SPECIFICATIONS FOR OPTICAL COHERENCE TOMOGRAPHY (OCT)

1. It should provide high resolution OCT scans of the retina using Swept Source technology or Spectral Domain technology.
2. Imaging mode : Posterior segment, Anterior segment, OCT Angiography, Fundus Imaging.
3. It should have facilities for high resolution OCT scanning of retina including macula, RNFL (retinal nerve fibre layer), ganglion cell layer, optic disc; choroid, posterior vitreous and anterior segment, particularly, cornea and angle of anterior chamber.
4. The OCT light source should be superluminiscent diode (SLD) or tuneable laser.
5. The central OCT scanning wavelength should be within the range of 800-1400 nm.
6. The scanning speed should be 1,00,000 A scans/second or more.
7. The lateral resolution should be better than 20 microns and the optical axial(in-depth) resolution better than 8 microns.
8. The number of A scans and B scans in a macular cube should be 512 A X 128 B scans or more.
9. The A scan depth should be 1.8mm or more.
10. Wide field imaging should be possible, picture angle should be 36 X 30 degrees or more.
11. Scan range on fundus should be Horizontal : 3-12mm or more; Vertical : 3-9 mm or more
12. It should be capable of scanning the central retina as well as the peripheral retina and have the necessary internal fixation targets with or without external fixation target.
13. It should be capable of segmentation of the various retinal layers and measurement of various retinal layers and parameters like macular thickness, RNFL, ganglion cell layer and choroidal thickness.
14. It should be capable of dyeless OCT Angiography (OCTA).
15. The OCTA should be capable of scanning the superficial and deep retinal plexi, the outer retinal layers and the choriocapillaris.
16. Fundus photography should be colour, redfree or infrared.
17. Ability for fundus imaging using color photography or line scanning ophthalmoscopy or confocal scanning laser ophthalmoscopy.
18. The focus adjustment range should be -20D to +20D or more.
19. There should be a good eye tracking system to decrease effect of eye movements on the scan quality.
20. It should have good registration capability to capture images of the same area of interest during follow up scans on subsequent visits of the same patient and then analyse the changes.
21. It should have the latest relevant software for image capturing as well as analysis, particularly for macular thickness, RNFL evaluation, Ganglion cell complex and optic nerve head evaluation for glaucoma.
22. It should have normative database as well as software for analysis of images with reference to the normative database.
23. It should have the capability of taking OCT images through minimum pupil diameter of 3.3mm or less.
24. It should be capable of taking fundus images through a minimum pupil diameter of 3mm or less.
25. Features for autofluorescence, fluorescence angiography.
26. PC networking to be provided at least for 2 stations. It would be an additional advantage. Though this particular specification is not mandatory.
27. Scan range on cornea should be Horizontal: 3-8mm or more; Vertical: 3-8mm or more
28. The software should be upgradeable.
29. System should remember previous chinrest position for follow up scans.
30. Original motorized table is to be provided.
31. The latest workstation for viewing the OCT and OCTA images and running the advanced software as well as its updates is to be provided.

32. There should be an integrated or external display monitor, at least one of which should be of size 15 inches or more.
33. To be provided with integrated Windows 10 or better, multicore processor, internal or external DVD RW drive/USB Port, laser colour printer which prints the high-resolution OCT and OCTA images without any deterioration in image quality is to be provided.
34. Ability for internal storage of at least 80,000 scans or 1 TB or more.
35. Suitable online UPS with at least 30 minutes back-up.
36. User (Operating) and service manual in English.
37. Warranty: Comprehensive warranty for 5 years with further 5 years of CMC after the warranty period.
38. USFDA/European CE with four digit notified number/BIS approved.
39. Demonstration to be given inhouse for the technical acceptance of the equipment.
40. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of catalogue/data sheet.
41. Standards and Safety certificates (including electrical safety) to be provided.
42. List of important spare parts and accessories with their part numbers and costing.