesn't want a new name. He can't understand why he has to answer to anything else. "Why do I have to have a new name?" he asks his parents, tears springing to his eyes. It would be one thing if his parents were to call him Nikhil, too. But they tell him that the new name will be used only by the teachers and children at school. He is afraid to be Nikhil, someone he doesn't know. Who doesn't know him. His parents tell him that they each have two names, too, as do all their Bengali friends in America, and all their relatives in Calcutta. It's a part of growing up, they tell him, part of being a Bengali. They write it for him on a sheet of paper, ask him to copy it over ten times. "Don't worry," his father says. "To me and your mother, you will never be anyone but Gogol."

– Excerpt from *The Namesake* by Jhumpa Lahiri

- Why did Gogol not want to go to kindergarten? **2**
- Why did Gogol's father choose the name Nikhil? **2**
- Was Ashima happy about Gogol's chosen name? Why? **2**
- "Gogol being unhappy about his name indicates a deeper conflict of identity". Elaborate. **4**
- Find words in the passage that mean the following and make sentences:  
Likeness, shorten, floating. **6**
- Pick the correct words from the passage and fill in the blanks:

Mr. Kothari was a very \_\_\_\_\_ man in the industry. He was well known for his integrity in the way he conducted business. Though he was generally a very \_\_\_\_\_ man to work with, his intolerance of corruption was well-known. His employees were \_\_\_\_\_ of committing any fraud. However, all was about to change as a \_\_\_\_\_ employee joined his company. **4**

- Q.6 Write a speech in 350-400 words on the topic – Development of the nation is not possible unless it comes from the local communities themselves. **20**
- Q.7 “This house believes that India today stands poised to become the next superpower.” Write a debate either for or against the given motion in 350-400 words. **20**

## End Semester Examination, Dec. 2019

B.A. (Hons.) Economics – Second Semester

### ECONOMIC HISTORY OF INDIA (BHE-205)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part A** and **TWO** questions from **Part B**. Each question carries equal marks.

- Q.1 Answer the following in not more than 50 words:
- What do you understand by 'Welter of rights'?
  - Explain the concept of 'Reserved forests' under British Rule.
  - What were the economic reasons behind extensive clearance of forest lands under British rule?
  - Explain the process of commercialization.
  - In what aspect was the government at loss with the implementation of Permanent Settlement?
  - Differentiate between 'hundis' and the 'credit system' that developed under British rule.
  - Explain the role played by pre colonial rulers in conducting international trade.
  - Discuss reasons behind rise in population growth after 1920s.
  - Explain the reasons behind the emergence of tribal groups as laborers class under British rule.
  - Explain Jajmani system. **2×10**

#### **PART-A**

- Q.2
- Describe the features of Zamindari system. **6**
  - How was zamindaris system different from other land revenue systems introduced by British? **7**
  - Discus the impact of zamindaris system on peasant class. **7**
- Q.3
- What do you understand by commons? **5**
  - Discuss the impact of British policies on commons as a resource in India. **7**
  - How was tribal society affected by such changes? **8**
- Q.4
- Technological advancement in Indian economy was solely a British contribution. Comment. **10**
  - Discuss the emergence of credit markets under British rule and its impact on Indian Economy. **10**

#### **PART-B**

- Q.5
- What do you understand by deindustrialization process? Discuss in detail. **5**
  - Explain the key arguments in deindustrialization debate in Indian context. **15**
- Q.6
- In what ways did the railways affect the growth of Indian economy? **10**
  - Railways were deployed in India primarily to serve colonial objectives and thus failed to play a transformative role. Comment. **10**

- Q.7 a) Explain the theory of drain of wealth in Indian context. **10**  
b) Discuss the state of economy of India at the eve of independence. **10**

## **End Semester Examination, Dec. 2019**

B. A. / B. Sc. (Liberal Arts) – Third Semester

### **NUTRITION (BLA-CA-304A)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt **ANY TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Fill in the blanks:  
a) Emulsification  
b) Energy  
c) Malnutrition  
d) Colloids  
e) Viscosity  
f) Hydrogenation  
g) Beri-Beri  
h) Fats  
i) Food flavours  
j) Nutrition **2×10**

