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# GIET UNIVERSITY, GUNUPUR – 765022

Ph.D. (Second Semester) Examinations, April – 2024

## PPEMT2042 - Fixed Point Theory

(Mathematics)

Time: 3 hrs

Maximum: 70 Marks

The figures in the right-hand margin indicate marks.

### Answer ANY FIVE Questions

(14 x 5 = 70 Marks)

	Marks
1. State And Prove Abian's Theorem.	14
2. State And Prove Jachymski's Theorem.	14
3. State And Prove Matkowski's Theorem.	14
4. State And Prove Krasnoselski's Theroem.	14
5. State And Prove Graphic Contraction Theroem.	14
6. Describe About Infinite Matrices.	14
7. Write About Jaggi-Non Expansive Operators.	14
8. Let $(s, f, t)$ be a complete menger space, let $t$ be a $h - t$ norm and $f: s \rightarrow s$ be a probabilistic $q$ -contraction. Then $f$ has a unique fixed point $u^* \in s$ and $u^* = \lim_{n \rightarrow \infty} f_n(p)$ for every $p \in s$ .	14

---End of Paper---