TOPIC AND REFERENCES –

COMPETITION PROFESSOR ASSISTENT- POSITION 14

DEPARTMENT OF DENTAL MEDICINE

1. Effective methods in dental office ergonomics. Placement of the dental chair. Arrangement of auxiliary installations for the dental chair.

2. Producing compressed air in the dental office. The compressor. Types of compressors used in dental practice.

3. Specific ways of carrying out the sterilization procedure in the dental medical activity. Sterilization of medical instruments. Specific methods of sterilizing the dental office.

4. Medical imaging in the diagnosis of dental medicine. Components, the meaning of the symbols on the front panel. Modes of operation in exploitation. Radiological facilities for performing retroalveolar radiography. Panoramic radiological installations. CBCT radiological installations

5. Computer tomograph. The structure of a CT, component elements, the physical principle. Applications of CT in nuclear medicine. PET-CT

6. Maintenance and revisions of radiodiagnostic devices. Selection of the necessary information from the technical documentation. Ways of adjusting and setting nominal operating parameters in service mode

7. Applications of CT in dental medicine. Computer tomograph. The structure of a CT, component elements, the physical principle. Applications of CT in dentistry. Image reconstruction algorithms in dental radiographic explorations

8. Nuclear magnetic resonance used in dentistry. NMR structure, component parts. Investigation techniques

9. Lasers. Uses and applications of laser radiation in dental medicine. Use of laser in medical treatment. Use of laser in oral cavity surgery

10. Specific actions of radioactive isotopes in dental medicine.

11. The importance of using electronic methods for determining the length of root canals.

12. Introduction to the study of instruments, devices and devices in the dental laboratory. Technological possibilities for obtaining prosthetic parts. The dental technician's work table and small tools.

13. Tools, devices and devices for fingerprinting. Classification of fingerprints. The ideal characteristics that a fingerprint holder must fulfill. Universal and individual impression trays, single-identity trays. Tools, devices and apparatus used in duplicate model technology. Tools, devices and appliances necessary for making models. Model classification. Tools, devices and appliances necessary for making plaster models, cements, amalgams, resins, ceramic masses, pulverized metals/alloys. Tools, devices and devices necessary for making models by the electroplating method. Model systems with movable abutments.

14. WMD simulators. Classification of simulators. The occluders, articulators and facebows.

15. Tools, devices and devices used to make models. Heat sources for plasticizing/melting wax. Additive modeling tools.

16. The parallelograph. Classification. Component parts. Areas of use.

17. Tools, devices and apparatus for pattern making, for their preheating and heating. Vacuum mixer. The conformers. Ovens for drying models or for removing wax from patterns. Ovens for heating patterns.

18. Tools, devices and devices for cold processing of metals/alloys. Disc cutter. The head pulling machine. Pliers for orthodontic applications.

19. Instruments, devices and appliances for hot processing of metals/alloys. Heat sources for melting metals/alloys. Devices and apparatus for introducing melt into patterns. Complex melting/casting installations. Possibilities of joining the metal parts of some dental prostheses.

20. Instruments, devices and devices for conditioning metal frameworks in the dental laboratory. Sandblasting. Electrolytic etching. Oxidation. Silanization. Ceramization. Metallization. Tinning.

21. Tools, devices and apparatus necessary for the polymerization of plastic masses. Installations for polymerization in different thermal and pressure regimes. Enclosures and photopolymerization devices. Polymer injection installations.

22. Instruments, devices and devices used in the processing of ceramic masses. Furnaces for firing ceramic masses. All-ceramic systems.

23. Tools, devices and apparatus for disassembling, processing, finishing and polishing prosthetic parts. Steam, ultrasonic cleaning installations. Rotary tooling for cutting operations. Electrolytic polishing.

24. Labor protection rules in the dental laboratory. Location and design criteria. Criteria for placement and operation of devices and machinery.

25. Dental implants Differences from dental structures, Types of implants.

26. Component elements of implant systems for performing prosthetic works

- 27. Prosthetic options in implantology
- 28. Analog fingerprint and digital fingerprint
- 29. Analog work model and digital work model
- 30. Materials used in implantology
- 31. 3d printer
- 32. Digital elements for carrying out works on implants
- 33. Unidental zirconium crowns
- 34. Metal-ceramic maxillary bridge cemented on implants
- 35. Screwed provisional metal-ceramic bridge
- 36. Total prosthesis stabilized with 2 implants
- 37. Overdenture with 4 implants
- 38. The surgical template

REFERENCES:

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- 2. Nagy I. și colaboratorii. Îndreptar lucrări practice, Ed Eurobit 2004 3.
- 3. Grava C. Ștefăniță C. Buzuloiu V. Principii ale aparatelor de imagistică medicală,

Ed.Universității din Oradea 2004

- 4. Cavalu S. Pop L. Bât L. Ghid practic de biofizică medicală, Ed Universității din Oradea 2005
- Pompiliu Manea Aparatură pentru radioloie şi imagistică medicală Editura MEDIAMIRA Cluj-Napoca ,2007 ISBN 978-973-713-147-8 7.Radioimagistică Medicală Radiofizică şi Tehnică Editura Universitară Carol Davila Bucureşti ,2016
- 6. Rândașu Proteze dentare, Ed. Medicală, București, 2000.
- 7. D.D. Slăvescu, O.V. Rândașu Metaloceramica dentară, Ed. RCR Print, București, 1999
- 8. D. Bratu, R. Nussbaum și colab. Bazele clinice și tehnice ale protezării fixe, Ed.Signata, Timișoara, 2001
- Shafie, Hamid R., 1. Dental Abutments. 2. Dental Implant-Abutment Design. ISBN 978-1-118-92665-9 (Adobe PDF) – ISBN 978-1-118-92853-0 (ePub) – ISBN 978-1-119-94981-7 (hardback),2014
- 10. Jonathan L. Ferencz, Nelson R.F:A.Silva .Fundamentals Of CAD/Cam Dentistry ,2018, American Colege of prosthodontists Education foundation.

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