

Comments on GCC Workshop Held at Randfontein Estates on 3 March 2004

The workshop was attended by 145 delegates, including members of the DME, DoL, private training institutions, mines, industries and other interested parties.

Introductory remarks were made by the Presidents of AMRE and ICM&EE. The introductions stressed good preparation is essential using a multidisciplinary approach. Experience is essential in electrical, mechanical, structural, civil and management disciplines of all mining and industrial equipment and plant. The role of mentors cannot be overstated and there is a suspicion that in many cases candidates have not been allocated competent and interested mentors. Standards will not be lowered and it is expected of candidates to have developed considerable ability to perform lateral thinking before presenting themselves for the examination.

The future of the examination is not in doubt and the examination will remain. It was explained that although the examining body may change this will not impact on the syllabus, scope and method of examination. The purpose of the examination is to test if candidates are able to display their competence.

The standard of completion of many candidate application forms is dismal giving an early indication of a lack of elementary application of thinking skills.

The trend in pass rates for the past 4 years was discussed and slides were shown which indicated the pass rates since the inception of the GCC 96 years ago. The results have never been outstanding but certainly better than at present.

The DME web page, www.dme.gov.za, was advertised where examiner's comments are available after each exam. In addition extracts from these reports were quoted to the delegates.

Questions were raised, comments made and feedback given throughout the workshop. Some of these are noted below.

- During the 2 year pupilage some candidates are placed on one project for up to 6 months.
- Candidates are not provided the opportunity to experience other industries e.g. Colliery vs gold exposure.
- Mentors are disinterested and candidates are recommended at the expiry of a fixed training period regardless whether they have been properly trained or not.
- Training is not multidisciplinary.
- There is a poor understanding of the SI system and it's units.
- Many candidates demonstrate a weak technical background and a poor understanding of the fundamentals of mechanics.

- Parrot fashion learning is common.
- Management does not budget for training and candidates are expected to work productively for the duration of their training period.
- It was felt that the Mining Plant Exam has too much specific legal content thereby reducing the opportunity to test practical issues.
- Answers need to be numerically correct.
- The mark allocation to questions is an indication of the volume or number of responses required.
- There were numerous requests for model answers to be made available after each examination.
- Assumptions based on practical experience of machinery or plant behaviour are frequently required.
- Formulae are not understood and too frequently just memorised.
- Candidates attempt to conceal ignorance with verbiage.
- There is a tendency to replace “on the job” training with course attendance.
- Training programmes must be focused and meaningful with a set objective.
- In spite of academic qualifications being high, a poor understanding of engineering and mathematical fundamentals is frequently demonstrated.
- The examination is not focused on theoretical engineering but rather on the practical situation as found in the field.
- There seems to be a lack of self motivation by candidates to ensure that they gain the necessary and relevant experience.
- The exam preparation is a joint venture between candidates and their employers.
- The evolutionary development of competence with regard to knowledge, experience and wisdom was expounded on.
- Two years is too short to train candidates who do not have a technical background.
- The most common reason for failure is poor preparation on the part of the candidates.
- A culture of hard work and study is not evident.

- The examination is only suitable for candidates with more than two years of experience.

Recommendations

1. The examination is here to stay.
2. Candidates must control their own future and insist on proper exposure and appropriate training in all disciplines in the industry.
3. Employers must accept their responsibility and ensure that training is thorough and complete.
4. Model answers be made available after examinations.
5. Certificated responsible mentors be appointed for each candidate.
6. The Learner Official/Junior Engineer programme be reintroduced.
7. The difference between practical experience and theoretical knowledge be acknowledged by candidates.
8. That candidates are only recommended to attempt the examination when they are properly trained and prepared.
9. Legal questions be confined to the Legal Knowledge examination.
10. Increase the number of questions in the Mining Plant examination to cover a broader spectrum- alternatively allow more time for the exam.

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