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Electronics Engineer (Development) 09

GS-0855-09

I. INTRODUCTION

NOTE: THE SENTENCE IN PART I DESCRIBING THE PURPOSE OF THE POSITION AND PARTS II AND III IN THEIR ENTIRETY ARE PERMANENT PARTS OF THE LIBRARY AND MAY NOT BE CHANGED OR EDITED IN ANY WAY.

This position is located in

Serves as an electronics engineer and is assigned professional engineering duties of an equipment development nature, that provide continuing experience in the practical application of engineering theory and basic principles.

II. MAJOR DUTIES AND RESPONSIBILITIES

Assists and conducts professional engineering analysis, experimentation, evaluation and development of equipment, instrumentation, materials and processes and/or performs experimental and investigative activities in order to develop new and improved equipment and to advance the current state of technology.

Duties typically involve assignments such as:

Designing and performing modeling techniques for electronics equipment; documenting, flowcharting and analyzing systems design changes, implementation practices and new procedures;

Developing measurement techniques and procedures to verify adequacy of systems components; developing models based on systems functions and theory and assessing their likely performance (e.g. radio system and propagation modeling); designing, coding, debugging and implementing both software for interface between digital devices and specialized software for measurement systems (e.g. developing computer controlled spectral data measurement, storage and analysis); analyzing data and preparing reports of findings.

III. FACTOR LEVELS

Factor I - Nature of Assignment Degree A (1 point)

Assignments typically consist of a series of interrelated tasks for problems which have been isolated or defined. They involve the independent application of a series of steps and procedures relating primarily to the fact finding and investigative phases of the work in such efforts as: Personal Communications Development and Measurements; High Frequency Channel Modeling and Simulation; Wave Propagation and Spectrum Usage Measurement. Assignments are designed to assist in yielding specific additions or changes to current technology or data gathering areas such as radio/telecommunications technology, performance, and spectrum utilization. Assignments are confined to a single area of investigation.

Factor II - Supervision Received Degree A (1 point)

Supervisor or team leader outlines nature of work, requirements and critical features. General instructions and objectives regarding the design, execution and evaluation of the work is provided. The engineer independently lays out and accomplish a number of successive steps. Supervisor is available to discuss potential sources of difficulty and observes work in progress. Completed work is reviewed for compliance with instructions, accuracy of methods and data, adequacy of treatment, and conformance with established scientific procedures and sound engineering and scientific practices.

Factor III - Guidelines and Originality Degree A (1 point)

Precedents are generally available in the form of previous studies on related subjects, standard methods in textbooks, handbooks, or other literature. The engineer selects and evaluates the applicability and limitations of various analytical and experimental methods and then determines those means that could be used to produce accurate, reliable and valid findings. Innovation and originality is limited to searches for information and the adaption of findings to the specific problem. The engineer may make minor innovations and modifications of procedures and techniques.

Factor IV - Qualifications and Contributions Degree A (2 points)

The position requires a fundamental knowledge of electronics engineering as well as a broader understanding of the scientific and engineering techniques and processes by which the electronics systems, equipment and software are identified and utilized (e.g. radio propagation theory, spectrum analysis, data acquisition). The incumbent assists higher graded engineers/scientists by performing supplemental and subsidiary investigations necessary for project completion which necessarily contribute to the final product and demonstrate the employee's ability to perform a variety of experimental development activities in areas such as telecommunications/radio systems or related software.

TOTAL= 5 pts

This position is exempt from coverage under the Fair Labor Standards Act.

IV. UNIQUE POSITION REQUIREMENTS

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