



UNIVERSITY OF THE PUNJAB

Part-I A/2017

Examination:- M.A./M.Sc.

Roll No.

Subject: Economics

PAPER: I (Microeconomic Theory)

TIME ALLOWED: 3 hrs.

MAX. MARKS: 100

NOTE: Attempt any FOUR questions. All questions carry equal marks. Student must follow the English Version of the questions Paper. Urdu Translation is provided only for additional help to understand the questions.

Q. No.1 Define marginal rate of substitution. Explain this concept with the help of diagram and mathematics. (25)

مختتم شرح استبدال کے تصور کی تعریف کیجیے۔ اس کی ڈائیگرام اور ریاضی کی مدد سے کیجیے۔ سوال نمبر ۱

Q. No.2 Find out (i) MPL (ii) MPK (iii) MRTS (iv) Elasticity of factor substitution (v) Factor intensity in the light of Cobb-Douglas production function $X = b_0 L^{b_1} K^{b_2}$ (25)

کوب ڈگلس تقاضا پیداوار اور $X = b_0 L^{b_1} K^{b_2}$ کو پیش نظر رکھتے ہوئے سوال نمبر 2

(i) محنت کی مختتم پیداوار

(ii) سرمایہ کی مختتم پیداوار

(iii) مختتم فی شرح استبدال

(iv) عامل کی استبدالی چمک

(v) عامل کی جازبیت معلوم کیجیے

Q. No.3 Explain Cournot Model of duopoly with the help of Reaction curve? (25)

دو جہارہ ماحول میں کورنوت ماڈل کی خطوط رد عمل کی مدد سے تشریح کیجیے۔ سوال نمبر 3

Q. No.4 How a firm succeeds in the maximization of output when cost of production is given with the help of diagrams and mathematics. (12 ½ + 12 ½)

ایک فرم دیئے ہوئے مصارف پیداوار کی موجودگی میں اپنی پیداوار کو کس طرح زیادہ سے زیادہ کرنے میں کامیاب ہوتی ہے۔ ڈائیگرام اور ریاضی کی مدد سے واضح کیجیے۔ سوال نمبر 4

Q. No.5 (a) Production and cost function of the firm are given as below. Find out value L and K When firm is in equilibrium Position? (15)

$Q = 2LK$ (Production function) (10)

$4K + 3L - 90 = 0$ (cost function)

(b) The Comparison of monopoly and perfect competition.

الف: مذکورہ بالا تقاضا پیداوار اور تقاضا لاگت کو پیش نظر رکھتے ہوئے محنت (L) اور سرمایہ (K) کی قدریں معلوم کیجیے جن پر فرم توازنی حالت میں ہوتی ہے۔ سوال نمبر 5

ب: اجارہ داری اور مکمل مقابلہ کے ماحول میں موازنہ کیجیے۔

Q. No.6 Explain Paul sweezy model of non-collusive oligopoly. (25)

پال سویزی کا پیش کردہ چند جہارہ غیر تعاونی ماڈل کی وضاحت کیجیے۔ سوال نمبر 6

Q. No.7 Write comprehensive notes on any Two of the following? (12 ½ + 12 ½)

(a) The concept of Game Theory

(b) Cartel Model of Collusive oligopoly

(c) Law of increasing returns to scale

درج ذیل میں سے کسی دو پر جامع نوٹ لکھیے۔ سوال نمبر 7

الف: گیم تھیوری کا تصور

ب: تعارفی چند جہارہ کارٹل ماڈل کا تصور

ج: قانون پیمانہ تکثیر حاصل



UNIVERSITY OF THE PUNJAB

Part-I A/2017
Examination:- M.A./M.Sc.

Roll No.

