ITM Skills University

NOTIFICATION

Examination Timetable (September 2024)

Program: Master of Business Administration
Term I (Regular) End Semester Examination

Date & Day	Timing	Course Code	Course Title	Duration (h)	Batch
04-09-2024 Wednesday	11.00 am to 01.00 pm	0213310300	Business Statistics	2	PD, PK, CKP, AS, BG & AK
	02.00 pm to 04.00 pm			2	WB, NN, AB, PS, MP & SC
05-09-2024 Wednesday	09.30 am to 10.30 am	0213310301	Managerial Economics	1	PD, PK, CKP, AS, BG & AK
	11.00 am to 12.00 pm			1	WB, NN, AB, PS, MP & SC

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Controller of Examinations

ITM Skills University

End Semester Examination-September 2024
Term I (Regular)

Program: Master of Business Administration
Course Title: Business Statistics
Course Code: 0213310300
Date: 04th September 2024

Total Marks: 50
Duration: 2 hrs

Instruction to Candidates:

➢ This question paper comprises of two sections: Section A and Section B.
➢ Each section is worth 50 marks.
➢ Section A is compulsory for all students, irrespective of their subject specialization.
➢ In Section B, attempt all the questions. There is an internal choice in (Q2-Q4). Attempt all subparts in Q5.
➢ Write your answers clearly and legibly. Use a blue or black pen for writing.
➢ Diagrams and tables should be drawn in pencil.
➢ Do not write your name or any identification mark anywhere on the answer script.
➢ Manage your time effectively, allocating appropriate time to each section.
➢ Refrain from any unfair means. Violation will result in disqualification.
➢ Hand over your answer script to the invigilator before leaving the examination hall.

Section – A

Q1. The below table shows the regression output of domestic sales of a product by producing area (in hectares). Based on the above information, answer the following questions. 10 marks (CO5/K3)

a) List the independent and dependent variables.
b) Frame the necessary hypothesis?
c) Comment on value and strength of model.
d) Frame the Equation of regression.
e) Is the hypothesis accepted or rejected.

SUMMARY OUTPUT						
Regression Statistics						
Multiple R	0.658102884					
R Square	0.433099406					
Adjusted R Square	0.370110451					
Standard Error	4.801382127					
Observations	11					
ANOVA						
	Df	*SS*	*MS*	*F*	*Significance F*	
Regression	1	158.5096579	158.5097	6.875799	0.027712	
Residual	9	207.479433	23.05327			
Total	10	365.9890909				
	Coefficients	**Standard Error**	**t. stat**	**P-value**	**Lower 95%**	**Upper 95%**
Intercept	30.85590683	3.849536982	8.015485	2.18E-05	22.14765	39.56416
Producing Area	0.000633111	0.000241445	2.622175	0.027712	8.69E-05	0.001179

Attempt all questions. Each question carries 10 marks. Q2 to Q4 there is an internal choice.
Attempt all subparts in Q5.

Q2: Attempt any one question from question Q2. 10 marks

A. The following data shows the relationship between revenue earned and advertising cost data of a given company for seven different companies. **(CO2/K2)**

Company	Advertising (millions)	Revenues (millions)
A	1073	408200
B	4,898	79700
C	3,345	123000
D	3,296	104600
E	2,822	107800
F	2,577	118300
G	829	114600

a) Obtain the regression equation.
b) If the advertising cost is 1000 (in millions), what would be the expected revenue of the company?

OR

B. Data on age and blood pressure was collected from 10 sports persons and recorded in the table below. **(CO2/K2)**

Sportsperson	A	B	C	D	E	F	G	H	I	J
Age (X)	42	36	55	58	35	65	60	50	48	51
Blood Pressure (Y)	98	93	110	85	105	108	82	102	118	99

a) Obtain the regression equation of Blood Pressure on Age.
b) Forecast the Blood Pressure of a sports person whose age is 45.

