



**Nr 8.** Hereditary disorder affecting enamel form or its calcification is called:

- A. amelogenesis imperfecta.
- B. dentinogenesis imperfecta.
- C. dentin dysplasia.
- D. odontodysplasia.
- E. abfraction.

**Nr 9.** Which of the following problems is **least frequently** observed in geriatric patients?

- A. reduced salivary flow.
- B. cementum thickening.
- C. root caries.
- D. pit and fissure caries.
- E. tooth shape and color change.

**Nr 10.** Indicate the **false** sentence concerning self-etching adhesive systems:

- A. contain low concentration acids: 5% maleic or 5% citric, for etching enamel and dentin.
- B. contain acid primers that etch enamel and dentin.
- C. contain acid primers priming enamel and dentin.
- D. after application the primer is not rinsed away from the preparation.
- E. using them we avoid dentin overdrying, which can have negative influence on adhesion.

**Nr 11.** Choose the procedure that may improve sodium hypochlorite efficacy:

- 1) heating the solution to body temperature or even above;
- 2) cooling the irrigant to the temperature of 15°C;
- 3) storage in transparent bottle to ensure access of light;
- 4) simultaneous use with chlorhexidine;
- 5) administering larger volumes of the solution for irrigation;
- 6) application of ultrasonic devices.

The correct answer is:

- A. 2,4,5.
- B. 1,3,4.
- C. 2,3,5.
- D. 1,3,5.
- E. 1,5,6.

**Nr 12.** Which statement concerning root canal irrigation is true?

- A. needle should wedge into the canal to allow the irrigant to fill up the entire root canal.
- B. irrigant should be administered under high pressure to enable effective cleaning of the root canal along its whole working length.
- C. use of larger volumes of irrigant enhance the efficacy of the root canal cleaning.
- D. use of a larger gauge needle is helpful because it enables more frequent replenishment of the irrigant and ensure greater disinfection efficacy.
- E. all the answers are correct.

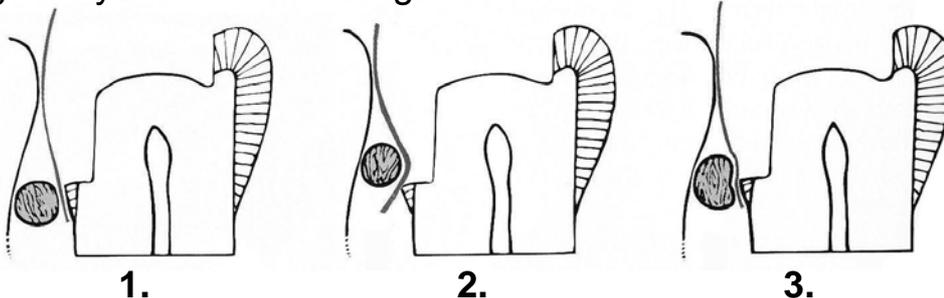
**Nr 13.** Indicate the proper interpretation of the statement: “the instrument features 0.04 taper”:

- A. the instrument has a diameter of 0.04 mm at  $D_0$ .
- B. the instrument has a diameter of 0.04 mm at  $D_1$ .
- C. the tip diameter of the instrument is increased by 0.04 comparing with the instrument of the same size produced according to ISO standard.
- D. the instrument has 0.04 mm increase in diameter per each millimeter of length.
- E. there is 0.04 mm difference in diameter between  $D_1$  and  $D_{16}$ .

**Nr 14.** Indicate the proper stage of the preparation of a cavity at which it is beneficial to place a matrix while restoring class II cavity (according to Black) with composite resin:

- A. before the preparation of the cavity – it is so-called pre-wedging.
- B. after the preparation of the cavity but before etching.
- C. after etching the cavity.
- D. after the application of an adhesive system.
- E. it does not matter at which stage the matrix is placed.

**Nr 15.** Choose the picture illustrating the correct wedge position in the interproximal space during cavity class II according to Black restoration:



The correct answer is:

- A. 1.
- B. 2.
- C. 3.
- D. each of the above.
- E. each picture illustrates an incorrect wedge position.

**Nr 16.** A 43-year-old patient presents with teeth hypersensitivity. In the region of tooth 35 a small gingival recession and dark discolouration is seen on the exposed root surface. Which of the following procedures should be applied?

- 1) oral hygiene instructions;
- 2) dietary habit correction;
- 3) fluoride application;
- 4) preparation of the lesion and filling the cavity with composite resin;
- 5) preparation of the lesion and filling the cavity with amalgam;

The correct answer is:

- A. 1,2,4.
- B. 1,2,3.
- C. 1,3,5.
- D. 2,3,4.
- E. 1,3,4.

**Nr 17.** Choose the true sentence concerning materials for cavity restoration in dental hard tissues:

- A. glass-ionomer fillings has poorer esthetics but better physical properties comparing with composite resin and compomer restorations.
- B. compomers release more fluoride ions than glass-ionomer cements and composite restorations but they have worse physical properties.
- C. composites have better physical properties comparing with compomers and glass-ionomer cements, but they release less fluorine than the other two.
- D. glass-ionomer cements release more fluoride ions than composites but less than compomers.
- E. all the answers are correct.

**Nr 18.** A 44-year-old patient presented with radiating spontaneous pain in the region of the left molars but he did not manage to point out the tooth that was the cause of the pain. In the intraoral examination you can notice the restorations in a good state in all the molars on the left side. The reaction of the teeth to vertical percussion does not help in finding the solution. How can you check whether the pain concerns the upper or lower teeth?

- A. take an X-ray – a tooth with spontaneous pain has always lesions on the X-ray.
- B. carry out the drilling procedure in dentin.
- C. remove the restorations to check the state of the teeth.
- D. carry out an anaesthetic test – pain relieving after nerve block anaesthesia of the inferior mandibular nerve proves that the lower tooth was the cause of the pain.
- E. it is impossible to check whether the pain concerns the lower or upper teeth – the only solution is further monitoring of the teeth.

**Nr 19.** Indicate the correct statements concerning smear layer produced during root canal preparation:

- 1) it contains only organic material – remains of pulp tissue;
- 2) it covers root canal walls and does not penetrate into the dentinal tubules;
- 3) it is easy to remove with 5% NaOCl;
- 4) it may be contaminated with bacteria and their byproducts;
- 5) it may interfere with adhesion and penetration of the sealer into dentinal tubules.

The correct answer is:

- A. 1,2.                      B. 2,3.                      C. 3,4.                      D. 4,5.                      E. 1,5.

**Nr 20.** Which is the recommended way of preparing gutta-percha points before placing them inside the root canal?

- A. to sterilize them with hot air.
- B. to disinfect them with 5% sodium hypochlorite.
- C. to sterilize them with hot air and disinfect them with 70% alcohol.
- D. to plasticize them with eugenol.
- E. gutta-percha points are ready to use immediately after taking them from the box and they do not require any additional activity before placing inside the root canal.

**Nr 21.** You suspect a crown crack in the tooth 22 in a 38-year-old patient. What kind of examination will be the most helpful in diagnosis?

- A. tooth tapping and X-ray.
- B. use of Briault probe and impression mass.
- C. examination with the use of Diagnodent.
- D. transillumination and tooth dyeing.
- E. all of the above-mentioned examinations are very important in tooth crack diagnosis.

**Nr 22.** How long does it take to etch dentin while applying the fourth or fifth generation adhesives?

- A. 10 s.
- B. 15 s.
- C. 30 s.
- D. 60 s.
- E. fourth and fifth generation adhesives are self-etching systems and they do not require traditional etching procedure.

**Nr 23.** Indicate the true statement concerning dentin management after using etchant and before the application of adhesive in the case of filling the cavity with composite resin:

- A. dentin after rinsing with water should be slightly wet because overdrying may result in the collapse of collagen fiber network which may interfere with optimal primer penetration.
- B. dentin after rinsing should be properly dried because moisture may impede the polymerization process.
- C. dentin after rinsing should be properly dried because then it is possible for hydrophilic primer to penetrate into collagen fibres.
- D. answers B and C are correct.
- E. no answer is correct.

**Nr 24.** Which of the following instruments are used for enlarging root canal orifices?

- 1) Gates-Glidden drills;
- 2) Peeso Reamers;
- 3) Barbed broaches;
- 4) nickel-titanium files.

