South East Asian J. of Mathematics and Mathematical Sciences Vol. 20, Proceedings (2022), pp. 205-214

ISSN (Online): 2582-0850

ISSN (Print): 0972-7752

PACKING RELATED PARAMETERS OF GENERALIZED JAHANGIR GRAPHS

C. Gayathri, K. Karuppasamy and S. Saravanakumar*

Department of Mathematics, Kalasalingam Academy of Research and Education, Krishnankoil - 626126, Tamil Nadu, INDIA

E-mail : gaya320102012@gmail.com, karuppasamyk@gmail.com

*Department of Mathematics, Thiagarajar College of Engineering, Madurai - 625015, Tamil Nadu, INDIA

E-mail : alg.ssk@gmail.com

(Received: Apr. 08, 2022 Accepted: Jul. 28, 2022 Published: Aug. 30, 2022)

Special Issue Proceedings of National Conference on "Emerging Trends in Discrete Mathematics, NCETDM - 2022"

Abstract: In a graph G = (V, E), a set $S \subseteq V(G)$ is 2-packing if $N[u] \cap N[v] = \phi$ for every $u, v \in S$, and S is called open packing if $N(u) \cap N(v) = \phi$ for every $u, v \in S$. An open packing set S is an outer-connected open packing set if either S = V(G) or $\langle V - S \rangle$ is connected. The largest cardinalities of 2-packing, open packing, and outer-connected open packing in G are respectively called the 2packing number (ρ) , the open packing number (ρ^o) , and the outer-connected open packing number (ρ_{oc}^o) of a graph G. In this paper, we compute these numbers for the generalized Jahangir graphs.

Keywords and Phrases: Packing number, 2-packing number, open packing number, outer-connected open packing number, Jahangir graph, generalized Jahangir graph.

2020 Mathematics Subject Classification: 05C70.