

## Path point cover

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### Abstract

A path cover  $\psi$  is a collection of edge disjoint paths covering all the edges of  $G$  exactly once. A point  $v$  is said to cover a path  $P$  of  $\psi$  if  $v \in P$ . A  $\psi$ -point cover is defined as a collection of points  $S \subseteq V$  covering all the paths of  $\psi$ . In this paper we study some properties of  $\psi$ -point cover. This study is motivated by the work of Purnima Gupta and B.D. Acharya [3] on domination in graphoidal covers.

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## 1. Introduction

Let  $G$  be a  $(p, q)$  graph and a path cover  $\psi$  of  $G$  is a collection of edge disjoint paths covering all the edges of  $G$  exactly once. Let the vertex set  $V(G) = \{x_1, x_2, \dots, x_p\}$  and a path cover  $\psi = \{P_1, P_2, \dots, P_m\}$ . With  $G$  we associate a bipartite graph  $H$  as follows. Let  $X = \{x_1, x_2, \dots, x_p\}$ ,

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