Clinical Biochemistry Department Specialist Portfolio Seminars

Name of Tutee: _____

7.1 Laboratory Automation – Knowledge Assessment

- **Complete the following tasks. Collect the evidence in the 7.1 area of your portfolio**

Knowledge	Task – Reflective Notes – no more than 2 sides for each, along with evidence collected as described – include all in your portfolio	Assessed for Knowledge Initials/Date
Understanding Automation and Mechanisation	**Use Ref 1:** Note the differences between mechanisation and automation. Which terms have stood the test of time and are still in use today?	
Roles of CFA	**Use Ref 2:** Critically examine the R&D proposal and give you views on the CFA option as a way forward. Give alternative mechanisation ideas to help with increasing TPMT workload growth.	
Discrete Analysis	**Use Ref 3:** Consider the evaluation of the Dacos analyser to look at fundamental issues of assessing an analyser. Give a view on why the Dacos analyser was not a commercial success in the form described in the paper.	
Issues With Phlebotomy and other pre-analytical factors	**Use Ref 5:** Summarise the key issues raised by the study of phlebotomy techniques in the City Emergency Department. Give your own views on the ways issues could be overcome in a sustainable way.	
Historical Perspective	**Use Ref 4:** What tests did they do in the Sandwell Laboratory on Christmas Eve 1956 (the day after I was born!). Discuss any issues with the way the results were written down. How do you think they measured these parameters?	
Current Test Knowledge	Obtain kit inserts for the following for your portfolio and write brief notes to explain the basis of the tests: • A simple photometric test • A photometric test which uses rate determinations to measure enzyme activity • A photometric test which uses rate determinations to measure the amount of substance in a sample. • An immunoassay method – explain the reaction	

	principle and the way the signal is measured. • An ISE method – write brief notes about the way the ion you have chosen is measured.	
Quality Control and EQA	• Take one test and review the QC and EQA. Briefly describe the EQA system so that someone non-technical could understand what the numbers mean!	

Jonathan Berg, 10th June 2019