The correct answer is:

- A. all of the above.
- B. 1 and 2.
- C. only 1.
- D. 1 and 4.
- E. only 4.

**Nr 25.** Ultrasonic activation of irrigating solution is associated with:

- A. creating the acoustic streaming.
- B. warming of the irrigant.
- C. additional oxygen release from the solution.
- D. A and B are correct.
- E. A, B and C are correct.

**Nr 26.** Choose the **false** sentence concerning tertiary dentin:

- A. it is formed in reaction to external irritants such as attrition, abrasion, trauma, moderate-rate caries and some operative procedures.
- B. it is formed by odontoblasts in response to irritants.
- C. it usually appears as a localized dentin deposit on the wall of the pulp cavity directly sub-adjacent to the area of the tooth that has received the injury.
- D. it is called reparative dentin.
- E. it contains more tubules compared with primary dentin.

**Nr 27.** An outline of the proper access for the treatment of the first maxillary molar is:

- A. round.
- B. oval, led buccolingually.
- C. oval, led mesiodistally.
- D. triangular with the base pointing buccally.
- E. triangular with the base pointing lingually.

**Nr 28.** The method of obturation of canals with internal resorptive defects should be chosen carefully. Which of the methods below is considered the best?

- A. lateral condensation.
- B. single cone.
- C. solvent-softened custom cones.
- D. sealer only.
- E. warm vertical compaction of gutta-percha.

**Nr 29.** On which teeth surfaces does erosion occur in bulimic patients?

- A. lingual lower surfaces.
- B. labial and buccal surfaces of the upper teeth.
- C. palatal and occlusal surfaces of all the maxillary teeth and the buccal and occlusal surfaces of the mandibular teeth.
- D. lingual surfaces of the mandibular teeth.
- E. all tooth surfaces.

**Nr 30.** Pulp vitality **can not** be assessed on the basis of:

- A. electric test.
- B. thermal test.
- C. dentin preparation test.
- D. percussion test.
- E. laser Doppler flowmetry.

**Nr 31.** Choose the appropriate method for the treatment of irreversible pulpitis:

- A. pulpectomy.
- B. pulpotomy.
- C. pulp devitalization.
- D. pulp capping with eugenol.
- E. direct pulp capping.

**Nr 32.** An 18-year-old girl comes to the clinic because of a pain located on the upper right side. She has been complaining of prolonged pain reaction to cold and the episodes of spontaneous pain for 7 days. The tooth number 17 responds to probing with an explorer into a carious lesion. Radiolucency located under the distal cusp is observed on the X-ray. It extends to the distal pulp horn. There is no pain reaction to percussion. What is your pre-diagnosis?

- A. reversible pulpitis.
- B. irreversible pulpitis.
- C. pulp necrosis.
- D. dentin hypersensitivity.
- E. acute apical periodontitis.

**Nr 33.** Which of the following radiological techniques provide the most accurate reproduction of the tooth's dimensions, thus enhancing the determination of the working length of the tooth:

- A. the bisecting angle technique.
- B. the right-angle technique.
- C. the bite-wing technique.
- D. the full mouth radiograph.
- E. A and B are correct.

**Nr 34.** Which of the following methods of sealer placement result in the highest percentage of dentin walls coverage?

- A. Lentulo spiral and EZ-fill spiral.
- B. file.
- C. master gutta-percha cone.
- D. ultrasonic instrument.
- E. in all the methods the sealer distribution is equal.

**Nr 35.** On the X-ray there is a radiolucent area visible around the apical part of the tooth 35. The tooth responds correctly to any stimuli. What will be the diagnosis:



- A. apical granuloma.
- B. periapical cyst.
- C. mental foramen.
- D. endo-perio lesion.
- E. artefact on the X-ray.

**Nr 36.** Indicate the false statement concerning the application of ultrasound devices for root canal irrigation:

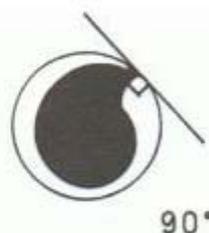
- A. constant cavitation during mechanical preparation of the canal.
- B. warming up the irrigation solution.
- C. the possibility of application for initial irrigation in narrow and curved canals.
- D. better smear layer removal.
- E. introducing greater volumes of fresh solution into the canal in the same time unit.

**Nr 37.** Which of the following statements regarding cervical root resorption is false?

- A. it appears to be a delayed reaction to an injury.
- B. it presents no symptoms; often detected through routine radiography.
- C. granulation tissue can be seen to undermine the enamel of the crown giving it pinkish appearance.
- D. adjacent bone resorption may appear.
- E. pulp is usually involved in the resorption.

**Nr 38.** What is the name of instrument which cross-section is visible on the figure below?

- A. H-file.
- B. K-file.
- C. S-file.
- D. reamer.
- E. barbed broach.



**Nr 39.** A 30-year-old patient reports pink spot at the cervical region of the tooth 22. The tooth is currently asymptomatic and the patient has never had problem with this tooth. Five years ago orthodontic treatment was completed. Clinical examination revealed a small lesion just under the level of gingiva. During probing bleeding from the cavity was observed. The tooth responds positively to pulp testing. The most probable diagnosis is:

- A. external inflammatory resorption.
- B. internal resorption type A.
- C. cervical inflammatory resorption.
- D. surface resorption.
- E. replacement resorption.

**Nr 40.** Mark the **false** statement concerning intentional replantation:

- A. the tooth should be extracted with the minimal trauma to the tooth and socket.
- B. the root surface must be kept dry to minimize the contamination.
- C. endodontic treatment of the extracted tooth should be performed as fast as possible to minimize extraoral time.
- D. after replantation a splint is applied.
- E. after the procedure the patient should be on a mushy diet.

**Nr 41.** A 54-year-old woman comes to the dental office because of a tooth pain. During the examination a deep carious lesion is observed on the mesial surface of the first lower right molar. Irreversible pulpitis is diagnosed. Patient is generally healthy but reports a hip joint replacement one year ago. What is your treatment plan?

- A. anaesthesia + root canal treatment.
- B. root canal treatment without anaesthesia because anaesthesia is contraindicated in patients with prosthetic joints.
- C. indirect or direct pulp capping (depending on the depth of the lesion) + final restoration.
- D. tooth extraction.
- E. prophylactic coverage with antibiotics + anaesthesia + root canal treatment.

**Nr 42.** Mark the **incorrect** statement concerning the sinus tract:

- A. it is usually lined with epithelium throughout its length.
- B. it originates from the source of infection and usually opens to the surface of the gums adjacent to the source of infection.
- C. it may extend extraorally.
- D. tracing the sinus tract may be helpful in diagnosing the problematic tooth.
- E. generally periapical infection accompanied by the sinus tract is not painful.

**Nr 43.** A 47-year-old patient reports very severe toothache when applying any pressure on tooth 11. In the clinical examination the tooth doesn't respond to pulp vitality tests and the radiograph exhibits a widened periodontal ligament space without periradicular radiolucency. Percussion test is positive. What is the most probable diagnosis?

- A. reversible pulpitis.
- B. irreversible pulpitis.
- C. pulp necrosis.
- D. acute periradicular periodontitis.
- E. chronic periradicular periodontitis.

**Nr 44.** Electronic apex locator **shouldn't** be used in patients with:

- A. angina pectoris.
- B. prosthetic heart valve.
- C. peacemaker.
- D. cardiac shunt.
- E. infective endocarditis.

**Nr 45.** So-called "pink tooth" is a characteristic condition of:

- A. internal root resorption.
- B. cervical root resorption.
- C. external inflammatory resorption.
- D. replacement resorption.
- E. A and B are correct.

**Nr 46.** Which material **cannot** be used for indirect pulp capping?

- A. zinc oxide-eugenol (ZOE).
- B. IRM.
- C. Ca(OH)<sub>2</sub>.
- D. Dycal.
- E. all the materials can be used for indirect pulp capping.

**Nr 47.** Extraction of pulpless milk teeth in an outpatient setting is contraindicated in children with:

- A. haemophilia disease.
- B. diabetes mellitus.
- C. asthma.
- D. Down syndrome.
- E. leukaemia.