Q3: Attempt any one question from Q3. 10 marks

A. Calculate Karl – Pearson' s coefficient of skewness for the following height data in inches. **(CO3/K2)**
        58, 59, 60, 61,62, 63, 64, 65

OR

B. A worn machine is known to produce 10% defective components. If the random variable X is the number of defective components produced in a run of 4 components, find the probability that X takes the value 1. **(CO3/K2)**

Q4: Attempt any one question from Q4. 10 marks

A. Find Karl Pearson's coefficient of correlation between capital employed and profit obtained from the following data. **(CO4/K2)**

Students	A	B	C	D	E	F	G	H	I	J
Capital Employed (Rs. In Crore)	10	22	30	40	50	60	70	80	90	100
Profit (Rs. In Crore)	2	4	8	5	10	15	14	20	22	50

OR

B. Calculate the spearman rank correlation coefficient between marks scored in Statistics and Mathematics. **(CO4/K2)**

Marks in Statistics	82	68	75	61	68	73	85	68
Marks in Mathematics	81	71	71	68	62	69	80	70

Q5: Theory Questions: Attempt all questions. 10 marks

A. Briefly explain the difference between Simple Regression & Multiple Regression with examples. **(CO1/K1)**
B. What are mutually exclusive and independent events in probability. Explain with examples. **(CO1/K1)**

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Program: Master of Business Administration
Course Title: Business Statistics
Course Code: 0213310300
Date: 04th September 2024

Total Marks: 50
Duration: 2 hrs

Instruction to Candidates:
- ➤ This question paper comprises of two sections: Section A and Section B.
- ➤ Each section is worth 50 marks.
- ➤ Section A is compulsory for all students, irrespective of their subject specialization.
- ➤ In Section B, attempt all the questions. There is an internal choice in (Q2-Q4). Attempt all subparts in Q5.
- ➤ Write your answers clearly and legibly. Use a blue or black pen for writing.
- ➤ Diagrams and tables should be drawn in pencil.
- ➤ Do not write your name or any identification mark anywhere on the answer script.
- ➤ Manage your time effectively, allocating appropriate time to each section.
- ➤ Refrain from any unfair means. Violation will result in disqualification.
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SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.778819
R Square	0.60656
Adjusted R Square	0.567216
Standard Error	1.346796
Observations	12

ANOVA

	Df	SS	MS	F	Significance F
Regression	1	27.96391	27.96391	15.41681	0.002837
Residual	10	18.13859	1.813859		
Total	11	46.1025			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	9.100374	0.851528	10.68711	8.62E-07	7.203051	10.9977
Advertising	0.058231	0.014831	3.926424	0.002837	0.025186	0.091275

Section – A

Q1. The above table shows the regression output of a market research firm. The firm is trying to investigate the impact of advertising on sales. Based on above information answer the following questions: **(CO5/K3)** 10marks

- a) List the independent and dependent variables.
- b) Frame the necessary hypothesis?
- c) Comment on value and strength of model.
- d) Frame the Equation of regression.
- e) Is the hypothesis accepted or rejected.

Section – B

Attempt all questions. Each question carries 10 marks. Q2 to Q4 there is an internal choice. Attempt all subparts in Q5.

Q2: Attempt any one question from question Q2.   10 marks

A. A random sample of ten warships between 1 and 6 years old were selected. The following data shows the relationship between age in years of warships(x) and price of warships in hundreds of dollars (y). **(CO 2/K2)**

Age	6	6	6	2	2	5	4	5	1	4
Price	125	115	130	260	219	150	190	163	260	160

  a) Obtain the regression equation.
  b) If the age of the warship is 3 years old, what would be the expected price of the warship?

OR

B. Data was collected from 11 males aged 18-24 years where x denotes height, in inches, and y denotes weight, in pounds. **(CO 2/K2)**

Height (x)	65	67	71	71	66	75	67	70	71	69	69
Weight (y)	175	133	185	163	126	198	153	163	159	151	155

a) Obtain the regression equation of weight on height.
b) Forecast the weight if the height of a male is 74 inches.

