Virtual Dissection Table

- 1. PACS Based Virtual Dissection and visualization Workstation for Complete Anatomy teaching from basic to advance level
- 2. Table should contain a fully labeled interactive body atlas with atleast 2500 body structures as a reference for classes, Physiological Atlas and visor of histological slides.
- 3. It should contain 3D models for anatomy education with full 3D functionality like 360 degree rotating, zoom in and out, identify individual structure with full information and also the ability to perform virtual dissection.
- 4. It should contain tutorials for Anatomical guidance in details with animations
- 5. Should have the facility to cut the 3D Models in transverse, sagittal, and coronal planes and facility to correlate the 3D model with the sectional anatomy (transverse, sagittal, and coronal sections) displayed on same screen
- 6. Should also have facility to correlate 3D models with radiological images.
- 7. This system should be equipped with physiological atlas with images and videos of all the systems of the human body, and biomechanical functions for comprehensive physiologic training and teaching.
- 8. The system should have facility to allow reconstruction and cuts in MPR 2D images
- 9. Should have a inbuilt Picture Archiving and Communication system (PACS) based Visualization workstation with specialized PACS software for 3D medical Imaging
- 10. It should have facility to allow users to import real patient cases based on CT and MRI data and automatically reconstruct 3D models from Raw DICOM Files.
- 11. The system should have tools to allow oblique cuts at any angle or position of the reconstructed images Virtual Dissection table and workstation should run on full DICOM compatibility, enabling the workstation to connect through LAN to servers in PACS Domain or DICOM Based.
- 12. The workstation/table should have the facility of viewing any DICOM image as well as clinical images and film clips from Diagnostic Imaging systems
- 13. Should have the possibility of connecting to other PACS available in the market
- 14. Software should feature a touch based user interface.
- 15. The 3D body structure should freely rotate in all 3 axis (X,Y,Z)for comprehensive views of the anatomy
- 16. The system should allow the user to work the texture and density of tissues, make annotations and measurements in both 2D and 3D images.
- 17. The system should be capable to interact with digital microscopes and should have histological slide viewer software for visualization of Histological slides observed and identified by microscope.
- 18. The system should have histological atlas with pictures of tissues and organs of human body
- 19. Should have single piece Full HD LED Touch screen with minimum 4k resolution, antiglare protection.
- 20. Minimum Screen size should be 65 inches or better with multiple touch points for effective group learning.
- 21. It should be possible to use workstation as a Black Board as well a Table for effective classroom teaching environment
- 22. The workstation should have electrical stepless adjustment of height to accommodate students & Teachers of all height.
- 23. The workstation station should have stepless Electrical tilting from 180 to 90 degree for achieving board position
- 24. Should have the facility to be connected To a single Normal Projector available in Institute for Classroom Teaching without any additional computer/connections
- 25. The workstation should be on 4 lockable castor wheels for easy maneuverability within the department. It should pass easily in standard classroom doors and most elevators

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- 26. The system should be supplied with Digital microscope with following specifications
 - a) Tripod made entirely of metal, arm and foot firmly fixed to each other
 - b) Focal adjustment by the basic and fine control buttons, integrated to the tripod on both sides;
 - c) Tube: Inclined monocular vision of 45°, rotation up to 360°;
 - d) Objectives: Objective revolver with 4 achromatic targets 4x / 0,10, 10x / 0.25, 40x / 0.65, 100x / 1.25 (immersion in oil);
 - e) Increases: 40x, 100x, 400x, 1000x;
 - f) Platinum object holder: Platinum cross x-y, 140 mm x 140 mm, with object introducer, adjustment range of 75 mm x 50 mm;
 - g) Illumination: Adjustable halogen lamp 6 V, 20 W integrated in the foot. Power supply in universal voltage from 100 V to 240 V, 50/60 Hz;
 - h) Condenser: Abbe condenser N.A.1,25 with iris diaphragm;
 - i) Filter holder and filter, focal adjustment by means of a gear with shaft;
 - j) Camera sensor: 1/3 "CMOS, 1.3 Megapixels, colour,
 - k) Power supply: Via USB 2.0 interface;
 - Supplied Complete, with dust protection case, Table for microscope with wheels and connection to the main table.
- 27. Visualization system should be supplied complete with Synthetic Human anatomy model Upper and Lower Limb 1 no each for comprehensive anatomy teaching and demonstration with following specifications
 - a) Should be suitable to be used as an alternative to human cadavers in basic anatomy classes.
 - b) The Limb should include all major human skeletal system, bones, muscle, vasculature, nerves, tendon, ligament, fasciae and cartilaginous structures present in typical human anatomy.
 - c) Should be have real life like size, shape and texture education grade antomical model
 - d) Tissues of arm and leg should mimic mechanical, dielectric and physico-chemical properties of life like live tissue. It should give look and feel of a live human structure
 - e) Should be biohazard and formaldehyde-free and should not pose any health risks to students/faculty
 - f) Should allow Realistic anatomy teaching and training without compromising a live patient.
 - g) Anatomy Arm should have following features:
 - i. Structural Features: Skeletal, muscular, vascular, nervous, fascial, and cartilaginous structures of the shoulder, upper arm, forearm, wrist and hand.
 - ii. Articulating Joints: Shoulder, elbow, wrist and digits.
 - iii. Construction Materials Thermoplastic bones with integral fascia sheath. Muscular tissues of Organo silicate composite and specialized synthetic human skeletal muscle, tendon, fibrous fascia, and bone.
 - h) Anatomy Leg should have following features
 - i. Structural Features: Skeletal, muscular, fascial, and cartilaginous structures of the hemi-pelvis, thigh, lower leg and foot.
 - ii. Articulating Joints: Hip, knee, ankle and toes of foot.
 - iii. Construction Materials: Thermoplastic bones with integral fascia sheath. Muscular tissues of organo silicate composite and specialized synthetic human skeletal muscle, vessels, nerves, tendons, fibrous fascia and bones.
 - i) The manufacturer should have the facility for This model may also be customized with pathologies, customization of Arm and leg with pathologies ,nerves, vessels, and custom colors if needed
 - j) System should be supplied complete with specialized storage container for preservation in medium
- 28. The bidder should be authorized by the OEM and manufacturers authorization for all components shall be enclosed with the bid failing which the bid shall not be considered

(2) In guerred.

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