



MONAD UNIVERSITY HAPUR (UP)

Programme: **M.Sc.**

Semester: **II**

Course: **MMTH-121 TOPOLOGY**

Assignment No: **2**

Due date of submission: **22.04.2019**

Instructions

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme and Enrolment Number clearly at the top of the page.

Q.1

- (a) Define first countable space. Show that every discrete space is first countable.
- (b) Define T_2 -space or Hausdorff space with an example. Show that every metric space is T_2 .

Q.2

- (a) State and prove Urysohn metrization theorem.
- (b) Define T_3 -space and T_4 -space. Prove that every T_4 -space is also a T_3 -space.



MONAD UNIVERSITY HAPUR

Programme: **M.Sc.**

Semester: **IV**

Course: **MMTH-122 Differential Geometry**

Assignment No: 2

Due date of submission: **22.04.2019**

Instructions

4. Write the responses to the assignment in your own handwriting.
5. Submit the responses to your HOD within the due date.
6. Write your Name, Programme and Enrolment Number clearly at the top of the page.

Q.1

- a) Find the envelope of $lx + my + nz = p$ when $a^2l^2 + b^2m^2 + c^2n^2 = p^2$
- b) State and prove Monge's theorem

Q.2

- a) State and prove Mainardi Codazzi equation.
- b) State and prove Bonnets theorem on parallel surface.



MONAD UNIVERSITY HAPUR (UP)

Programme: M.Sc.

Semester: II

Course: MMTH-123 OPERATIONS RESEARCH

Assignment No: II

Due date of submission: 22.04.2019

Instructions:

7. Write the responses to the assignment in your own handwriting.
8. Submit the responses to your HOD within the due date.
9. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

Q.1

(a) Determine an initial basic feasible solution to the following transportation problem using the North-West corner rule:

	D ₁	D ₂	D ₃	D ₄	Availability
O ₁	6	4	1	5	14
O ₂	8	9	2	7	16
O ₃	4	3	6	2	5

Requirement 6 10 15 4

(b) Obtain an initial basic feasible solution to the following transportation problem using Vogel's approximation method.

	I	II	III	IV	
A	5	1	3	3	34
B	3	3	5	4	15
C	6	4	4	3	12
D	4	-1	4	2	19
	21	25	17	17	

Q2.

(a) Solve the minimal assignment problem whose effectiveness matrix is given by

	A	B	C	D
I	2	3	4	5
II	4	5	6	7
III	7	8	9	8
IV	3	5	8	4

(b) Write the algorithm of Game theory.

Assignment Number: 2
Course Code: MBA-124
Class: MSC
Title: ENTREPRENEURSHIP DEVELOPMENT

Instructions

- 1. Write the responses to the assignment in your own handwriting.**
- 2. Submit the responses to your HOD within the due date.**
- 3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.**

Question: - 3

- a) What are the Stages of economic development ?**
- b) Name Govt. Policies for SSIs and explain any one.**

Question: - 4

- a) Read and explain the struggling to success story of any Woman entrepreneur.**
- b) What do you mean by Venture capital? Give an example of venture capital in brief.**



MONAD UNIVERSITY HAPUR (UP)

Programme: **M.Sc.**

Semester: **II**

Course: **MCA-223 Computer Based Numerical and Statistical Techniques**

Assignment No: **1**

Due date of submission: **22.04.2019**

Instructions:

10. Write the responses to the assignment in your own handwriting.
11. Submit the responses to your HOD within the due date.
12. Write your Name, Programme and Enrolment Number clearly at the top of the page.

Q.1

- c) Using Euler's method find the value of $y(0.1)$ given $dy/dx = x+y +xy$; $y(0) = 1$ and step size $h = 0.025$
- d) Use Picard's method to find $y(0.20)$ given $dy/dx = x-y$ with initial condition $y=1$ when $x=0$

Q.2

- a) Find y in $[0,3]$ by solving the initial value problem $y' = (x - y)/2$, $y(0) = 1$ using Runge-Kutta method of order four with $h = 1/2$ and $1/4$.
- b) The velocity (v) of a particle at a distance (s) from a point on its path is given by following table.

Distance(s) meters	0	10	20	30	40	50	60
Velocity(V) (m/sec)	47	58	64	65	61	52	38

Calculate the time taken to travel the distances of 60m by using Simpson's one-third rule.