Q3: Attempt any one question from Q3.   10 marks

A. Compute the Karl Pearson's coefficient of skewness from the following daily expenditure data in 1000 rupees:
    20, 30, 40, 50, 60, 80, 100   **(CO3/K2)**

OR

B. In a box of switches, it is known 10% of the switches are faulty. A technician is wiring 30 circuits, each of which needs one switch. What is the probability that all 30 works?   **(CO3/K2)**

Q4: Attempt any one question from Q4.   10 marks

A. The following data represents the number of hours a student watched television during the weekend and the test scores of students who took a test the following Monday. Find the Karl Pearson Correlation Coefficient. **(CO4/K2)**

Students	A	B	C	D	E	F	G	H	I	J	K	J
Hours of TV	0	1	2	3	3	5	5	5	6	7	7	10
Test Scores	96	85	82	74	95	68	76	84	58	65	75	50

OR

B. Judge A & Judge B are judging a competition and giving ranks to a sample of 10 participants Calculate the spearman rank correlation coefficient between the ranks of judges A & B. **(CO4/K2)**

Participants	A	B	C	D	E	F	G	H	I	J
Judge A	2	9	1	3	10	4	6	8	5	7
Judge B	6	9	2	1	8	4	3	10	7	5

Q5: Theory Questions: Attempt all questions.   10 marks

A. Explain the concept of correlation with examples. **(CO1/K1)**

B. Distinguish between positively skewed and negatively skewed distributions. **(CO1/K1)**

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ITM Skills University
End Semester Examination-September 2024
Term I (Regular)

Program: Master of Business Administration
Course Title: Managerial Economics
Course Code: 0213310301   **Total Marks: 25**
Date: 05ᵗʰ September 2024   **Duration: 1 hr**

Instruction to Candidates:
➢ Attempt All questions for 25 marks
➢ Thoroughly review the question paper before answering any questions.
➢ Provide brief, accurate, and focused answers in a bullet-point format.
➢ Underline key terms or concepts for clarity
➢ Write your answers clearly and legibly. Use a blue or black pen for writing.
➢ Diagrams and tables should be drawn in pencil.
➢ Do not write your name or any identification mark anywhere on the answer script.
➢ Manage your time effectively, allocating appropriate time to each question.
➢ Refrain from any unfair means. Violation will result in disqualification.
➢ Hand over your answer script to the invigilator before leaving the examination hall.

Question No. 1: Attempt any <u>ONE</u> question from question no. 1A and 1B (2.5 marks each = 2.5 marks).

Question No. 1A:
Draw the circular flow diagram of the two-sector economy model. **[CO-1/K-1]**

Question No. 1B:
Match the items of column I correctly with the items of column II. **[CO-1/K-1]**

Column I	Column II
Market Structure	**Characteristics/Examples/Company**
Monopoly	Product-differentiation
Oligopoly	Very large number of relatively small firms
Monopolistic competition	IRCTC
Perfect competition	A small number of relatively large firms

Question No. 2: Compulsory Question = 2.5 marks.

Use the following data to draw a demand curve diagram for Tomatoes in the Navi Mumbai market, showing both an expansion and a contraction of the demand curve (Graph paper is not required). **[CO-2/K-1]**

Day	Per Kg Price in Rupees of Tomatoes	Quantity Demanded in Kg
Monday	50	2000
Tuesday	40	2400
Wednesday	60	1600

Question No. 3: Attempt any <u>ONE</u> question from question no. 3A and 3B (5 marks each = 5 marks).

Question No. 3A:
Assume that the Indian Rupee depreciates from 1$ = Rs.80 to 1$=Rs.95, how it will affect India's exports and imports. **[CO-3/K-2]**

Question No. 3B:
Explain the following concepts (anyone). **[CO-3/K-2]**
   a) Interpret NEER and REER, if NEER = 80 and REER=120 against the 64 economies.
   b) The fixed and flexible exchange rate system
   c) Balance of Payment (BOP) surplus and deficit

Question No. 4: Attempt any <u>ONE</u> question from question no. 4A to 4C (10 marks each = 10 marks).

Question No. 4A:
The following are the quarterly estimates of the GDP growth rate for Q4 (January-March) 2023-24.

▪ Headline GDP at Constant Price = 7.8%	▪ GDP at Current Price = 9.9%

Why is GDP at Constant Price used to declare India's headline GDP and not GDP at the Current Price? **[CO-4/K-2]**

Question No. 4B:
Why is a single-digit moderate inflation rate considered desirable for the economy coming from the demand side (demand-pull inflation)? **[CO-4/K-2]**

Question No. 4C:
Explain the following concepts (anyone). **[CO-4/K-2]**

a) Business Cycle	b) Inflation and Interest rate

Question No. 5: Attempt any <u>ONE</u> question from question no. 5A to 5C (5 marks each = 5 marks).