**Nr 48.** Apexification is a term used for:

- A. physiological development of the root.
- B. formation of the apex of the root in a tooth with a vital pulp.
- C. surgical cut third of the root apex.
- D. stimulation of root development in a tooth devoid of vital pulp.
- E. obturation method in immature teeth.

**Nr 49.** "Green teeth" might be seen in a child that suffers from:

- A. porphyria.
- B. hyperbilirubinemia.
- C. haemophilia.
- D. amelogenesis imperfecta.
- E. cystic fibrosis.

**Nr 50.** Choose the correct sentences concerning fissure sealing in the permanent teeth:

- 1) it is contraindicated in children with intense caries of the primary dentition;
- 2) to improve the sealing retention the fissure should be prepared with diamond flame drill;
- 3) most important cariostatic mechanism is fluoride release;
- 4) proper local conditions are important for the sealing effectiveness;
- 5) sealed fissures should be inspected every 6 months and any lacking sealing should be replaced.

The correct answer is:

- A. all of the above.
- B. 3,4,5.
- C. 2,4,5.
- D. 3,4.
- E. 4,5.

**Nr 51.** Match the term to its description:

1) attrition;      2) abrasion;      3) erosion;      4) caries.

- a) irreversible loss of tooth substance brought about by a chemical process that involves bacterial action;
- b) irreversible loss of tooth substance brought about by a chemical process that does not involve bacterial action;
- c) physical wear of tooth substance produced by something other than tooth-to-tooth contact;
- d) wear of the tooth as a result of tooth-to-tooth contact.

The correct answer is:

- A.** 1-d, 2-c, 3-b, 4-a.
- B.** 1-a, 2-b, 3-c, 4-d.
- C.** 1-b, 2-a, 3-d, 4-c.
- D.** 1-d, 2-b, 3-c, 4-a.
- E.** 1-c, 2-d, 3-b, 4-a.

**Nr 52.** In a chronology of deciduous dentition, typically:

- 1) first teeth to appear are upper central incisors;
- 2) normal sequence of milk teeth are: central incisors, lateral incisors, canines, first molars, second molars;
- 3) the roots completion finishes at the age of 12 months;
- 4) hard tissue formation of the maxillary central incisors starts in the fourth month of fetal life;
- 5) upper and lower canines start their eruption in the same time.

The correct answer is:

- A.** 1,2.
- B.** 2,3.
- C.** 3,4.
- D.** 4,5.
- E.** 1,5.

**Nr 53.** In a chronology of permanent dentition, typically:

- A.** time of eruption of permanent teeth is the same in girls and boys.
- B.** premature loss of primary teeth accelerates the eruption of permanent successors.
- C.** maxillary canines usually start their eruption before the second premolars.
- D.** mandibular canines usually erupt before the maxillary ones.
- E.** mineralization of the first molars takes place in the second year of life.

**Nr 54.** During sedation with nitrous oxide:

- 1) patient is awake;
- 2) gag reflex is reduced;
- 3) patient does not respond to commands;
- 4) skin colour is grey;
- 5) there is no need for local anaesthesia.

The correct answer is:

- A.** 1,2.
- B.** 2,3.
- C.** 3,4.
- D.** 4,5.
- E.** 1,5.

**Nr 55.** Intraligamentary anaesthesia:

- 1) is recommended especially in children;
- 2) is safer as it does not induce systemic complications;
- 3) demands the use of bigger amounts of local anaesthetic solution compared with conventional methods;
- 4) acts quicker compared with infiltration;
- 5) results in weaker soft tissue anaesthesia compared with regional block injection.

The correct answer is:

- A.** all of the above.      **B.** 1,2,5.      **C.** 1,3,4.      **D.** 2,4,5.      **E.** 4,5.

**Nr 56.** A 8-year-old boy comes to the dental surgery. Two hours before, he had an accidental injury to the upper, left central incisor. In clinical investigation, one can find the enamel and dentine fractured, and the pulp exposed. The diameter of the exposure is less than 1 mm, no bleeding. The reaction to stimuli is normal. X-ray image is in accordance with standards of the age. The treatment of choice will be:

- A.** temporary filling and observation.
- B.** direct pulp capping and cosmetic restoration.
- C.** amputation of the coronal pulp and cosmetic restoration.
- D.** pulp extirpation and standard root canal treatment.
- E.** extraction and orthodontic or prosthetic treatment.

**Nr 57.** A 11-year-old girl comes to the dental surgery. Six hours before, she received an injury falling down the stairs at school. The radiographic examination revealed that the development of the roots of the incisors have been finished, but the root of the tooth 11 has been fractured in  $\frac{1}{2}$  of its length. In clinical investigation the tooth is slightly moving, the reaction of pulp to cold stimuli is present. The treatment of choice will be:

- A.** exclusion from the bite and observation.
- B.** splinting the teeth for up to 4 weeks and observation.
- C.** splinting the teeth for up to 8-12 weeks and observation.
- D.** immediate extirpation of the pulp and splinting for up to 4 weeks.
- E.** extraction of the coronal fraction and extrusion of the remaining part of the tooth.

**Nr 58.** A 5-year-old girl comes to the dental surgery with a pain of tooth 75. The pain is spontaneous and has persisted for 2 days. In clinical investigation one can find a deep carious lesion. During the preparation of the cavity pulp exposure occurs. The pulp responds to the stimuli and is slightly bleeding. No radiographic changes. No medical history. The treatment will be:

- A.** temporary filling and observation.
- B.** indirect pulp capping and restoration.
- C.** direct pulp capping and restoration.
- D.** amputation of the pulp and restoration.
- E.** extraction.

**Nr 59.** Find the **false** statement concerning dental trauma:

- A. boys experience dental trauma almost twice as often as girls.
- B. maxillary central incisors are most commonly involved.
- C. in all luxation injuries the prognosis for pulpal healing is worse in the case of immature apex.
- D. injuries to the permanent dentition occur less often than to the primary dentition.
- E. the prognosis for replantation of avulsed teeth is best if undertaken within half an hour after the injury.

**Nr 60.** A 3-year-old girl comes to the dental surgery with dental injury. The injury took place a few days ago. Her tooth 51 is extruded with the mobility of grade III. The treatment will be:

- A. observation.
- B. reposition, splinting the teeth for 10 -14 days.
- C. reposition, splinting the teeth for 3-4 weeks.
- D. reposition, immediate extirpation of the pulp and splinting the teeth for 3-4 weeks.
- E. extraction.

**Nr 61.** Pulp canal obliteration:

- 1) causes a reduction of pulp response to vitality tests;
- 2) is more common in immature teeth after trauma than in developed ones;
- 3) is more common in concussion than in luxation injuries;
- 4) is a contraindication to root canal treatment;
- 5) proves the pulp necrosis.

The correct answer is:

- A. 1,2.                    B. 2,3.                    C. 1,4.                    D. 4,5                    E. 1,5.

**Nr 62.** Delayed tooth eruption can be seen in:

- 1) Down syndrome;
- 2) Turner syndrome;
- 3) cleidocranial dysplasia;
- 4) Ellise-van Creveld syndrome;
- 5) Hallermann-Streiff syndrome.

The correct answer is:

- A. only 1.                B. 1,2.                    C. 1,2,3.                D. 1,2,3,4.             E. all of the above.

**Nr 63.** "Rootless teeth" occur in:

- A. osteogenesis imperfecta.
- B. dentin dysplasia.
- C. ectodermal dysplasia.
- D. amelogenesis imperfecta.
- E. vitamin-D resistant rickets.

**Nr 64.** A six-year-old boy comes to the dental surgery complaining of a "swelling of the right cheek". He has been suffering from headache, vomiting and fever (up to 39 degrees) for 3 days. The pain inhibits his eating and head movements. In clinical investigation one can find redness and dryness of the mucous membrane. Probably he suffers from:

- A. difficulty in eruption of first molar.    B. mucocele.    C. sialolithiasis.    D. mumps.    E. cancer.

**Nr 65.** Epstein-Barr virus is a causal agent in etiology of:

- A. mumps.    B. mononucleosis.    C. measles.    D. rubella.    E. herpangina.

**Nr 66.** "It is a congenital jaw abnormality. The characteristic fullness of the cheeks and jaws is caused by the overgrowth of the maxillary, mandibular and zygomatic bones. Children are born with no symptoms, the initial presentation is common between two and four years of age. The changes actively grow to puberty. Radiographic radiolucencies of the mandible show irregular shapes in the initial stage of the disease". The anomaly is called:

- A. ameloblastoma.    D. Melkersson-Rosenthal syndrome.  
B. acromegaly.    E. Albright syndrome.  
C. cherubism.