Subject: Economics
PAPER: II (Macroeconomic Theory)

TIME ALLOWED: 3 hrs.
MAX. MARKS: 100

S.No. Q	Questions	marks
	Note: Attempt any FOUR questions. All questions carry equal marks.	
Q # 1	a) Explain short-run and long-run Phillips Curve. b) Does there exist an inverse relationship between the rate of unemployment and the rate of inflation in the long-run? الف) عرصہ قلیل اور عرصہ طویل کے خطِ فلیس کی وضاحت کریں ب) کیا عرصہ طویل میں شرح بے روزگاری اور شرح افراط زر میں معکوس تعلق پایا جاتا ہے؟	20 05
Q # 2	a) What is time lag? State its types. b) Discuss relative effectiveness of Monetary Policy using IS-LM model. الف) زمانی وقفہ کیا ہے؟ اس کی اقسام بیان کریں ب) آئی ایس۔ ایف۔ ایم کے ذریعے زرعی پالیسی کے نسبتی اثر پذیری پر بحث کریں	10 15
Q # 3	Explain Neo Classical Growth Model and show how stable equilibrium occurs in an economy. نو کلاسیکل ماڈل برائے ترقی کی تشریح کریں اور دکھائیں کہ ایک معیشت میں مستحکم توازن کیونکر پیدا ہوتا ہے	25
Q # 4	Explain sources of Demand-Pull and Cost-Push inflation. What are their policy implications? طلب کے دباؤ اور افزائش مصارف کے افراط زر کے ماخذ کی وضاحت کریں۔ ان کے پالیسی مضمرات کیا ہیں؟	20+05
Q # 5	1-Suppose that $C = 60 + 0.8Y_d$ $G_o = 250$ $M_s = 100$ $I = 150 - 10r$ $T_o = 200$ $M_d = 40 + 0.1 - 10r$ a) Find the equations for IS and LM schedules. b) Find the equilibrium values for income (Y) and the interest rate (r). 2- Suppose now investment is perfectly interest inelastic in part-1 i.e $I = 150$ so again a) Find the new equations for IS and LM schedules with graph. b) Find the new values of income (Y) and the interest rate (r). ۱۔ انگریزی حصہ میں دی گئی معلومات کی روشنی میں الف) آئی ایس اور ایف ایم خطوط کی مساواتیں اخذ کریں ب) آمدنی اور شرح سود کی متوازن قدریں معلوم کریں ۲) اگر پارٹ۔ ۱ میں سرمایہ کاری شرح سود کے لحاظ سے مکمل طور پر غیر چمکدار ہو تو الف) آئی ایس اور ایف ایم خطوط کی نئی مساواتیں اخذ کریں اور گراف بنائیں ب) آمدنی اور شرح سود کی نئی متوازن قدریں معلوم کریں	07 06 07 05
Q # 6	Explain and critically evaluate the Friedman's Theory of Consumption. فریڈمین کے نظریہ صرف کی وضاحت کریں اور اس کا تنقیدی جائزہ لیں	18+07
Q # 7	a) What is Tax Shooting? b) What is meant by Lucas Critique? c) The Expectation Augmented Phillips Curve. الف) ٹیکس شوٹنگ کیا ہے؟ ب) لوکاس تنقید سے کیا مراد ہے؟ ج) توقعات بڑھاؤ خطِ فلیس	05 10 10



UNIVERSITY OF THE PUNJAB

Part-I A/2017
Examination:- M.A./M.Sc.

Roll No.

Subject: Economics
PAPER: III (Mathematical Economics)

TIME ALLOWED: 3 hrs.
MAX. MARKS: 100

NOTE: Attempt any FOUR questions. All questions carry equal marks.

- 1 (a) What is Transpose of a Matrix? Give its properties with examples (9)
- (b) Given the linear equations: (6)
- $$4X_1 + 3X_2 = 28$$
- $$2X_1 + 5X_2 = 42$$
- Find \bar{X}_1 and \bar{X}_2 .*
- (c) Find the equations for the lines passing through the following points (10)
- (3, -17), (0, 19)
 - (-7, 4), slope 5
- 2 (a) Clearly bring out the difference between the following giving suitable examples. (9)
- Relations and functions
 - Minors and cofactors
 - Transpose and adjoint of a matrix
- (b) The demand for a product is given by (16)
- $$P + 2Q = 250 \text{ and the supply by } P - 4Q = 100$$
- If a flat-rate tax is imposed on each unit sold what is the maximum possible tax revenue?
 - Show that if a percentage tax is imposed on each unit sold the same maximum possible tax revenue is obtained.
- 3 (a) Differentiate the following: (10)
- Total Derivative and Total Differential
 - Static & Comparative Static Analysis
- (b) A monopolist faces a linear demand function given by (15)
- $$P = 30 - 3Q. \text{ His total-cost function is given by}$$
- $$C(Q) = Q^2 + 2Q + 2.$$
- If a tax of t per unit of output sold is imposed by the government on this monopolist find:
- The maximum tax revenue that can be obtained by such taxation
 - The monopolist's maximum profit after the tax levy
 - The price per unit output at which the monopolist's profit-maximizing output is sold