#### **PART-A**

- Q.2 What is nutrition? Why knowledge of nutrient is important in food preparation? **20**
- Q.3 Name emulsifying agents and their role in food preparation. **20**
- Q.4 Differentiate between:  
a) Insoluble fibre and soluble fibre  
b) Macro and micro nutrients. **10×2**

#### **PART-B**

- Q.5 Nutritive value of food gets reduced by certain faulty practices. Suggest procedures to improve nutritive value of foods. **20**
- Q.6 Discuss the concept of energy and health hazards associated with overweight and underweight. **20**
- Q.7 What is meal planning? Mention the factors affect the meal planning. **20**

## End Semester Examination, Dec. 2019

B.A. Liberal Arts – First Semester

### HOTEL ACCOUNTING (BLA-CA-304B)

Time: 2 hrs.

Max Marks: **50**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt **ANY TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Define the following terms in 2-3 lines each:

- a) Goodwill
- b) Assets
- c) Liabilities
- d) Finance
- e) Capita!

**2×5**

#### **PART-A**

Q.2 What do you understand by the term accounting? Explain any five functions of accounting. **10**

Q.3 Draw the format of balance sheet, journal and ledger. **10**

Q.4 What do you understand by the term financial statement and what are the different types of financial statements explain each? **10**

#### **PART-B**

Q.5 What do you mean by working capital and what are the factors that affect the working capital in hotels? **10**

Q.6 What do you mean by capital budgeting? Enlist the five importance of capital budgeting and name any five methods of capital budgeting. **10**

Q.7 Explain the process of capital budgeting. **10**

## End Semester Examination, Dec. 2019

B.A. Liberal Arts – First Semester

### HOTEL ACCOUNTING (BLA-CA-304B)

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Define the following terms in 2-3 lines each:

- a) Goodwill
- b) Assets
- c) Liabilities
- d) Finance
- e) Capital

**2×5**

#### **PART-A**

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#### **PART-B**

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Q.6 What do you mean by capital budgeting? Enlist the five importance of capital budgeting and name any five methods of capital budgeting. **10**

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**End Semester Examination, Dec. 2019**  
B.A. Liberal Arts – First Semester  
**FOOD AND BEVERAGE PRODUCTION (CULINARY ARTS THEORY-I)**  
**(BLA-CA-T-101)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: *Attempt **FIVE** questions in all; **Q.1** is compulsory. Attempt **ANY TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Write short notes on the following:

- a) Nouvelle cuisine
- b) Cookery
- c) Kitchen hazard
- d) Food safety
- e) Fusion cuisine
- f) Textures
- g) Fats
- h) Salad dressing
- i) Chef
- j) Boiling

**1×10**

**PART-A**

Q.2 Classify the soups. Give the recipe of any one of the international soup. **10**

Q.3 Why is personal hygiene important in kitchen, Elaborate? **10**

Q.4 What are the duties and responsibilities of an Executive Chief in the Kitchen of a 5 star hotel? **10**

**PART-B**

Q.5 Draw the structure of an egg, label its parts and give its uses in cookery. **10**

Q.6 Plan all stocks in a 5 star kitchen and give recipe of white stock. **10**

Q.7 Define sugar. Give various stages of cooking sugar. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. Liberal Arts – Second Semester  
**CULINARY ARTS-II FOOD AND BEVERAGE PRODUCTION-II**  
**(BLA-CA-T-202)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1** and **Q.2** are compulsory. Attempt any **THREE** questions from **Part-C**. Marks are indicated against each question.

**PART-A**

Q.1 Define the following terms:

- a) A'anglaise
- b) A'la only.
- c) Zuppa
- d) Zest
- e) Offal

**2×5**

**PART-B**

Q.2 Draw a well labelled diagram of cuts of chicken.

**10**

**PART-C**

Q.3 Write down the points to be considered while selecting fish.

**10**

Q.4 What are the steps involved in straight dough method in bread making?

**10**

Q.5 What is cream? Describe its processing.

**10**

Q.6 Write down the effects of heals on rice cereals and pulses.

**10**

Q.7 Draw and describe the vegetable cuts also draw the vegetable family chart.

