An integrated Data Envelopment Analysis–Artificial Neural Network–Rough Set Algorithm for assessment of personnel efficiency.
4. Conclusion and future work

The proposed approach of this paper provided a six-stage analysis to help managers formulate an effective decision-making procedure to demonstrate critical attributes affecting personnel efficiency in particular and total efficiency in general. The purpose is to alert management to the important attributes that should be considered if an effective decision to enhance total efficiency is to be formulated. Determination of critical personnel attributes is a useful procedure to overcome complication associated with multi-ple inputs and outputs. The proposed algorithm assesses the im-pact of personnel efficiency attributes on total efficiency through Data Envelopment Analysis (DEA), Artificial Neural Network and Rough Set Theory (RST). The outcome helps managers to construct helpful system to forecast DMUs efficiencies by selected attributes. Also, this is the first study in literature in which neural networks, Data Envelopment Analysis and Rough Set Theory are integrated for assessment of personnel efficiency. The significant features of the proposed algorithm in comparison with existing models and algorithms are shown in Table 8. Obviously, the proposed algo-rithm is superior to the conventional and existing models and algorithms.