**Nr 67.** Which of the features below **is not** characteristic of Down syndrome?

- A. tendency to breathe through the mouth.    D. crowding.  
B. macroglossia.    E. oligodontia.  
C. high level of caries.

**Nr 68.** A 4-year-old boy comes to the dental surgery. He doesn't want to eat and he has been vomiting for a few days. The biggest concern is a gingival bleeding and a persistent fever (about 37 °C) that has lasted for several weeks. The skin is very pale and the boy seems to be sleepy. In clinical investigation one can find: bruises in mouth, gingival bleeding and pallor, the enlargement of nodes. The child probably suffers from:

- A. difficulties in tooth eruption.    D. haemophilia.  
B. leukaemia.    E. viral hepatitis.  
C. mercury poisoning.

**Nr 69.** Amalgam material:

- A. is the most technique sensitive material of all currently available restorative material.  
B. undergo a big dimensional change during hardening.  
C. one of the aims of its condensation is to incorporate the excess of mercury.  
D. microleakage formed during its hardening is smaller compared with the one of composite materials.  
E. is the least brittle restorative material.

**Nr 70.** Find the **false** statement concerning fluoride:

- A. ingested fluoride is secreted into saliva.  
B. ingestion of fluoridated water during the adulthood decreases the prevalence of caries.  
C. the process of remineralization of demineralised enamel makes tooth tissue more resistant to acid attacks than the healthy tissue is.  
D. occlusal surfaces benefit the most from fluoridation.  
E. communal fluoridation is more beneficial in countries with high incidence of caries.

**Nr 71.** Which of the following sentences concerning topical application of fluoride is true:

- A. is not recommended in the absence of dental caries.
- B. fluoride varnish is present on the tooth surface for up to several days and releases fluoride continuously.
- C. fluoride varnish should be applied only to the permanent teeth.
- D. rinsing after an application does not reduce fluoride ingestion.
- E. fluoride varnishes are not as safe as foams in dental caries prevention in children.

**Nr 72.** In a home oral hygiene:

- A. in all cases electric toothbrushes demonstrate greater efficacy than manual ones.
- B. through toothbrushing twice a day exclude the demand for flossing.
- C. use of liquid dentifrices in children can be a substitute for toothbrushing.
- D. no simple relationship exists between the level of oral hygiene and the prevalence of caries.
- E. hard toothbrush is recommended in very young children.

**Nr 73.** Match the method of toothbrushing to its description:

- |                                 |                                |
|---------------------------------|--------------------------------|
| 1) roll method;                 | 3) Charter's method;           |
| 2) horizontal scrubbing method; | 4) modified Stillman's method. |

- a) the brush is placed at the mucogingival line, with the bristles pointed to the roots. The handle is rotated toward the crown and vibrated as the brush is moved along;
- b) the brush is placed in the vestibule, the bristles ends directed apically, with the sides of the bristles touching the gingival tissue. Then the brush is moved with along the rolling motion;
- c) the ends of the bristles are placed in contact with the enamel of the teeth and the gums, with the bristles pointed at about 45 degree angle toward the plane of the occlusion. The brush is vibrated gently forth and back a millimeter or so;
- d) the brush is placed horizontally on the buccal and lingual surfaces and moved forth and back ten times at one spot performing scrubbing motions.

The correct answer is:

- |                        |                        |
|------------------------|------------------------|
| A. 1-b, 2-c, 3-d, 4-a. | D. 1-d, 2-b, 3-a, 4-c. |
| B. 1-a, 2-b, 3-c, 4-d. | E. 1-c, 2-d, 3-a, 4-b. |
| C. 1-b, 2-d, 3-c, 4-a. |                        |

**Nr 74.** "Chronic deficiency of the vitamin can result in the condition known as pernicious anemia, which is characterized by large, immature blood cells. Additional manifestations are atrophic gastritis peripheral nerve degeneration. Oral manifestations include oral soreness and atrophic glossitis". The description concerns:

- A. vitamin A.      B. vitamin B<sub>12</sub>.      C. vitamin C.      D. vitamin D.      E. vitamin PP.

**Nr 75.** Calculate a maximum dose of Lidocaine that can be safely given to a child weighted 20 kg knowing that one ampoule contains 2 ml of 2% Lidocaine solution. The number of ampoules is:

- A. 0,5.      B. 1.      C. 2.      D. 3.      E. 4.

**Nr 76.** In a prepubertal periodontitis:

- 1) the primary dentition is involved;
- 2) in generalised form, the children are susceptible to otitis media and respiratory tract infections;
- 3) there are no specific micro-organisms involved in the etiology of the disease;
- 4) the age of the first onset is between 11 and 15 years;
- 5) the disease responds well to antibiotics.

The correct answer is:

- A.** 1,2.            **B.** 2,3.            **C.** 3,4.            **D.** 4,5.            **E.** 1,5.

**Nr 77.** The indication(s) for pulpotomy in a permanent tooth with an exposure of the pulp after trauma is/are:

- 1) reporting longer than 48 hours after the injury;
- 2) large loss of crown preventing temporary filling or restoration;
- 3) pulpitis limited to the crown;
- 4) closed apex of the root;
- 5) pulp necrosis.

The correct answer is:

- A.** all of the above.    **B.** 1,2,3.    **C.** 1,3,4.    **D.** 1,2,4.    **E.** only 5.

**Nr 78.** Find the **false** statement concerning supernumerary teeth:

- A.** occur more often in boys than in girls.  
**B.** in many cases the familial pattern of an occurrence is present.  
**C.** the one between the upper incisors is called mesiodens.  
**D.** they may cause a delayed eruption of adjacent teeth.  
**E.** occur more often in primary than permanent dentition.

**Nr 79.** Which of the symptoms are characteristic of children with a cleft lip and cleft palate?

- 1) frequent middle ear infections;
- 2) higher incidence of congenitally absent teeth;
- 3) supernumerary teeth;
- 4) higher prevalence of caries;
- 5) posterior crossbite.

The correct answer is:

- A.** all of the above.    **B.** 1,3,4,5.    **C.** 2,4,5.    **D.** 1,4,5.    **E.** only 4.

**Nr 80.** Mucocele:

- 1) is a result of injury to minor salivary glands;
- 2) might be caused by sialolithiasis in the sublingual gland;
- 3) most often appears in the sublingual area;
- 4) is painless and soft;
- 5) resolves spontaneously.

The correct answer is:

- A.** all of the above.    **B.** 2,3,4,5.    **C.** 2,3,4.    **D.** 1,4,5.    **E.** 1,4.

**Nr 81.** In the anatomy of primary dentition:

- 1) upper central incisor has the longest root of all one-rooted teeth;
- 2) lateral lower incisor is bigger than a central one;
- 3) lower second molar usually has two roots;
- 4) mandibular canine is bigger than its maxillary opponent;
- 5) first upper molar usually has two roots.

The correct answer is:

- A.** 1,2.                    **B.** 2,3.                    **C.** 3,4.                    **D.** 4,5.                    **E.** 1,5.

**Nr 82.** Post surgical radiotherapy in craniofacial cancers is applied if:

- A.** there is no metastasis in the excised lymph nodes.  
**B.** tumor is differentiated.  
**C.** tumor excision is complete.  
**D.** tumor is multifocal.  
**E.** none of the above.

**Nr 83.** Anaesthesia of inferior alveolar nerve near the mandibular foramen is applied in:

- A.** inframandibular space.                    **D.** buccal space.  
**B.** parapharyngeal space.                    **E.** there is no specific name of this space.  
**C.** pterygomandibular space.

**Nr 84.** The most often localisation of ameloblastoma is the area of:

- A.** body of mandible.                    **D.** frontal teeth in the maxilla.  
**B.** maxillary tuber.                    **E.** the answer A and C are correct.  
**C.** angle of mandible.