**10**

**End Semester Examination, Dec. 2019**  
B.A. / B.Sc. (Liberal Arts) – Third Semester  
**FOOD AND BEVERAGE SERVICE (THEORY-I) (BLA-CA-T-303)**

Time: 2 hrs.

Max Marks: **50**

No. of pages: *1*

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Fill in the blanks:
- a) Water service is done from \_\_\_\_\_ side.
  - b) Salad is served in \_\_\_\_\_ plate.
  - c) Quarter plate is also known as \_\_\_\_\_.
  - d) In which year ITDC was formed \_\_\_\_\_.
  - e) Name of the first hotel building \_\_\_\_\_ constructed in New York.
  - f) Musafir khanas and Sarais were developed during which period \_\_\_\_\_.
  - g) ITDC stands for \_\_\_\_\_.
  - h) Which is the First hotel by Taj group of Hotels \_\_\_\_\_?
  - i) An F & B Outlet where single cuisine is served is called \_\_\_\_\_.
  - j) A square table for 2 have dimensions \_\_\_\_\_ feet. **1×10**

**PART-A**

- Q.2 Explain the role of kitchen stewarding and enlist the various jobs performed by it. **10**
- Q.3 Name different types of glassware used in a standard bar with their uses and size. **10**
- Q.4 Answer the following:
- a) What are the various types and brands of coffee available?
  - b) Write down the service procedure of Coffee. **5×2**

**PART-B**

- Q.5 What are the different types of catering establishments? Explain airline catering in brief. **10**
- Q.6 Differentiate between:
- a) Mise-en-scence and Mise-en-place
  - b) Pre-plated service and Platter to plate service **5×2**
- Q.7 Design a 17 course French classical menu by providing two examples of classical dishes from each course. **10**

**End Semester Examination, Dec. 2019**  
B.A. Liberal Arts – Second Semester  
**INTERMEDIATE MICROECONOMICS (BLA-EC-202)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) Define market, and state its main objective(s).
  - b) For a normal shape of demand curve, prove that slope of MR curve is twice the AR curve.
  - c) Why demand curve in perfectly competitive market is infinitely elastic?
  - d) Which is the key factor of price discrimination by monopolist? Distinguish first with third degree price discriminations.
  - e) A monopolist can face losses in long run too - explain why.
  - f) What are the heroic assumptions made by Chamberlin regarding the group equilibrium?
  - g) What are the main types of cartel? Outline the objectives of each.
  - h) Define product positioning in context of location model.
  - i) Briefly explain why the oligopoly market faces indeterminacy of equilibrium price/output.
  - j) Is it possible to find out equilibrium if both MC and MR are downward sloping? Explain briefly. **2×10**

**PART-A**

- Q.2
- a) Derive mathematically firm's equilibrium using marginalism approach; explain the same with respect to competitive market structure by a suitable diagram. **10**
  - b) There are three specific relations between average and marginal curves that ultimately rely on the slope of average curve. Prove this statement with respect to AR and MR. **10**
- Q.3
- a) If unit tax is imposed, it will affect short run equilibrium of firm. In the competitive market setting explain this statement, and show how much tax the producer will be able to shift in a normal demand-supply condition of market. Will the firm be able to shift any tax if facing completely elastic supply? **10**
  - b) Explain how a firm can determine its equilibrium by interaction between TR and TC? **10**
- Q.4
- a) Define the multiplant monopoly. Also explain the mathematical derivation of the equilibrium of the multiplant monopolist. **10**
  - b) What is monopoly power? Show that monopoly power varies inversely as the price elasticity of demand. **10**

**PART-B**

- Q.5
- a) Differentiate between perfect competition, monopolistic competition and monopoly competition upon their distinctive features. **10**
  - b) How does a firm in monopolistic competition reach in equilibrium price-output decisions when firms in the group indulge in price competition and there is no barrier to entry and exist of the firms? **10**

- Q.6 Briefly describe the simplified version of Cournot's duopoly model, and explain that each firm at equilibrium will produce rd of market output in this model. **20**
- Q.7 Suppose the increasing market demand causes factor prices to increase over time, and there is an exogenous increase in demand at commodity market as well. Under this situation, how the oligopolistic firms will adjust their supply in long run? **20**

## End Semester Examination, Dec. 2019

B.A. / B. Sc. (Liberal Arts) – Second Semester

### ENGLISH LITERATURE-II (BLA-EL-202)

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1** and **Q.2** are compulsory. Attempt any **THREE** questions from **Part-C**. Marks are indicated against each question.

