Review Form1.6

Journal Name:	Journal ofAdvances inMathematics andComputer Science
Manuscript Number:	Ms_JAMCS_88626
Title of the Manuscript:	On the Zero divisor and Cayley graphs of some classes of the 2-radical index of Nilpotence finite local rings
Type of the Article	Original Research Article

GeneralguidelineforPeerReview process:

This journal's peer review policy states that NO manuscript should be rejected only on the basis of 'lackofNovelty', provided the manuscript is scientifically robust and technically sound.
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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The definition of terms and notations used in this paper, relating to Graph Theory and Ring Theory can be considered in [Text in Mathematics, Heidelberg: Springer. (2010)]. Also, other useful terminologies and studies related to Graph Theory and Ring Theory can be obtained from [Journal Of Mathematics And Statistical Science Vol 2016, 524-533]. The characterization of finite local rings via the well known structures of their zero divisor graphs and cayley graphs remains an open problem. Some classes of completely primary finite rings which are local, have however been characterized by the compartments of their units and zero divisors where the classification of the unit groups have been done using the Fundamental Theorem of finitely generated Abelian Groups while the zero divisors have been characterized via the zero divisor graphs. In this paper, it has been characterized the zero divisor graphs Γ(R) and cayley graphs CAY (R) where R is a finite local ring with 2-radical index of Nilpotence. These two classes of graphs have been completely described and compared using their algebraic properties. Some of the graphs have been drawn for purposes of their comparison. The methods of study involved partitioning the ring under consideration into mutually disjoint subsets of invertible elements and zero divisors and determining their graphs using case by case basis discovery of their structural properties. We have also given symmetric groups associated with some of the graphs studied Also, it has been characterized the 2-radical index of nilpotence finite local rings R given in constructions I and II using the structural, geometric and algebraic properties of the Zero divisor and Cayley graphs of R. It is evident from the main results that the graphs Γ(R) of power two radical zero local rings of characteristic p and p 2 are complete graphs of order p rh−1. They are also Hamiltonian graphs and as the value of p increases, the more the hamiltonian cycles. The Cayley graphs on the other hand are incomplete with complete subgraphs which are copies of each other. Moreover, unlike Zero divisor graphs, Cayley graphs represent noisy geometries such that one cannot easily describe the algebraic and the structural properties of the whole graph.	
Minor REVISION comments	1. The main motivation and contribution should be highlighted at the end of the Introduction. 2. At the end of the Introduction, which theorems correspond to which conclusions need to be clearly stated?. 3. The numbering of equations preferred to be added according to the numbering of Sections. 4. All references should be cited in the text in sequence . For example, the first cited item should be ref. [1]; then comes ref. [2]…. Etc.	
Optional/General comments		

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PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

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