**Nr 85.** Maximum single anaesthetic doses of 2% lidocaine (2% LA) and 2% lidocaine with noradrenaline (2% LA + Nor) are:

- A.** 10 ml 2 % LA ; 25 ml 2 % LA + Nor.    **D.** 100 ml 2 % LA ; 75 ml 2 % LA + Nor.  
**B.** 25 ml 2 % LA ; 10 ml 2 % LA + Nor.    **E.** 17.5 ml 2 % LA ; 25 ml 2 % LA + Nor.  
**C.** 2.5 ml 2 % LA ; 1.0 ml 2 % LA + Nor.

**Nr 86.** Which of the following signs and symptoms **are not** characteristic of clinical presentation of acute osteomyelitis of the maxilla:

- 1) suppurative discharge from the gingival pockets in the affected area;
- 2) presence of the sinus tracts;
- 3) acute local lymphadenitis;
- 4) lockjaw;
- 5) areas of thickening and thinning of the bone structure on the x-ray image.

The correct answer is:

- A.** 1,3,4.                    **B.** 2,4.                    **C.** 3,4,5.                    **D.** 1,2,5.                    **E.** 2,3,5.

**Nr 87.** Which of the following diseases **is not** an indication to use antibiotics as premedication before extraction of the teeth with gangrene inside?

- A. inflammation of eye ball and eye nerve.      D. glomerulonephritis.  
B. malignant hypertension.                              E. rheumatoid arthritis.  
C. endocarditis and myocarditis.

**Nr 88.** Point out the **false** sentences characterizing dentigerous cyst (follicular cyst):

- 1) the cyst is usually associated with the mandibular third molars or maxillary canine teeth;
- 2) it is an odontogenic cyst;
- 3) it's associated with the cemento-enamel junction of unerupted tooth;
- 4) it never displaces adjacent teeth;
- 5) ameloblastoma should be taken into account in clinical differentiation.

The correct answer is:

- A. 1,3.                      B. 2,4.                      C. 3,5.                      D. only 2.                      E. only 4.

**Nr 89.** Indications for the resection of the tooth root apex include:

- 1) root cyst which does not cover 1/3 of the root length;
- 2) root cyst which covers more than 1/3 of the root length;
- 3) perforation of a single-rooted tooth at 1/2 of the root length during endodontic treatment;
- 4) transversal root fracture at apical third in the vital tooth, without fragment dislocation;
- 5) transversal root fracture at apical third in the non-vital tooth.

The correct answer is:

- A. 1,4,5.      B. 2,3,5.      C. all of the above.      D. 1,5.      E. 2,4,5.

**Nr 90.** Vincent's sign refers to:

- A. lingual nerve.                                              D. hypoglossal nerve.  
B. mental nerve.                                              E. all the mentioned nerves.  
C. interior alveolar nerve.

**Nr 91.** Choose the correct sentences concerning the canine fossa abscess:

- 1) it is caused by pathological process occurring near the canine and first premolar;
- 2) it does not change the face outline;
- 3) local anesthesia is usually sufficient to perform incision of the abscess;
- 4) it can be complicated with orbital phlegmon and sinusitis of the cavernous sinus;
- 5) because of the content of the canine fossa, the abscess at its initial stage is never subperiosteal abscess.

The correct answer is:

- A. all of the above.      B. 1,3,4.      C. 1,3,5.      D. 1,2,4.      E. 1,4,5.

**Nr 92.** Choose the true sentences concerning Costen's syndrome:

- 1) it is caused by anterior translocation of the head of the mandible;
- 2) lowering of the vertical dimension of occlusion restores the normal conditions in the temporomandibular junction;
- 3) tinnitus is caused by the pressure on the anterior tympanic artery;
- 4) pharmacological treatment includes phenytoin, clonazepam, carbamazepinum;
- 5) increase of the vertical dimension of occlusion is the basic therapeutic procedure.

The correct answer is:

- A.** 1,2,4.    **B.** none of the above.    **C.** 1,3,4.    **D.** 2,3,4.    **E.** 3,4,5.

**Nr 93.** Choose the true sentences concerning actinomycosis:

- 1) in its peripheral form it spreads into the bone from surrounding soft tissues. The infections spreads through Haversian canals into the spongy bone. In clinical examination: the presence of the sinus tracts and, characteristically, no periosteal reaction;
- 2) its granulomatous form is characterized by granulomas that destroy bone tissues. This leads to cystic translucencies seen on x-ray;
- 3) in its suppurative and granulomatous form it should be treated surgically in addition to antibiotics. The surgery shortens significantly (by up to several weeks) the time needed for the treatment with antibiotics;
- 4) it is rarely accompanied by systemic complications; the local ones (like mandible fracture) occur more frequently;
- 5) material for histopathological examination may be obtained from the sinus tract fluid. The biopsy of the infected bone or soft tissue should not be performed.

The correct answer is:

- A.** 2,3,4.    **B.** 2,3,5.    **C.** all of the above.    **D.** 1,4.    **E.** 1,2,5.

**Nr 94.** Choose the true sentences concerning phlegmon:

- 1) it is deep diffused acute purulent infection of the loose connective tissue covering more than one interfascial spaces;
- 2) it is characterized by quick spreading but without crossing the limits of the interfascial spaces;
- 3) it is related to severe general condition of the patient, high temperature and chills;
- 4) it is not accompanied by the lockjaw but there may appear obstructive dyspnoea or a pain on swallowing;
- 5) in its treatment wide drainage of the pus may be necessary but counter incisions are not recommended.

The correct answer is:

- A.** 1,5.    **B.** 2,5.    **C.** 1,3.    **D.** 2,4.    **E.** 4,5.

**Nr 95.** The capacity of the maxillary sinus is:

- A.** 10 cm<sup>3</sup>.    **B.** 20 cm<sup>3</sup>.    **C.** 30 cm<sup>3</sup>.    **D.** 40 cm<sup>3</sup>.    **E.** 50 cm<sup>3</sup>.

**Nr 96.** The fractures of the mandible are most often located in the region:

- A. of the canine and premolar teeth.      D. of the condylar process.  
B. of the angle of the mandible.      E. of the middle line of mandible.  
C. of the molar teeth.

**Nr 97.** Indicate the correct physical description of the papule:

- A. circumscribed area of changed color but without elevation.  
B. large palpable mass, elevated above the epithelial surface.  
C. small palpable mass, elevated above the epithelial surface.  
D. small loculation of fluid in or under the epithelium.  
E. none of the mentioned above.

**Nr 98.** The minimal distance required between an implant and the interior alveolar canal is:

- A. 0.5 mm.      B. 1 mm.      C. 1.5 mm.      D. 2 mm.      E. 3 mm.

**Nr 99.** After administering Lidocaine, pulpal anaesthesia of the maxillary teeth is expected to last for:

- A. 10-20 min.      B. 30-40 min.      C. 50-60 min.      D. 90-100 min.      E. 3 hrs.

**Nr 100.** The instrument most commonly used for removing sharp bone edge is:

- A. Liston forceps.      D. sharp periosteal elevator.  
B. Luer forceps.      E. none of the mentioned above.  
C. chisel and mallet.

**Now, take the other answer ticket in order to mark the answers  
to questions 101 - 200.**

**Nr 101.** Minimal integration time of an implant placed in the anterior mandible is:

- A. 2 months.      B. 3 months.      C. 4 months.      D. 5 months.      E. 6 months.

**Nr 102.** Most commonly, odontogenic infections are caused by:

- A. aerobic Staphylococci.      D. anaerobic and aerobic Streptococci.  
B. aerobic Streptococci.      E. anaerobic Streptococci.  
C. anaerobic and aerobic Staphylococci.

**Nr 103.** Choose the correct stabilization period in the case of root fracture:

- A. 7-10 days.      B. 1-2 weeks.      C. 3-4 weeks.      D. 2-4 months.      E. 5-6 months.

**Nr 104.** A 22-year-old patient has reported with pain in the region of the lower second and third molar and acute inflammation of the soft tissue surrounding the crown of a partially erupted tooth. The best treatment would be:

- A. to extract the lower third molar.
- B. to apply antibiotics.
- C. to excise the surrounding tissue in order to settle the infection.
- D. to apply local irrigation without antibiotics.
- E. to remove the lower third molar after settling the infection.

**Nr 105.** The usual dose for oral administration of Clindamycin in a 7-year-old child is:

- A. 300 mg every 8 h.
- B. 300 mg every 6 h.
- C. 150 mg every 8 h.
- D. 500 mg every 8 h.
- E. 600 mg every 8 h.

