

**SDI FINAL EVALUATION FORM 1.1**

**PART 1:**

Journal Name:	Asian Research Journal of Mathematics
Manuscript Number:	Ms_ARJOM_119464
Title of the Manuscript:	GENERAL STRUCTURE AND PROPERTIES OF CYCLIC CODES IN GF(2)
Type of Article :	ORIGINALRESEARCH PAPER

**PART 2:**

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
<p>1. Include the references mentioned in my last review report. 2. Should not write generating function associated with codes.</p> <p>Comments are</p> <p>The manuscript need modification and overall correction.</p> <ol style="list-style-type: none"> <li>1. The Paper in present form is not suitable for publication.</li> <li>2. Some results are incorrect.</li> </ol> <p>Following are some suggested corrections.</p> <ol style="list-style-type: none"> <li>i) Page 1, Line 1, Codes in GF(2) should be Codes over GF(2)</li> <li>ii) Page 1, Line 4, Encryption and Decryption should be replaced by encoding and decoding</li> <li>iii) Page 1, Line 22, ,and digital communications should be , digital communications and Quantum computing iv) Page 1, Line 10 from last, investigated spelling is incorrectly written</li> <li>v) Page 2, In statement of Theorem <math>F_q[x]/x^{n-1}</math> should be <math>F_q[x]/\langle x^{n-1} \rangle</math>, it should be followed in the entire paper.</li> <li>vi) Page 2, 3, Check GF(2) not GF2</li> <li>vii) Page 4, Generator function should be generator polynomial.</li> <li>viii) Theorem 5 Must be checked and modified accordingly, C(x) cannot be a generating function. A cyclic code can is associated with generator polynomial/generator matrix not generating function. This theorem should be modified.</li> <li>ix) Check the conclusion GF(2) is incorrectly written as gf2.</li> </ol> <p>In the present form this paper cannot be accepted. To make the work more robust and sound I suggest the author to modify the paper and read the following references and add them in the reference section and do the above suggested corrections.</p> <ol style="list-style-type: none"> <li>1. A new construction of quantum codes from quasi-cyclic codes over finite fields. Soumak Biswas and Maheshanand Bhaintwal, Indian Journal of Pure and Applied Mathematics, 54(2), 375-388, 2023.</li> <li>2. On m-spotty weight enumerators of <math>Z_2(Z_2+uZ_2)</math>-linear codes and Griesmer type bound, Soumak Biswas and Maheshanand Bhaintwal, Computational and Applied Mathematics, 41(2), 64, 2022.</li> </ol>	<p>All corrections pertaining these comments have been done.</p> <p>I cannot get access to Most of the references given below.</p>

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<p>3. On the structure of <math>\mathbb{Z}_2</math>-linear and cyclic codes, I. Aydogdu, I. Pathan, Roger Ten-Valls, Finite Fields and their Application, 48, 241-260, 2017.</p> <p>4. On Some characterization of quasi-cyclic codes over <math>\mathbb{Z}_q</math>, Soumak Biswas, Maheshanand Bhaintwal, Advances in Mathematics of Communications, Online published in December 2023.</p> <p>5. On the structure of linear and cyclic codes over a finite chain ring, G. H. Norton, A. Salagean, Applicable Algebra in engineering, communication and computing, 2. 10, 489-506,2000.</p>	
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