#### **PART-A**

Q.1 Explain with reference to the context (**any four**):

- a) My heart aches, and a drowsy numbness pains  
My sense, as though of hemlock I had drunk,  
Or emptied some dull opiate to the drains  
One minute past, and Lethe-wards had sunk:
- b) Where are the songs of spring? Ay, Where are they?  
Think not of them, thou hast thy music too,—  
While barred clouds bloom the soft-dying day,  
And touch the stubble-plains with rosy hue;
- c) Her clarion o'er the dreaming earth, and fill  
(Driving sweet buds like flocks to feed in air)  
With living hues and odours plain and hill:
- d) Angels of rain and lightning: there are spread  
On the blue surface of thine aëry surge,  
Like the bright hair uplifted from the head
- e) In the golden lightning  
Of the sunken sun,  
O'er which clouds are bright'ning,  
Thou dost float and run;  
Like an unbodied joy whose race is just begun.
- f) Away! away! for I will fly to thee,  
Not charioted by Bacchus and his pards,  
But on the viewless wings of Poesy,  
Though the dull brain perplexes and retards:

**5×4**

#### **PART-B**

Q.2 What are the different characteristics of an essay? Write an essay on any recent incident that has shook the world. **20**

#### **PART-C**

Q.3 Critically discuss the poem Ode to a Nightingale. **20**

Q.4 What is an ode? In what ways does Shelley's Ode to the West Wind poem fit the definition of an ode? **20**

Q.5 Compare the writing styles of John Keats and P. B. Shelly. **20**

Q.6 What has inspired Shelly to write the poem Ode to a Skylark? Elaborate. **20**

Q.7 Discuss the age of Francis Bacon. What type of essayist was Bacon?

20

## End Semester Examination, Dec. 2019

B.A. / B. Sc. (Liberal Arts) – Second Semester

### ENGLISH LITERATURE-II (BLA-EL-202)

Time: 3 hrs.

Max Marks: 100

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Explain with reference to the context (**any four**):

a) Where are the songs of spring? Ay, Where are they?

Think not of them, thou hast thy music too,—  
While barred clouds bloom the soft-dying day,  
And touch the stubble-plains with rosy hue;

b) My heart aches, and a drowsy numbness pains

My sense, as though of hemlock I had drunk,  
Or emptied some dull opiate to the drains  
One minute past, and Lethe-wards had sunk:

c) Her clarion o'er the dreaming earth, and fill,  
(Driving sweet buds like flocks to feed in air),  
With living hues and odours plain and hill:

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Like the bright hair uplifted from the head,

e) In the golden lightning,  
Of the sunken sun,  
O'er which clouds are bright'ning,  
Thou dost float and run;  
Like an unbodied joy whose race is just begun.

f) Away! away! for I will fly to thee,  
Not charioted by Bacchus and his pards.  
But on the viewless wings of Poesy,  
Though the dull brain perplexes and retards:

5×4

### **PART-A**

Q.2 Compare the writing styles of John Keats and P. B. Shelly.

20

Q.3 What are the different characteristics of an essay? Write an essay on any recent incident that has shook the world.

20

Q.4 Critically discuss the poem Ode to a Nightingale.

20

### **PART-B**

Q.5 What has inspired Shelly to write the poem Ode to a Skylark? Elaborate.

20

Q.6 What is an ode? In what ways does Shelley's Ode to the West Wind poem fit the definition of anode?

20

Q.7 Discuss the age of Francis Bacon. What type of essayist was Bacon?

20

# End Semester Examination, Dec. 2019

B.A. Liberal Arts – Second Semester

## UNDERSTANDING ECONOMIC PRINCIPLES (BLA-EP-E-201)

Time: 2 hrs.

Max Marks: 50

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1** and **Q.2** are compulsory. Attempt any **THREE** questions from **Part-C**. Marks are indicated against each question.

### PART-A

Q.1 Answer the following questions:

- What is meant by economic agents?
- State three injections into the circular flow of income.
- What is elasticity of demand?
- Make the distinction between static and dynamic analysis.
- What do you mean by economic agents and discuss their rational and adaptive expectations.