**Nr 106.** From the maxillary canine and premolar, infections typically spread to the following space:

- A. palatal.
- B. submaxillary.
- C. buccal.
- D. parapharyngeal.
- E. submandibular.

**Nr 107.** Primary eruptions **do not** include:

- A. pustules.
- B. abrasions.
- C. squamae.
- D. stains.
- E. bullae.

**Nr 108.** Which of the following diseases is **not caused** by DNA virus:

- A. Varicella.
- B. Burkitt's lymphoma.
- C. hand, foot and mouth disease.
- D. hairy leukoplakia.
- E. Vulgaris verruca (common wart).

**Nr 109.** Which of the following **doesn't** belong to precancerous states with moderate risk of neoplasmal transformation (acc. to Gwieździński's classification)?

- A. lichen planus.
- B. leukoplakia.
- C. lip diseases.
- D. ulcerations.
- E. xeroderma pigmentosum.

**Nr 110.** Which antibiotic should be given before curettage to a patient with infectious endocarditis with history positive for penicillin shock:

- A. amoxicillin.
- B. ampicillin.
- C. clindamycin.
- D. spiramycin.
- E. tetracycline.

**Nr 111.** Which statement concerning leucotoxin **is not** true?

- A. it is an endotoxin.
- B. it is an exotoxin.
- C. it is released by *Actinobacillus actinomycetemcomitans*.
- D. it is capable of destroying leucocytes and monocytes.
- E. it inhibits chemotaxis.

**Nr 112.** Aggressive periodontitis is characterized by:

- A. correct phagocytosis.
- B. presence of tooth deposits.
- C. presence of coexisting diabetes.
- D. presence of *Actinobacillus actinomycetemcomitans* in periodontal tissues.
- E. presence of *Treponema denticola*, *Porphyromonas gingivalis* and *Actinobacillus actinomycetemcomitans* in periodontal tissues.

**Nr 113.** The aim of surgical treatment in periodontal therapy is:

- A. elimination of inflammation.
- B. reduction of PD (pocket depths).
- C. better tooth root surfaces cleaning.
- D. rebuilding of the attachment of connective tissue.
- E. all the answers are correct.

**Nr 114.** The examination which unambiguously confirms pemphigus is:

- A. anti-pemphigus antibodies presence in the blood.
- B. anti-pemphigus antibodies presence in the tissue.
- C. positive result of Tzanck Test.
- D. positive result of Nikolski test.
- E. answers A and B are correct.

**Nr 115.** In which of following conditions there **is no** endemic incidence?

- A. Behçet syndrome.
- B. Zahorsky's herpangina.
- C. Delbanco disease.
- D. answers A and B correct.
- E. answers B and C correct.

**Nr 116.** Point the **false** phrase regarding periodontium:

- A. it's wider near the tooth neck than in the middle section of the dental root.
- B. periodontium of the tooth lacking its antagonist is wider than that of the tooth taking part in mastication.
- C. periodontium gets narrower with age.
- D. occlusal trauma may cause periodontium to widen.
- E. main ingredients of periodontium are collagen fibers.

**Nr 117.** In subgingival plaque:

- A. bacteria represent 50 percent of the composition.
- B. matrix represents 30 percent of the composition.
- C. mobile bacteria are in the majority.
- D. carbohydrate metabolism prevails.
- E. there is a low diversity of bacterial species.

**Nr 118.** Which of the following pathogens **do not** belong to orange bacterial complex?

- A. *Eikenella corrodens*.
- B. *Fusobacterium nucleatum*.
- C. *Prevotella intermedia*.
- D. *Campylobacter rectus*.
- E. all the above-mentioned belong.

**Nr 119.** Open curettage differs from closed curettage in:

- A. cleaning the gingival wall of periodontal defect.
- B. cutting the interdental papilla.
- C. root cementum smoothing.
- D. using the surgical dressing.
- E. rinsing with 0.9% NaCl.

**Nr 120.** In a patient with CAL in 34% of probed sites, with highest CAL value equaling 6 mm in tooth 16 (mesio-buccal point), chronic periodontitis should be classified as:

- A. mild.
- B. generalized.
- C. localized mild.
- D. generalized severe.
- E. too little data to establish diagnosis.

**Nr 121.** In orthodontic practice the extraction of teeth is possible in cases involving:

- A. treatment of deep bites.
- B. aesthetic indications.
- C. lack of space up to 4 mm.
- D. protrusion of both lips before the aesthetic line.
- E. oligodontia.

**Nr 122.** Maxilla develops from the fusion of:

- A. two mandibular processes.
- B. maxillary processes with the frontal process.
- C. nasal septum and tongue.
- D. maxillary processes with medial nasal processes.
- E. palatal processes and nasal septum.

**Nr 123.** Heterotopia is a distortion characterised by:

- A. buccal deflection of a tooth.
- B. non-physiological fusion of the tooth with the alveodental membrane.
- C. acceleration of tooth eruption.
- D. pathological position of tooth bud.
- E. resorption of roots in primary dentition.

**Nr 124.** Insufficiency in lip connecting can be diagnosed when the following symptoms occur:

- A. hypertension of lip muscles.
- B. prints of the lingual surfaces of the teeth on the lateral surfaces of the tongue.
- C. excessively elongated maxillary facial segment.
- D. position of the tongue between the dental arches while swallowing.
- E. lingual tipping of the lower incisors towards the tongue.

**Nr 125.** Optimal magnitude of force per unit of root surface which is necessary to move the root of a big tooth is:

**A.** 20-50 g/cm<sup>2</sup>. **B.** 40-50 g/cm<sup>2</sup>. **C.** 50-75 g/cm<sup>2</sup>. **D.** 120-150 g/cm<sup>2</sup>. **E.** 15-20 g/cm<sup>2</sup>.

**Nr 126.** Labial bows in Klammt activator, depending on the type of malocclusion treated,

**A.** protect the teeth from lip pressure. **D.** cause the expansion of the upper arch.  
**B.** prevent mouth breathing. **E.** separate the tongue from the teeth.  
**C.** tip the molars lingually.

**Nr 127.** Orthopantomogram enables:

**A.** determination of the actual (veritable) centre of mandible.  
**B.** assessment of impacted tooth topography.  
**C.** evaluation of the skeletal structures against the background of soft tissues.  
**D.** attainment of an image in every plane possible.  
**E.** evaluation of bone tissue structure.

**Nr 128.** During the analysis of diagnostic dental casts in relation to the sagittal plane we evaluate:

**A.** location of the skeletal mandibular midline. **D.** symmetry of the dental arch.  
**B.** length of the dental arch. **E.** supraposition of teeth.  
**C.** teeth height.

**Nr 129.** According to Ricketts the profile analysis makes use of:

**A.** orbital plane of Simon. **D.** aesthetic line.  
**B.** additional plane going through point *nasion*. **E.** midline.  
**C.** plane going through point *glabella*.

**Nr 130.** The retardation of eruption or the retention of the teeth are most frequently seen in:

1) first permanent molars; 4) lower lateral incisors;  
2) canines; 5) second upper premolars.  
3) medial upper incisors;

The correct answer is:

**A.** 2,3. **B.** 1,4. **C.** 2,5. **D.** 4,5. **E.** 1,5.

**Nr 131.** Sucking reflex expires physiologically at the end of:

**A.** 1 year of age. **D.** 40 month of age.  
**B.** 6 month of age. **E.** 18 month of age.  
**C.** between 8 and 10 month of age.



**Nr 138.** Adult type of swallowing can be recognized by:

- 1) position of the tongue in relation to the dental arches;
- 2) contraction of the mylohyoid muscle;
- 3) hypertonia of the lip and cheek muscles;
- 4) keeping freely air in the mouth;
- 5) touching the chin and left and right corner of the mouth with the tongue.

The correct answer is:

- A.** 1,2.                    **B.** 3,5.                    **C.** 1,4.                    **D.** 2,3.                    **E.** 4,5.

**Nr 139.** Analysis of diagnostic dental casts positioned in the habitual occlusion relies on:

- 1) evaluating the course of the dental arch midline;
- 2) measuring the width between I upper premolars;
- 3) analysis of Angle classes;
- 4) measurements of the dental arch length;
- 5) measurements of the posterior width of the dental arch.