PTO

4 (a) Differentiate between open and closed models of the input and output analysis. (10)

(b) Given the following input coefficients matrix and final demand vector: (15)

$$A = \begin{bmatrix} 0.4 & 0.3 & 0.1 \\ 0.2 & 0.2 & 0.3 \\ 0.2 & 0.4 & 0.2 \end{bmatrix} \quad D = \begin{bmatrix} 170 \\ 205 \\ 145 \end{bmatrix}$$

- i) Find the correct level of output for the three industries.
- ii) Interpret the economic meanings of the element 0.3
- iii) What meanings of the third column sum conveys?

5 (a) Explain the concept of rank of a Matrix giving suitable examples (9)

(b) Optimize the objective function subject to the following constraints

$$Z = 8x^2 + 6y^2 - 2xy - 40x - 42y + 180 \quad (16)$$

Subject to:

$$X + Y = 5$$

- i) Use Lagrangian Multiplier Method for finding the values of X, Y & λ
- ii) Use bordered Hessian determinant for 2nd order condition.

6 (a) Explain the concept of Jaccobian determinant with the help of an example. (8)

(b) Explain Duality Theorems giving examples. (8)

(c) Find the non stationary point of inflection of the function (9)

$$Y = -\frac{2}{3}X^3 + 10X^2$$

7 Write a short note on any TWO of the following: (12 ½)

- i) Simplex method (12 ½)
- ii) Properties of Inverse of a Matrix
- iii) Ingredients of Linear Programming



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Part-I A/2017
Examination:- M.A./M.Sc.

Roll No.

Subject: Economics
PAPER: IV (Statistics for Economists)

TIME ALLOWED: 3 hrs.
MAX. MARKS: 100

NOTE: Attempt any FOUR questions. All questions carry equal marks.

1	a) Differentiate between the following terms. i) Pooled data and cross sectional data. ii) Primary and secondary data. iii) Nominal and ordinal scale. b) What is meant by frequency distribution? Describe briefly the main steps in the preparation of a frequency table from raw data. c) The mean salary paid to 1,500 employees of an organisation was found to be Rs. 12,500. Later on, after disbursement of salary, it was discovered that salaries of two employees were wrongly entered as Rs. 15,760 and Rs. 9,590. The correct salaries were Rs. 17,760 and Rs. 8,590. Calculate the correct mean.	9 8 8
2	a) What are the measures of central tendency? Why are they called measures of central tendency? b) What do you understand by expected value of a random variable? Illustrate with examples. c) The probability that a contractor will get a plumbing contract is $\frac{2}{3}$ and the probability that he will not get an electrical contract is $\frac{5}{9}$. If the probability of getting at least one contract is $\frac{4}{5}$, what is the probability that he will get both?	9 8 8
3	a) Briefly describe the characteristics of the normal distribution. Why does it occupy such a prominent place in statistics? b) The normal rate of infection of a certain disease in animals is known to be 25 per cent. In an experiment with 6 animals injected with a new vaccine, it was observed that none of the animal got infection. Calculate the probability of the observed result. c) A workshop produces 2000 units of an item per day. The average weight of units is 130 kilograms with a standard deviation of 10 kilograms. Assuming the process following normal distribution, how many units are expected to weigh less than 142 kilograms? More than 142 kilograms?	8 8 9

