

**Review Form 3**

Journal Name:	<b>Asian Research Journal of Mathematics</b>
Manuscript Number:	<b>Ms_ARJOM_123604</b>
Title of the Manuscript:	<b>"ON THE IMPACT OF DIFFERENTIAL EQUATIONS ON INDEX RESPONSE, TRANSFER FUNCTION IMPULSE RESPONSE AND FREQUENCY RESPONSE"</b>
Type of the Article	<b>Original Research Article</b>

### Review Form 3

#### **PART 1:** Review Comments

<b>Compulsory</b> REVISION comments	<b>Reviewer's comment</b>	<b>Author's Feedback</b> (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b>	This manuscript lays out foundational principles that govern the behavior of various types of filters. Filters are essential components in engineering, telecommunications, and signal processing, where they help to manage signals and remove unwanted noise. Understanding their impulse, step, and frequency responses allows scientists and engineers to design more effective systems.	
<b>Is the title of the article suitable? (If not please suggest an alternative title)</b>	Title is informative but can be made more concise and focused on the key elements of the paper. It appears a bit complex, which might reduce its impact. Suggested Title: Impact of Differential Equations on Transfer Functions, Impulse and Frequency Responses in Filters	
<b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b>	The abstract is educative and captures the essential point of the work.	
<b>Are subsections and structure of the manuscript appropriate?</b>	Adding equation numbering, will connect sentences in the work together and give an explanation between equations, it will improve the readability of the work.	
<b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b>	The work demonstrates scientific correctness and robustness due to its rigorous use of well-established mathematical principles in control theory and signal processing. The reliance on linear differential equations to model physical systems, such as filters, provides a solid mathematical foundation. The technical soundness comes from the clear definitions and derivations of key concepts like step response, impulse response, transfer function, and frequency response, all of which are central to the analysis of linear time-invariant systems.	
<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b>	It would be valuable to reference recent studies or classical works on filters, particularly in signal processing, control systems, or electrical engineering. Providing context on how this work advances or contrasts with previous studies would strengthen its relevance.	
<b>Minor</b> REVISION comments		
<b>Is the language/English quality of the article suitable for scholarly communications?</b>	Language is quality but the author must check the work's spelling and grammatical aspects before publication.	
<b>Optional/General</b> comments	No citation.	

#### **PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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**Reviewer Details:**

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