The correct answer is:

- A.** 1,2.                    **B.** 1,3.                    **C.** 1,4.                    **D.** 3,4.                    **E.** 1,4.

**Nr 140.** Distocclusions are characterized by:

- A.** increased width of the maxilla.
- B.** suppression of the mandibular growth in three directions.
- C.** face asymmetry.
- D.** overbite in the region of the incisors.
- E.** regressed upper lip.

**Nr 141.** The masticatory system consist of:

- |                                                     |                     |
|-----------------------------------------------------|---------------------|
| 1) jaw, mandible;                                   | 4) lips, cheeks;    |
| 2) teeth;                                           | 5) tongue;          |
| 3) temporomandibular joint and cooperating muscles; | 6) salivary glands. |

The correct answer is:

- A.** all of the above.    **B.** 1,2,3,4.    **C.** 2,4,5,6.    **D.** 1,2,3,5.    **E.** 1,3,5.

**Nr 142.** The ligament position is the position of the condyles in the temporomadibular joint:

- A.** during any border movement.
- B.** when the mandible is in the maximal retrusion.
- C.** when the mandible is in the maximal lateral movement.
- D.** when the mandible is in the maximal protrusion.
- E.** none of the above.

**Nr 143.** Vertical dimension of the rest position should be measured between:

- A. subnasal and gonion points.
- B. subnasal and pogonion points.
- C. nasal and gonion points.
- D. nasal and pogonion points.
- E. none of the above.

**Nr 144.** Mandibular fossa in the neonatal period is:

- A. completely shaped.
- B. convex.
- C. a circular sector.
- D. almost flat.
- E. none of above.

**Nr 145.** The curve of Spee in the neonatal period:

- A. is a circular sector with a centre in the orbit.
- B. is a flat line.
- C. is 20,42 in diameter.
- D. is a circular sector with a centre in the head of the mandible.
- E. A and C are correct.

**Nr 146.** The masticatory movements in the development and maturation of the stomatognathic system:

- A. remain unchanged.
- B. change periodically and always return to the initial state.
- C. become individualized with time.
- D. can change depending on e.g. the type of food.
- E. C and D are correct.

**Nr 147.** The counterpart of Bennett movement on the non-working side is:

- A. laterotrusion.
- B. mediotrusion.
- C. Bennett angle.
- D. immediate side shift.
- E. condylar movement path.

**Nr 148.** Which of the following materials can be used for eliminating direct undercuts on gypsum models during the fabrication of removable partial dentures:

- A. base plate wax.
- B. zinc oxide+eugenol impression paste.
- C. dental cements.
- D. casting wax.
- E. impression gypsum.

**Nr 149.** Which of the following procedures is performed correctly?

- A. impression of the maxilla with epulis fissuratum using impression wax.
- B. impression for a tooth crown using alginate impression material.
- C. central occlusion registration in an edentulous patient using occlusion rims with the base made of modeling wax.
- D. occlusal vertical dimension registration in semi-supine position of the patient.
- E. making impression on composite impression tray in an edentulous patient.

**Nr 150.** What is the optimal method of communication with dental laboratory regarding the neutral zone and artificial teeth arrangement in this zone?

- A. verbal information, that the patient has a big tongue and the lateral teeth should be moved buccally and the front teeth labially.
- B. verbal information, that the patient has a small tongue and lateral teeth should be moved lingually.
- C. verbal information with a recommendation that the teeth should be set on the crest of the ridge.
- D. sending functional, closed mouth mandible impression made on the occlusion rim with additional registration.
- E. sending functional, myodynamic, open-mouth impression.

**Nr 151.** An edentulous patient, qualified for implant treatment has initial resorption of the base of the upper dental arch. According to Lekholm and Zarb classification this case should be classified as:

- A. class A.
- B. class B.
- C. class C.
- D. class D.
- E. class E.

**Nr 152.** What is the optimal taper of a preparation of the lateral tooth for a crown:

- A. parallel walls.
- B. 2.5°-6.5° of convergence.
- C. 10° of convergence.
- D. 15° of convergence.
- E. 30° of convergence.

**Nr 153.** While checking a trial denture the prosthodontist finds the adequate arrangement of teeth in the median line and the proper location of the upper occlusal plane, but a decrease in the occlusal height by 2 mm and the occlusal contact only in the region of teeth 41-47 and 37-35. The prosthodontist should:

- A. ask a dental technician to make the occlusal rim once again, and reestablish the centric occlusal position of the mandible.
- B. place a wax record between the dental arches and - while controlling the occlusal height - ask the patient to close his/her mouth with simultaneous saliva swallowing.
- C. rearrange teeth 31-34 to achieve the contact with the opposing teeth.
- D. rearrange all the lower teeth.
- E. remove teeth 41-47 and 37-35 and replace them with a bite rim, plasticise it and - while controlling the occlusal height - ask the patient to close his/her mouth with simultaneous saliva swallowing.

**Nr 154.** The patient presents with missing teeth 34-35. The prosthodontist can perform the restoration of the missing teeth by preparing a fixed bridge supported on abutments 33 and 36 and made of:

- A. feldspathic ceramics used in the sintering technology.
- B. leucite ceramics used in the CAD/CAM technology.
- C. lithium disilicate ceramics used in the pressing technique.
- D. aluminium trioxide ceramics used in sintering technology.
- E. zirconium dioxide ceramics in the CAD/CAM technology.

**Nr 155. Contraindications** to constructing an adhesive bridge to restore missing tooth 22 in a patient are the following:

- 1) lack of space in the occlusion;
- 2) open bite;
- 3) anatomically large and intact adjacent teeth;
- 4) 25-year-old patient;
- 5) mobility of tooth 23.

The correct answer is:

- A. 2,4.            B. 1,2.            C. 1,3.            D. 4,5.            E. 1,5.

**Nr 156.** Bennet angle is:

- A. angle formed between the condyle path during mandible protrusion and the path of condylar lateral movement on the balancing side, in the sagittal plane projection.
- B. angle formed between the condyle path during mandible protrusion and the path of condylar lateral movement on the balancing side, in the horizontal plane projection.
- C. angle formed between the condyle path during mandible protrusion and the path of condylar lateral movement on the balancing side, in the frontal plane projection.
- D. angle between the Camper's plane and the mandibular head path during protrusion or abduction in the sagittal plane projection.
- E. angle between the Camper's and Frankfort planes in the sagittal plane projection.

**Nr 157.** In the period of adaptation to complete dentures a patient reports speech disorders. These symptoms can signify the following:

- 1) elevated occlusion;
- 2) improper determination of the occlusal plane;
- 3) occlusal overloading;
- 4) inadequate shape of the upper plate of the denture;
- 5) position of the teeth too far forward or too far back in relation to the alveolar process.

The correct answer is:

- A. 1,2,4.            B. 2,4,5.            C. 1,3,4.            D. 1,4,5.            E. 1,3,5.

**Nr 158.** An edentulous patient comes to the dental office complaining of a pain while wearing the complete upper denture. The dental history shows that the denture was delivered five years ago and the pain started three weeks ago. Clinical examination finds the smooth and fragile mucosa in the whole region under the plate of the denture. What kind of treatment will you propose?

- 1) indirect relining with hard acrylic material;
- 2) direct relining with hard acrylic material;
- 3) relining with tissue conditioner material;
- 4) new denture fabrication after the healing of the oral mucosa.

The correct answer is:

- A. only 1.            B. 1,4.            C. 2,4.            D. 3,4.            E. only 3.

**Nr 159.** During the fabrication of immediate dentures, the Reichenbach method of master cast trimming is indicated in the case of teeth extraction with:

- A. vestibular bony plate removal.
- B. pathological gingival pockets.
- C. minor alveolar crests smoothing.
- D. radical alveolar surgery.
- E. interdental septa alveotomy.

**Nr 160.** Physiological mobility was diagnosed during clinical evaluation of tooth number 12. One can define it as:

- 1) grade I according to Kantorowicz;
- 2) grade II according to Kantorowicz;
- 3) grade 0 according to Entin;
- 4) grade I according to Entin;
- 5) grade 0 according to Mühlemann;
- 6) grade I according to Mühlemann.

The correct answer is:

- A. 1,3,6.
- B. 2,4.
- C. 1,5.
- D. 3,5.
- E. 1,3.

