APPENDIX - K

Description of the Criterion 'Mechanical Technology and Practice'

S.E. (M. & E.)

M.E. MECHANICAL TECHNOLOGY AND PRACTICE I

(Term work : 50 marks; Practical examination : 100 marks)

(A) College Certificate:

(a) Materials used in Machine construction: Their composition and properties.

(b) Theory. Manipulation and methods involved in various workshop processes.

Casting: Casting: moulds; die-casting, Chill-casting, centrifugal casting, Ducts in casting; precaution and remedies.


Smithy: Hearth and faces Tools and appliances. Forging steam and power hammers; hand and machine forging, heavy forging such as crank shafts, connecting rods, etc. Hand welding, stamping, bending drawing and rolling.

Fitting: Tools. Fits and units. Chipping, filling, scraping, granding, lapping.

Soldering and brazing:Heat treatment, tempering, hardening, annealing of carbon and alloy.

(B) Examination Workshop Practice

Practice in preparing simple jobs in: Pattern making; moulding; foundry; smithy; filling; fitting; soldering; brazing; plain and taper metal turning.
Practical Examination (100 marks)

The practical examination will be held for four days. Marks and time allotted for jobs will be as under:

1. Pattern Making One job three hours
2. Filling and Fitting One job six hours
3. Forging One job three hours
4. Metal Turning One job three hours

Term Work (50 marks)

Each candidate shall complete the following:

(i) Pattern making 4 jobs
(ii) Moulding & Casting 4 jobs
(iii) Filling and Fitting 4 jobs

When once a set of jobs has been submitted for the examinations and marked, the markings will be carried over to subsequent examinations unless new jobs are presented. A candidate whose marks are thus carried over shall be eligible for a class.

Source: Courses of studies prescribed under the Faculty of Technology including Engineering, Gujarat University, 1966, pp.64-65)