**ABSTRACT**

In recent year wireless sensor network plays an important role in day to day life, to achieve the security, cryptography techniques are used. As wireless sensor has the limited memory space and energy consumption to provide security is vital problem. The main aim of this research work is to analysing different cryptographic techniques such as symmetric key cryptography and asymmetric key cryptography and comparing AES, DES, 3DES, RC5 and IDEA encryption techniques. In this paper, a new security symmetric algorithm was proposed to provide high security. It provides cryptographic primary key integrity, confidentiality and authentication. The results show that the proposed hybrid algorithm HSR19 gives efficient performance for communication devices with the parameters in computation time with different file sizes, encryption and decryption speed and energy.