Question No. 5A:
Briefly explain Contractionary Monetary policy in the fast-growing economy. **[CO-5/K-3]**

Question No. 5B:
What can be the reasons behind the government's Fiscal policy decision to **decrease taxes and enhance government expenditure** on infrastructure development projects in a slow-growing economy? **[CO-5/K-3]**

Question No. 5C:
Explain the role of Velocity in QTM theory. **[CO-5/K-3]**

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Program: Master of Business Administration
Course Title: Managerial Economics
Course Code: 0213310301   Total Marks: 25
Date: 05th September 2024   Duration: 1 hr

Instruction to Candidates:
- ➢ Attempt All questions for 25 marks
- ➢ Thoroughly review the question paper before answering any questions.
- ➢ Provide brief, accurate, and focused answers in a bullet-point format.
- ➢ Underline key terms or concepts for clarity
- ➢ Write your answers clearly and legibly. Use a blue or black pen for writing.
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- ➢ Hand over your answer script to the invigilator before leaving the examination hall.

Question No. 1: Attempt any <u>ONE</u> question from question no. 1A and 1B (2.5 marks each = 2.5 marks).

Question No. 1A:
Draw the circular flow diagram of the three-sector economy model. **[CO-1/K-1]**

Question No. 1B:
Match the items of column I correctly with the items of column II. **[CO-1/K-1]**

Column I	Column II
Market Structure	**Characteristics/Examples/Company**
Monopolistic competition	Agriculture market
Perfect competition	Firms must differentiate their products
Monopoly	Type of product - Standardized or differentiated
Oligopoly	Patent & Copyrights

Question No. 2: Compulsory Question = 2.5 marks.

The supply and demand schedules for Coal in the Indian market from February to June 2024 are as follows:

Price per Ton	Quantity Supplied per Month (Million Tonnes (MT))	Quantity Demanded per Month (Million Tonnes (MT))
₹ 8000	100	140
₹ 9000	110	130
₹ 10,000	120	120
₹ 12,000	130	110
₹ 13,000	140	100

Use the information in the table to draw a demand and supply curve and Identify excess of demand(shortage) and excess of supply(surplus) for the given prices for **Coal** (Graph paper is not required). **[CO-2/K-1]**

Question No. 3: Attempt any <u>ONE</u> question from question no. 3A and 3B (5 marks each = 5 marks).

Question No. 3A:
Given the following factors, how will it affect the Rupee's appreciation and depreciation against the Chinese Yuan and vice versa? **[CO-3/K-2]**
- An increase in India's imports from China.
- An increase in exports from India to China.

Question No. 3B:
Explain the following concepts (anyone). **[CO-3/K-2]**

a) Purchasing Power Parity (PPP)	b) Assessment of BOP Disequilibrium
c) Current Account and Capital Account deficit and surplus	

Question No. 4: Attempt any <u>ONE</u> question from question no. 4A to 4C (10 marks each = 10 marks).

Question No. 4A:
Suppose a Japanese company outsources the production of a good to its subsidiary in India, how does it affect India's and Japan's GDP and GNP? **[CO-4/K-2]**

Question No. 4B:
Why is an even single-digit moderate inflation rate not considered desirable for the economy coming from the supply side (cost-push inflation)? **[CO-4/K-2]**

Question No. 4C:
Explain the following concepts (anyone). **[CO-4/K-2]**

a) Explain one method of measuring inflation.	b) NDP and NNP at factor cost

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Question No. 5: Attempt any <u>ONE</u> question from question no. 5A to 5C (5 marks each = 5 marks).

Question No. 5A:
Briefly explain Expansionary Monetary policy in the slow-growing economy. **[CO-5/K-3]**

Question No. 5B:
Explain the reasons behind the government's Fiscal policy decision to increase taxes and low government expenditure in a fast-growing economy. **[CO-5/K-3]**

Question No. 5C:
Explain the process of money creation by the commercial bank. **[CO-5/K-3]**

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