

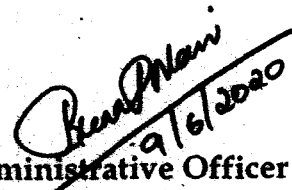
P&A/Syllabus-MFCP/SCTIMST/2020

09.06.2020

### NOTICE

The Syllabus for written test for MFCP to the post of Technical Assistant (Lab) - Bioceramics Laboratory as approved by the Director is notified for the information of all concerned.

- I. Histological sample preparation
  - (a) Embedding, cutting and staining of samples
  - (b) Handling and processing hard tissue samples
- II. Microscopy principles and different optical microscopes
- III. Electron Microscopy principles (Scanning and Transmission modes)
- IV. Transmission Electron Microscope (TEM) - Instrument detail and operation
- V. Sample Preparation for TEM
  - a. Biological Samples
    1. Tissue processing for routine glutaraldehyde fixed tissues/cells for resin embedding including osmification
    2. Section cutting with ultra microtome including ultrathin sectioning with glass and diamond knives
    3. Artifacts related to section cutting and troubleshooting
  - b. Non Biological Samples
    1. Drop casting
- VI. Staining for TEM samples
  1. Simple staining with Toluidine blue on semithin sections
  2. Heavy metal staining on ultrathin sections using lead citrate and uranyl acetate
  3. Negative staining using Uranyl acetate/Uranyless stains
- VII. Essentials of cell culture

  
9/6/2020  
Administrative Officer Gr.I