

[LN 1018]

OCTOBER 2018

Sub. Code: 5022

MASTER OF HOSPITAL ADMINISTRATION EXAMS
(Candidates admitted in 2017-2018)
FIRST YEAR
PAPER II – BIO-STATISTICS AND OPERATIONS RESEARCH

Q.P. Code : 435022

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. The hospital has 5 jobs A, B, C, D and E and 5 men V, W, X, Y and Z. The number of hours each man would perform each jobs as follows: How should the jobs be allocated to minimize the total time?

	V	W	X	Y	Z
A	3	5	10	15	8
B	4	7	15	18	8
C	8	12	20	20	12
D	5	5	8	10	6
E	10	10	15	25	10

2. Describe the importance of testing hypothesis. Also what test should be applied when?

II. Write notes on:

(10 x 6 = 60)

1. Type of Variables used in clinical research.
2. Presentation of Data.
3. Explain how the data recorded in medical practice.
4. Measures of Dispersion.
5. Type I Error, Type II Error and Sampling Error.
6. Calculate the Arithmetic mean from the following set of observations.
9, 12, 10, 11, 8, 13, 11, 12, 10, 11, 11, 12, 11, 8, 11, 6
7. Explain two-way classification of Anova.
8. Limitations of operations research?
9. Explain the concept of Balanced and Unbalanced problems in transportation problem.
10. Vogel's Approximation method.

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Time : Three hours**Maximum : 100 Marks****I. Elaborate on:****(2 x 20 = 40)**

1. Calculate correlation coefficient.

No of Antenatal Visit X :	1	3	4	6	2
Distance of PHC in Kms Y:	2	3	7	10	2

Find if Y = 5 kms how many antenatal visits will be X = ?

2. Procedure for solving the L.P by simplex method.

II. Write notes on:**(10 x 6 = 60)**

1. Application of statistics in medical field.
2. What are the qualitative & quantitative data recorded in routine clinical practice? Explain with examples.
3. Measure of dispersion.
4. Chi square test.
5. Limitations of operation Research.
6. Balanced & unbalanced problems.
7. North-west corner rule.
8. Positional averages.
9. Type I & Type II error.
10. One – sided & two sided Hypothesis.

[LQ 1019]

NOVEMBER 2020
(MAY 2020 EXAM SESSION)

Sub. Code: 5022

MASTER OF HOSPITAL ADMINISTRATION
(Candidates admitted in A Y 2017-2018 – New Regulation)
FIRST YEAR
PAPER II – BIO-STATISTICS AND OPERATIONS RESEARCH

Q.P. Code : 435022

Time : Three hours

Maximum : 100 Marks

I. Elaborate on: (2 x 20 = 40)

1. Define Correlation. Explain its type with example. Write the properties of Correlation Coefficient.
2. Explain North-West corner rule and Vogel's Approximation Method.

II. Write notes on: (10 x 6 = 60)

1. Measure of Central tendency.
2. Geometric & Harmonic mean.
3. Regression.
4. Steps in testing of Hypothesis.
5. Non parametric test.
6. Application of Linear Programming.
7. Hungarian model.
8. Scales of measurement.
9. Measure of Dispersion.
10. Different types of Diagrams.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321]

MARCH 2021

Sub. Code: 5022

(OCTOBER 2020 EXAM SESSION)

MASTER OF HOSPITAL ADMINISTRATION (AHS)

FIRST YEAR (Admitted in 2017-2018)

PAPER II – BIO-STATISTICS AND OPERATIONS RESEARCH

Q.P. Code : 435022

Time : Three hours

Answer ALL Questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Different measures of Central tendencies along with Merits and Demerits.
2. Find the minimum cost of transportation given.

Warehouses						Supply
		D ₁	D ₂	D ₃	D ₄	
Factory	F ₁	19	30	50	10	7
	F ₂	70	30	40	60	9
	F ₃	40	8	70	20	18
Demand		5	8	7	14	

II. Write notes on:

(10 x 6 = 60)

1. Applications of statistics in Medical research.
2. Data collection in clinical practice.
3. Ten students of M.Sc., class of a college have obtained the following marks in Biostatistics out of 100 marks. Calculate the S.D. of marks obtained.
Marks: 5 10 20 25 40 42 45 48 70 80
4. Range, Inter-quartile range, Variance and Standard Deviation.
5. Scatter diagram.
6. Co-efficient of correlation along with its characteristics.
7. Applications of Z-test.
8. Non-parametric tests.
9. Evolution and limitations of Operations research.
10. Vogel's approximation method for solving transportation problem.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0921]

**SEPTEMBER 2021
(MAY 2021 EXAM SESSION)**

Sub. Code: 5022

**MASTER OF HOSPITAL ADMINISTRATION (AHS)
FIRST YEAR (Admitted in 2017-2018)
PAPER II – BIO-STATISTICS AND OPERATIONS RESEARCH
*Q.P. Code : 435022***

Time : Three hours

Answer ALL Questions

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Parametric tests and Non-parametric tests.
2. Solve the following L.P.P. by simplex method

Maximize $Z=5x+8y$

Subject to the constraints $3x+2y\leq 36$

$x+2y\leq 20$

$3x+4y\leq 42$

$x\geq 0, y\geq 0$

II. Write notes on:

(10 x 6 = 60)

1. Classification data.
2. Different scales of measurement.
3. Diagrammatic representation of data.
4. Arithmetic mean, Geometric mean and Harmonic mean with merits and demerits.
5. Find median deviation and its coefficient of the following series:

Size	:	5	6	7	8	9	10
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Frequency	:	8	12	18	8	3	1
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6. Correlation and regression.
7. Type I error and Type II error, level of significance and power of the test.
8. Formulation of Models in operations research.
9. Simplex method of solving maximization problem in Linear programming problem.
10. Hungarian Algorithm of solving assignment Problem.