2×5

### PART-B

- Q.2 a) Explain different methods of measuring national income. 5  
b) Calculate National income from the following data:

S. No.	Items	(in ₹ Crore)
i)	Private Income	1,200
ii)	National Debt interest	40
iii)	Current transfers from the government administrative departments	40
iv)	Other current transfers from rest of the world	12
v)	Income from property and entrepreneurship accruing to government departments	16
vi)	Savings of government departmental enterprises.	8

5

### PART-C

- Q.3 a) Explain Circular flow of income in two sector economy. 5  
b) What do we mean by leakage? Name the 3 leakages from the circular flow of income? 5

- Q.4 a) Distinguish between price elasticity and income elasticity of demand. 5  
b) What do you understand by shift in demand curve? Enumerate three possible reasons for such shift. 5

- Q.5 a) Explain the concept of slopes for downward and upward sloping linear curve. 5  
b) What do you mean by partial and general equilibrium? 5

- Q.6 a) Discuss the importance of Opportunity cost in economics. 5  
b) What is Economics? Explain its nature and scope. 5

Q.7 Write short notes on the following:

- Efficiency vs. equity.
- Optimization and equilibrium.

5×2

84/5

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Liberal Arts) – First Semester  
**INTRODUCTION TO COMMUNICATION AND MEDIA (BLA-MS-101)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1 Attempt (**any ten**) of the following:
- a) Define 'communication'.
  - b) Who is an encoder in the communication process?
  - c) Write down any two examples of non-verbal communication.
  - d) Define 'upward communication'.
  - e) Cultivation theory was developed by \_\_\_\_\_ in the year \_\_\_\_\_.
  - f) Who is an opinion leader?
  - g) Name any two national news agencies.
  - h) What do you mean by folk media?
  - i) Write down any two functions of mass media,
  - j) Define 'New media'.
  - k) SMCR is a communication model. Write down the full form of S \_\_\_\_\_  
M \_\_\_\_\_ C \_\_\_\_\_ R \_\_\_\_\_.
  - l) What do you mean by feedback? **2×10**

**PART-A**

- Q.2 Explain the process of communication with examples. **20**
- Q.3 Explain the personal influence theory of communication. Do you think this theory is relevant in the current media scenario? **20**
- Q.4 Critically analyse Harold Lasswell's model of communication. How is this model different from Shanon and Weaver's model of communication? **20**

**PART-B**

- Q.5 "Audiences not only learn about issues through the media, they also learn how much importance should be given to a particular issue"? Justify the given statement with reference to agenda setting theory. **20**
- Q.6 Differentiate between traditional media and new media with relevant examples. **20**
- Q.7 Is communication free of all barriers? Discuss in detail. **20**

**End Semester Examination, Dec. 2019**  
B.A. Liberal Arts – Second Semester  
**INTRODUCTORY MATHEMATICS (BLA-MS-201)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 2

Note: Attempt **FIVE** questions in all; **Q.1** and **Q.2** are compulsory. Attempt any **THREE** questions from **Part-C**. Marks are indicated against each question.

**PART-A**

Q.1 Answer all the questions in not more than 50 words each:

- a) Explain the meaning of  $\cap$ ,  $\phi$ ,  $\subseteq$  and  $\supset$  with respect to set notation
- b) Symmetric matrix is always a square matrix. Do you agree? Justify your answer with an example.
- c) Identify dependent and independent variables and parameters of a function with suitable examples
- d) When is a matrix considered as non-singular?
- e) Suppose  $u = a^v$ . Find out  $du/dv$  when  $v = 1$  and  $a = 5$ .

f) Calculate the determinant of A, where  $A = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$ .

g) If  $a_n = n + \frac{7}{4}$  then calculate its 5<sup>th</sup> term.

h) Solve  $\int a \, dx$ , where a is a constant..

i) Given  $u = (5 \ 2 \ 3)$ , find vectors  $u'$ .

j)  $A = \begin{pmatrix} 1 & 5 \\ 11 & 10 \end{pmatrix}$ . Is determinant of A equals Determinant of A'?

