1. Which type/s of measurements does the CellDyn Sapphire performs?
2. Optical Flow Cell Measurements
3. Impedance Transducer Measurements
4. Hemoglobin Flow Cell Measurements
5. All of the above
6. True or False All True
7. Optical Flow Cell and Impedance Transducer measurements follow the principles of a process called flow cytometry.
8. HCT = (RBCi x MCV)/100
9. MCH = RBCi/HGB
10. MCHC = (HGB/HCT) X 100
11. Which statement/s is/are true for HGB determination? a. True b. False
    1. HGB is measured by absorption spectrophotometry.
    2. RBC’s are lysed first by Diluent Sheath reagent and then forms a complex with HGB reagent.
12. Using one of the troubleshooting job aids, what parameters are associated with:
    1. Sample Transfer Pump # 1? PLTo, RBCo
    2. Sample Transfer Pump # 2? PLTi, RBCi, RETIC (bonus)
    3. Sample Transfer Pump # 3? HGB, WBC
13. Give at least 5 references/job aids for troubleshooting purposes. They have to enumerate.
    1. Cell Dyn Sapphire Parameter Generation Reference
    2. Cell Dyn Sapphire Flow Diagram
    3. Cell Dyn Sapphire System Quick Trouble Shooting Guide
    4. Cell Dyn Sapphire Flow Panels
    5. Cell Dyn Sapphire Customer Training Workbook
    6. Cell Dyn Sapphire System Quick Reference Guide
    7. Cell Dyn Sapphire Online Manual on each Sapphire
    8. Cell Dyn Sapphire Paper Copy Manual in the office.
14. Which parameter/s is/are reported and which one/s is/are used as a QC check?
    1. RBCo QC check only for RBCi, hence RIC/ROC error
    2. RBCi Reported
    3. PLTo Reported
    4. PLTi QC check only for PLTo, hence the PIC/POC error
15. Cell/Parameter Analysis. Write OS for Optical Scatter, F for Fluorescence, I for Impedance, AS for Absorption Spectrophotometry or combinations like OS+F or OS+I
    1. WBC OS+F
    2. DIFF OS+F
    3. NRBC OS+F
    4. RETIC OS+F
    5. PLATELETS OS+I
    6. RBC OS+I
    7. MCV I
    8. RDW I
    9. MPV I
    10. HGB AS
16. Results would not cross to SOFT. What are the two things to check and list the steps? They have to give the answers and the steps.
    1. Check if Transmit button is activated. If not, go to Set-up, Host Computer/Auto-transmit, Enable all four boxes.
    2. Start Sapphire Interface in SOFT. Interfaces, Interface Setup, Autoposting, Instrument Autoposting, Right click, Start Interface
17. You are trying to run a sample manually but the touch plate would not respond? What will you check? They have to give the answer.

Check if the Open Tube Aspiration Switch Plug/Cable is connected.

1. You loaded a full rack of samples and after analysis, all your HGB results has “>>>>>>>”instead of numerical values. Give 2 possible causes and give the resolution. They have to list the possible causes and resolutions
   1. HGB syringe popped-out of the holder. Reseat syringe, reanalyze.
   2. The valve opening and closing during HGB reagent delivery is not opening causing the tubing to pop out and thereby the reagent leaked in the instrument. Clean the valve. If it doesn’t work, notify coordinator. Call for service if necessary.
   3. There could be other answers. I will help in checking if the answer is right.