A descriptive design, was applied throughout the present study in order to assess the workers’ awareness and compliance with occupational health nursing and safety measures. The study sample was (330) worker, working in basic factory departments, in the state company for fertilizer-northern area. A special questionnaire was prepared by the investigator, through an extensive literatures review, opinion of experts and conducting a preliminary study. Content validity of the questionnaire was done through eliciting the opinions of a panel of (19) expert, while the reliability of questionnaire was done through a pilot study and by using internal consistency and calculation of Pearson Correlation Coefficient on data gathered from (10) workers. The results of the study showed that all workers were males; the majority (62.12 %) were (30–39) years old. High proportion were married (95.15 %) and have (42.12 %) period long of service (10–14) year of workers service. With regard to the educational level of workers, the highest percentage was (48.18 %) who were graduated from secondary schools. Commonest work was manual (61.12 %), and the majority of them work in the maintenance department (49.96 %). According to the shift of work, most of them (54.24 %) work in evening shift. So as the results of the study showed that there was awareness and compliance of workers with occupational health nursing and safety measures, and there was a significant relationship between the degree of this awareness and compliance and some demographic characteristics. Depending on the results of the study, the researcher recommended that occupational health nursing-oriented health education programs and training can be designed, constructed and implemented for workers to increase, maintain and improve their awareness toward the impact of the work hazard and work environment on their health status, and their compliance with safety measures.