**2×5**

**PART-B**

Q.2 Answer **any four** of the following:

- a) Explain exponential and logarithm functions with suitable example(s)
- b) Solve the following:

$$\int \sqrt{x} \sqrt{x} \sqrt{x} \, dx$$

- c) Explain intersection between sets A and B using Venn diagram. Define and show in diagram for set complement.

d) Calculate X,  $X = 2(AB + C)$ ,  $A = \begin{pmatrix} 3 & 0 & -1 \\ 0 & 2 & 1 \end{pmatrix}$ ,  $B = \begin{pmatrix} 1 & 2 \\ 1 & 0 \\ 0 & 6 \end{pmatrix}$  and  $C = \begin{pmatrix} -2 & 0 \\ -2 & -5 \end{pmatrix}$ .

e) Calculate the cofactor matrix of A, where  $A = \begin{pmatrix} 7 & 3 & 5 \\ 2 & 0 & 2 \\ 1 & -1 & 0 \end{pmatrix}$ .

**5×4**

**PART-C**

- Q.3 a) Graphically and mathematically express the constant and cubic functions. If a function is given by  $y = 2 + 3x$ , find out its inverse function. **10**  
 b) For the sets:  $\{4, 5\}$  and  $\{\text{green, red}\}$ , explain their Cartesian product. **10**
- Q.4 a) Suppose that a curve  $y = f(x)$  in the  $xy$  plane has the property that at each point  $(x, y)$  on the curve, the tangent line has slope  $x^{3/4}$ . Find an equation for the curve given that it passes through the point  $(2, 1)$ . **10**  
 b) What is a diagonal matrix? Give an example. **10**
- Q.5 a) Explain the concept of derivative as slope of curve. **10**  
 b) Solve the derivatives:  
 i) Find  $\frac{dy}{dx}$  for  $y = 4\sqrt{x} + \frac{5}{x^3} - \frac{2}{(\sqrt[3]{x})^2}$ .  
 ii) Find  $g''$  when  $g(x) = \frac{z^2 + 2}{z - 1}$  and  
 iii) Find  $f''(2)$  if  $f(t) = -t^4 + 2t^3 + t + 4$ . **10**
- Q.6 Using Cramer's rule, solve the following equations:  
 $8x_1 - x_2 = 15$   
 $x_2 + 5x_3 = 1$   
 $2x_1 + 3x_3 = 4$  **20**
- Q.7 Solve the following:  
 a)  $\int \frac{e\sqrt{x}}{\sqrt{x}} dx$ .  
 b)  $\int (x^2 + 1)^{50} 2x dx$  **10×2**

**End Semester Examination, Dec. 2019**  
B.A. Liberal Arts – First Semester  
**UNDERSTANDING POLITICAL THEORY (BLA-PS-101)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: *1*

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 How Marxist theory and Liberal theory view 'Politics'? Which theory is more relevant today according to you? Explain in detail. **20**

**PART-A**

Q.2 What is Equality? Describe evolution of equality. **20**

Q.3 Describe John Rawls theory of Justice. Discuss its feminist critique. **20**

Q.4 What is Gender? Discuss the developments in Sex/Gender debate in feminist theory. **20**

**PART-B**

Q.5 What is Identity? Critically analyse its importance in a multicultural society. **20**

Q.6 What is Civil Society? Discuss the evolution of Civil Society in modern times. **20**

Q.7 What is the concept of Property? Analyse Property from the feminist perspectives. **20**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Liberal Arts) – Second Semester  
**POLITICAL PROCESS IN INDIA (BLA-PS-202)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1** and **Q.2** are compulsory. Attempt any **THREE** questions from **Part-C**. Marks are indicated against each question.