PTO

4	<p>a) Explain the concept of regression and point out its usefulness in dealing with economic problems.</p> <p>b) What is the meaning of standard error of estimate?</p> <p>c) A computer while calculating the correlation coefficient between two variables x and y from 25 pairs of observation obtain the following results:</p> $n = 25, \quad \sum x = 125, \quad \sum x^2 = 650$ $\sum y = 100, \quad \sum y^2 = 460, \quad \sum xy = 508$ <p>It was however discovered at the time of checking that he had copied on two pairs of observation</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>6</td><td>14</td></tr> <tr><td>8</td><td>16</td></tr> </table> <p style="text-align: center;">instead of</p> <table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>8</td><td>12</td></tr> <tr><td>6</td><td>8</td></tr> </table> <p>Obtain the correct value of correlation coefficient between x and y.</p>	x	y	6	14	8	16	x	y	8	12	6	8	8 5 12																	
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5	<p>a) Differentiate between the following</p> <ol style="list-style-type: none"> i) z-test and t-test ii) Level of significance and level of confidence iii) Type I and type II error <p>b) A survey of 672 audited tax returns showed that 448 resulted in additional payments. Construct a 95% confidence interval for true percentage of all audited tax return that resulted in additional payments.</p> <p>c) A packaging device is set to fill detergent powder packets with a mean weight of 5 kilogram and standard deviation of 0.21 kilogram. The weight of packets can be assumed to be normally distributed. The weight of packet is known to drift upwards over a period of time due to machine fault which is not tolerable. A random sample of 100 packets is taken and weighted. The sample has a mean weight of 5.03 kilogram. Can we conclude that the mean weight produced by machine has increased? Use 5% level of significance.</p>	9 8 8																													
6	<p>a) Explain different components of time series data.</p> <p>b) The standard deviation in the 12-month earnings per share for 10 companies in the software industry was 4.27 and the standard deviation in the 12-month earnings per share for 7 companies in the Telecom industry was 2.27. Conduct a test for equal variances at 5 per cent level of significance. What is your conclusion about the variability in earnings per share for two industries?</p> <p>c) Construct the following weighted aggregative price index numbers for 1970 (base) and 1971 from the given data</p> <ol style="list-style-type: none"> i) Laspeyre's Index ii) Paasche's Index <table border="1"> <thead> <tr> <th rowspan="2">Commodities</th> <th colspan="2">Price (Rs. Per md)</th> <th colspan="2">Quantities (tons)</th> </tr> <tr> <th>1970</th> <th>1971</th> <th>1970</th> <th>1971</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>20</td> <td>40</td> <td>8</td> <td>6</td> </tr> <tr> <td>B</td> <td>50</td> <td>60</td> <td>10</td> <td>5</td> </tr> <tr> <td>C</td> <td>40</td> <td>50</td> <td>15</td> <td>15</td> </tr> <tr> <td>D</td> <td>20</td> <td>20</td> <td>20</td> <td>25</td> </tr> </tbody> </table>	Commodities	Price (Rs. Per md)		Quantities (tons)		1970	1971	1970	1971	A	20	40	8	6	B	50	60	10	5	C	40	50	15	15	D	20	20	20	25	8 7 10
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D	20	20	20	25																											
7	<p>Write note on any THREE of the following:</p> <ol style="list-style-type: none"> (i) Skewness and Kurtosis (ii) Sampling and Non Sampling Errors (iii) Point and interval estimation (iv) Least Square Method 	25																													

UNIVERSITY OF THE PUNJAB



Part-I A/2017
Examination:- M.A./M.Sc.

Roll No.

Subject: Economics
PAPER: V (Islamic Economics)

TIME ALLOWED: 3 hrs.
MAX. MARKS: 100

NOTE: Attempt FOUR Questions in all. All questions carry equal marks.