**PART-A**

- Q.1 Briefly answer the following questions (attempt all questions):
- Write a note on Article 324 relating to the election commission of India.
  - Define communalism.
  - What does greater autonomy mean?
  - Write a short note on Chipko movement.
  - Define criminalization of politics.
  - Write a short note on politicization of caste in India.
  - Write about Human Rights in India.
  - Write about Election Commission of India.
  - Define human rights.
  - Discuss the nature of Indian Federation.
- 2×10**

**PART-B**

- Q.2 Answer the following short questions (attempt **any four** questions):
- Critically discuss the language problem in India.
  - Explain the role of tribal politics in India.
  - Elucidate on the various attempts of electoral reforms in India.
  - Write a note on Narmada Bachao Andolan.
  - Examine the gradual growth of women's in India.
- 5×4**

**PART-C**

- Q.3 Examine the electoral performance of Indian National Congress since the first general election of 1951. **20**
- Q.4 Discuss in detail all the different regional parties of India. **20**
- Q.5 What do you mean by regionalization? Explain how regionalism has come to play an important factor in Indian politics? **20**
- Q.6
- Discuss the centre-state financial relations. **10**
  - Discuss some of the key integration mechanisms to strike a balance between centre and the state. **10**
- Q.7
- Write a note on women's movements in India. **10**
  - Write a note on chipko movement in India. **10**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Hons.) (Liberal Arts) – Second Semester  
**POLITICAL PROCESS IN INDIA (BLA-PS-202)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 Answer the following questions:

- a) What do you mean by Centre state relations?
- b) Which article of Indian Constitution divides the powers between the centre and states?
- c) How is the power divided between the national and state government?
- d) What does greater autonomy mean?
- e) Write a short note on Jhhapto Chheeno Andolan.
- f) What are the impacts of terrorism?
- g) What are traditional security threats?
- h) What are non-traditional security threats?
- i) What are types of security?
- j) Write a note on Bahujan Samaj Party. **2×10**

**PART-A**

- Q.2 a) Examine the tension areas in the relationship between the Centre and the State. **10**  
b) Discuss some of the Key integration mechanism to strike a balance between Centre and the State. **10**
- Q.3 Examine the electoral performance of Bhartiya Janta Party since 1990. **20**
- Q.4 a) Examine Caste as an important factor in Indian politics. **10**  
b) Examine how religion has become a decisive factor in Indian politics? **10**

**PART-B**

- Q.5 a) Write a note on Women's movements in India. **10**  
b) Write a note on the Chipko movement. **10**
- Q.6 Indian democracy faces various challenges due to criminalisation of politics. Examine the reasons, challenges and steps taken in this regard. **20**
- Q.7 Discuss any two current public movements over natural resource. What is Naxal problem? Are Naxalites terrorists? **20**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. Liberal Arts – Third Semester  
**ISSUES IN INDIAN POLITICS (BLA-PS-303)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: *Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.*

Q.1 What is the nature of Indian State? Is Indian State relatively autonomous? Explain. **20**

**PART-A**

Q.2 What is Indian Judiciary? Is Judicial Activism good for India? Evaluate. **20**

Q.3 How religion and politics are related to each other in India? How it is not healthy for Indian democracy? Explain. **20**

Q.4 What is Party system? Discuss different phases of Party system in post-independent India. **20**

**PART-B**

Q.5 Discuss the strategies of Development in post-independent India. Evaluate merits and Demerits of liberalization. **20**

Q.6 What is Social Movements? Discuss the reasons of its emergence in India. **20**

Q.7 Write an essay on Environmental Movements in India. How they are different than western Environmental Movements? **20**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Liberal Arts) – Third Semester  
**COLONIALISM AND NATIONALISM IN INDIA (BLA-PS-304)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 What is Colonialism? Analyze it from Marxist and Liberal perspectives. **20**

**PART-A**

Q.2 Describe the constitutional developments in colonial India. How it shaped the evolution of constitution making in post-independent India? **20**

Q.3 How Colonialism impacted Indian agriculture and industry? Evaluate. **20**

Q.4 What was 1857 revolt? How it shaped the background of Indian National Movement? **20**

**PART-B**

Q.5 Discuss different phases of Nationalist Movement? Describe the role of Liberals. **20**

Q.6 Describe the role of Gandhi in mass mobilization which finally led to Indian independence? **20**

Q.7 What is two-nation theory? Analyse the role of Muslim League in freedom struggle. **20**

**End Semester Examination, Dec. 2019**  
B.A. / B. Sc. (Liberal Arts) – Third Semester  
**UNDERSTANDING HUMAN PSYCHE (BLA-PY-301)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: **1**

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

Q.1 Fill in the blank:

- a) \_\_\_\_\_ allows humans to see in black, white and shades of grey in dim light.
- b) \_\_\_\_\_ principles of visual perception are based on the concept of grouping.
- c) \_\_\_\_\_ focuses on the self-concept, free will, and human nature as being positive.
- d) \_\_\_\_\_ emphasized unconscious processes and early life experiences.
- e) \_\_\_\_\_ learning is method of learning that consists of observing and modeling another individual's behavior, attitudes, or emotional expressions.
- f) \_\_\_\_\_ psychology says that "The whole is greater than the sum of its parts".
- g) \_\_\_\_\_ studies objective and observable environmental influences.
- h) \_\_\_\_\_ threshold is the minimum amount of sensory stimulation that can be detected 50% of the time.
- i) Our \_\_\_\_\_ has three basic functions: encoding, storing and retrieving information.
- j) \_\_\_\_\_ is the global capacity to act purposefully, think rationally and deal effectively with the environment. **2×10**

**PART-A**

Q.2 Analyze the importance of the role of the experimenter (psychologist) in Stanley Milgram's experiment. **20**

Q.3 Elaborate on the main career specialties in psychology. **20**

Q.4 The whole is greater than the sum of its parts. Explain using diagrams. **20**

**PART-B**

Q.5 Evaluate the importance of observational learning. **20**

Q.6 Explain and compare the three stages of memory. **20**

Q.7 Can the intelligence of a person be developed? Discuss in detail. **20**

## End Semester Examination, Dec. 2019

### B.A. Liberal Arts – Third Semester BIO PSYCHOLOGY (BLA-PY-302)

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B**. Marks are indicated against each question.

- Q.1
- a) What are the functional neuroimaging technique?
  - b) What is PET scan?
  - c) What does lateralization mean?
  - d) Which part of brain regulates homeostasis?
  - e) Differentiate between unipolar and multipolar neuron.
  - f) What are the various hormone secreted by pituitary gland?
  - g) Mechanoreceptor and nociceptors are responsible for.
  - h) Which part of brain is responsible for aggressive behaviour?
  - i) What is the function of myline sheath?
  - j) Which hormone is responsible for regulation of thirst? **2×10**

#### **PART-A**

- Q.2 Critically analyze the various neuroimaging techniques. **20**
- Q.3 With diagrammatic representation, explain the structure and functions of auditory system. **20**
- Q.4 What is various neurotransmitters and their functions? Also explain the neurological disorder associated with these neurotransmitters. **20**

#### **PART-B**

- Q.5 Elaborate the concept of endocrine system. **20**
- Q.6 Explain the process of sleep cycle and brain mechanism of sleep and wakefulness. **20**
- Q.7 Critically analyze the theories of emotions. Explain the neurophysiology of emotions. **20**

**End Semester Examination, Dec. 2019**  
M.A. / M. Sc. (Psychology) – First Semester  
**GENDER TOWARDS A NEW UNDERSTANDING (PSY-GE-013)**

Time: 3 hrs.

Max Marks: **100**

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

- Q.1 Answer the following questions in brief:
- What do you understand by trans-sexuality?
  - Give an example of institutionalized non-heteronormative culture and explain.
  - Using an illustration discuss how cultural taboos are framed around biological processes.
  - What is protest masculinity?
  - Why should we take account of gender while budgeting for resources?
  - Define 'Gender displays'.
  - Briefly explain the theory of gender performativity.
  - What role has gender played in social movements in India? Give one example.
  - Define 'intersectionality of gender'.
  - Mention one important gender related law enacted by the Indian government in recent years. **2×10**

**PART-A**

- Q.2 What do you understand by masculinity and femininity? Explain how gender helps in the formation of behavioural traits? **20**
- Q.3 What is gender embodiment? Show with illustrations how gendered subjects and objects are formed in men and women. **20**
- Q.4 Does the intellect of a person have anything to do with their sex and gender? Explain in detail. **20**

**PART-B**

- Q.5 Analyze 'body image' as a psychological construct. Explain how cultural idealization of feminine thinness can cause psychological disorders? **20**
- Q.6 "Women's domestic work is the invisible pillar essential to keep the economy running". Justify the statement. **20**
- Q.7 "Gender is not only a matter of difference, but one of power". Comment using illustrations. **20**