کوئی سے چار سوال حل کریں۔ تمام سوالوں کے نمبر یکساں ہیں۔

Q. #.	Question	Marks	سوال
1.a.	What are the objectives of business firm in Islamic Economics?	10	اسلامی معاشیات میں بیان کردہ ایک کاروباری فرم کے مقاصد کی وضاحت کریں۔
1.b.	Illustrate the business ethics which control the fields of production and marketing introduced by Islamic Shariah.	15	پیداہی اور منڈیاتی میدانوں میں اسلامی شریعت کے بیان کردہ کاروباری ضابطہ اخلاق کا جائزہ لیں۔
2.a.	Give different definitions of Islamic Economics.	10	اسلامی معاشیات کی مختلف تعریفیں بیان کیجیے۔
2.b.	Discuss the nature and importance of Islamic Economics.	15	اسلامی معاشیات کی نوعیت و اہمیت بیان کیجیے۔
3.a.	Elaborate and analyse the legal steps introduced by Islam for FAIR and JUST distribution of wealth.	15	عادلانہ اور منصفانہ نظام تقسیم دولت کے قیام کے ضمن میں اسلام کے تجویز کردہ قانونی اقدامات کا تفصیلی جائزہ پیش کریں۔
3.b.	Who are the beneficiaries of Zakat? Explain.	10	مستحقین زکوٰۃ کون ہیں؟ تفصیل سے بیان کریں۔
4.a.	Define economic development in Islamic perspective and discuss its objective in Islam.	15	اسلامی تناظر میں معاشی ترقی کی تعریف کریں اور اسلام میں اس کے مقاصد بیان کریں۔
4.b.	What strategy does Islam adopt for economic development.	10	اسلام معاشی ترقی کے لئے کیا طریق کار (strategy) اختیار کرتا ہے۔
5.a.	Define Musharkah and Mudarbah and describe their kinds?	15	مشارکہ اور مضاربہ کی تعریف کیجیے اور ان کی اقسام بیان کریں۔
5.b.	What are their basic terms and conditions?	10	ان کی بنیادی شرائط بیان کیجیے۔
6.a.	Discuss the evolution of the institution of Bait-ul-Mal.	10	بیت المال کے ارتقاء کو بیان کیجیے۔
6.b.	Highlight the sources of revenue and the heads of expenditure of an Modern Islamic State.	15	ایک جدید اسلامی ریاست کے ذرائع آمدنی اور اخراجات کی مدات بیان کیجیے۔
7.	Write notes on any two of the following:	12.5+	درج ذیل میں سے کوئی سے دو پروف تحریر کریں۔
7.a.	Explain the principles which govern the consumption pattern in Islamic perspective.	12.5	اسلامی تناظر میں صرف کے اصولوں کی وضاحت کیجیے۔
7.b.	Islamic view on free trade among different countries.		مختلف ممالک کے درمیان تجارت کے حوالہ سے اسلامی نقطہ نظر بیان کیجیے۔
7.c.	Property rights in Islam vs Socialism and Capitalism		اسلام میں ملکیت کے حقوق بمقابلہ سوشلزم و نظام سرمایہ داری



UNIVERSITY OF THE PUNJAB

Part-I A/2017
Examination:- M.A./M.Sc.

Roll No.

Subject: Economics

PAPER: VI (Major Issues in Pakistan Economy)

TIME ALLOWED: 2 hrs.
MAX. MARKS: 50

NOTE: Answer THREE questions including question # 4 which is compulsory.

تین سوالات کے جوابات تحریر کریں۔ سوال نمبر 4 لازمی ہے۔

Q: 1

- a) The structure of public debt in Pakistan. (05)
b) Which factors are responsible for its current rising trend (05)
c) The measures to improve the debt position (05)

(الف) پاکستان میں حکومتی قرضوں کی ساخت

(ب) قرضوں کا موجودہ بڑھتا ہوا رجحان

(ج) قرضوں کی پوزیشن بہتر کرنے کے لیے اقدامات

Q: 2

- a) Give an over view of earlier efforts of industrialisation in the country ? (8)
b) Which elements obstruct industrialisation in pakistan today ? (7)

س: پاکستان میں صنعتی ترقی کے لئے ابتدائی کوششوں کا جائزہ پیش کریں؟ نیز آج کے پاکستان میں صنعتی ترقی کے راستے میں رکاوٹوں کی نشاندہی کریں؟

Q: 3

- (a) What is poverty? (3)
b) Discuss incidence of poverty in our country ? (6)
c) Suggest suitable measures to eradicate poverty in Pakistsn ? (6)

س: غربت کیا ہے؟ ملک میں پائی جانے والی غربت سے بحث کریں؟ نیز غربت کے خاتمہ کے لئے سوزوں تجاویز پیش کریں؟

Q: 4 Write Note on any two topics: (20)

- a) Energy crisis in pakistan
b) Green Revolution
c) Importance of Human resource Development

س: ذیل میں دیئے گئے عنوانات میں سے دو پر نوٹ قلمبند کریں۔

(ا) توانائی کا بحران

(ب) سبز انقلاب

(ج) انسانی وسائل کی ترقی کی اہمیت