**Nr 161.** The processing method of IPS-Empress ceramic utilizes:

- A. ceramization.
- B. synterization.
- C. CAD/CAM technology.
- D. infiltration.
- E. none of the above.

**Nr 162.** KaVo Everest system enables the application of:

- A. titanium.
- B. zirconium dioxide in soft form.
- C. zirconium dioxide in hard form.
- D. zirconium dioxide in silicate form.
- E. all the answers are correct.

**Nr 163.** KaVo Everest system utilizes:

- A. mechanical scanner.
- B. optical scanner.
- C. 4-axis milling machine.
- D. answers B, C are correct.
- E. answers A, C are correct.

**Nr 164.** Titanium casting can be performed in:

- A. manual centrifuge.
- B. mechanical centrifuge based on the centrifugal force.
- C. vacuum centrifuge in an argon atmosphere.
- D. all the answers are correct.
- E. none of the above.

**Nr 165.** Muscle force on the dentition in the lateral tooth area during mastication amounts to:

- A. 15-40 kg.
- B. 40-50 kg.
- C. 50-80 kg.
- D. 80-100 kg.
- E. 100-120 kg.

**Nr 166.** Which of the following posttraumatic complications of resuscitation are the most frequent?

- A. fracture of the thoracic bones.
- B. pneumothorax.
- C. liver rupture.
- D. Mendelson's syndrome.
- E. burning of the thoracic integument from defibrillation.

**Nr 167.** Which of the following situations **is not** an indication for stopping resuscitation:

- A. return of spontaneous circulation (ROSC) was achieved.
- B. pulseless electrical activity (PEA) was diagnosed.
- C. all the available methods recommended by ERC 2010 were followed and ROSC was not achieved for 30 minutes from the beginning of resuscitation – isoelectric line.
- D. asystole not responding to treatment for 30 minutes.
- E. rescuer exhaustion with the loss of physical capability to continue resuscitation.

**Nr 168.** Defibrillation is the most effective method to treat ventricular fibrillation – especially if performed within the first 5 minutes after the circulatory arrest. How much does the chance of successful defibrillation decrease every minute after the circulation arrest caused by ventricular fibrillation?

- A. by 7-10%.    B. by 15-20%.    C. by 20-30%.    D. by 30-40%.    E. by 40-50%.

**Nr 169.** Which of the following statements concerning basic life support (BLS) is true?

- A. it does not increase the survival.
- B. it slightly increases the survival.
- C. it is an important link of the chain of survival, which increases the survival by 2/3, especially if additionally AED is applied.
- D. it should not be undertaken when defibrillation cannot be performed within 4-5 minutes after a sudden cardiac arrest.
- E. it may be performed only by a certified person.

**Nr 170.** What is the most frequent cause of traumatic pneumothorax?

- A. thorax injury with rib fractures.
- B. catheterization of the central veins as a result of iatrogenic complication.
- C. bronchial asthma and emphysema (COPD).
- D. air cyst of the lung.
- E. staphylococcal pneumonia.

**Nr 171.** Which should be applied first in the case of acute oral poisoning?

- A. activated charcoal.
- B. adrenaline.
- C. laxative.
- D. antidote to the poison.
- E. large amount of fluid to drink.

**Nr 172.** The most effective treatment of carbon monoxide poisoning is:

- A. application of 100% O<sub>2</sub>.
- B. application of mixture of 95% O<sub>2</sub> and 5% CO<sub>2</sub>.
- C. application of mixture of 78% N<sub>2</sub>, 21% O<sub>2</sub> and 1% Ar.
- D. hyperbaric oxygen therapy.
- E. cryotherapy.

**Nr 173.** Neurological evaluation of a patient after trauma reveals a lack of response in the categories of eye opening, verbal and motor response. What is the patient's Glasgow Coma Score?

- A. 0.
- B. 1.
- C. 3.
- D. 4.
- E. 6.

**Nr 174.** The most common type of hepatitis related to blood transfusion is:

- A. A.
- B. B.
- C. C.
- D. D.
- E. E.

**Nr 175.** The most commonly injured abdominal organ in blunt trauma is:

- A. spleen.
- B. liver.
- C. pancreas.
- D. kidney.
- E. stomach.

**Nr 176.** A dentist has been asked to give a speech on the possible uses of a brand new dentist's chair in sacrolumbar pain prevention. According to the Medical Code of Ethics:

- A. he cannot accept this offer.
- B. he can accept the payment as long as it is adequate to the work done.
- C. he can give a speech, but cannot accept the payment.
- D. he must obtain approval of his Regional Medical Chamber.
- E. both C and D are true.

**Nr 177.** A patient clearly declared that he did not want to be informed about the histopathological examination result of his gum biopsy because he was afraid to be diagnosed with cancer. If the pathologist confirms the cancer, the dentist should:

- A. hide the result and not tell the patient.
- B. calm down the patient and show him the result.
- C. send the patient to the oncologist without informing him about his result unless the patient asks for it.
- D. inform the patient's wife about the result.
- E. all of the above are false.

**Nr 178.** The dentist can issue a medical certificate concerning patient's treatment if:

- A. the content of the document is in accordance with his knowledge.
- B. he does not expect any payment for it.
- C. he has an appropriate numbered and registered official form.
- D. he has a sensitive conscience.
- E. all of the above are correct.

**Nr 179.** A dentist publically supported a campaign aimed to collect funds to provide poor children with toothpaste. According to the Medical Code of Ethics:

- A. he had the right to act this way.
- B. he should have got permission to do so from his Regional Medical Chamber.
- C. he could only have made his photo but not his name available for this campaign.
- D. he can do so only if he has been cooperating with the toothpaste manufacturers for many years.
- E. he cannot take part in such campaigns.

**Nr 180.** Good manners accepted by medical society:

- A. belong to the relics of the past in the law-governed state.
- B. have symbolic meaning in the dental profession.
- C. have importance within the range of the Medical Code of Ethics.
- D. are more important than the Code regulations.
- E. provide the guidelines of conduct in situations which are not covered by the law.

**Nr 181.** Access to medical records can be charged if:

- 1) medical records are shared at the premises of a health care facility;
- 2) extracts or copies are prepared by a health care facility;
- 3) an original copy is given for return;
- 4) an electronic extract or a copy is prepared;
- 5) it concerns records older than 10 years.

The correct answer is:

- A. 2,5.                      B. 3,4.                      C. 1,3.                      D. 2,4.                      E. 3,5.

**Nr 182.** A dentist having an individual practice decides to extend the range of health services provided in relation to the data entered in the register maintained by his regional chamber of physicians and dentists.

- 1) he should report to the Chamber within 14 days of the change;
- 2) he does not need to notify the Chamber;
- 3) if he does not notify the Chamber, he is bound to be punished with a fine;
- 4) he should report to the Chamber within 7 days of the change;
- 5) he may notify the Chamber at any time.

The correct answer is:

- A. 1,3.                      B. only 2.                      C. 3,4.                      D. only 5.                      E. only 4.

**Nr 183.** A dentist intends to conduct a medical experiment on his patients with the use of a new dental filling. Before starting this research he should obtain:

- A. Patient Ombudsman's consent.
- B. positive opinion of the ethics committee.
- C. positive opinion of the regional chamber of physicians and dentists committee on medical ethics.
- D. regional chamber of physicians and dentists president's permit.
- E. consent of the director of the Department of Science and Higher Education at the Ministry of Health.



**Nr 189.** Is a person insured in SIF(ZUS) allowed to work for money during the period of receiving sickness benefit owing to temporary incapacity to work?

- A. yes.
- B. no, they are not allowed to work for money.
- C. yes, in 1/3 time capacity.
- D. yes, in 1/2 time capacity.
- E. yes, but with another employer.

**Nr 190.** In accordance with the Law on cash benefits from social insurance in the case of disease and motherhood, the sickness benefit is not vested for the first five days of temporary incapacity to work, an incapacity that was caused by:

- A. tuberculosis.
- B. alcohol abuse.
- C. overdose of psychotropic drugs.
- D. infectious diseases.
- E. accident on the way to work.

**Nr 191.** In accordance with the Law on cash benefits from social insurance in the case of disease and motherhood, if there is a statement of fact that there are irregularities in medical rulings on temporary incapacity to work including issuing them without direct checking on the insured person's condition or without preparing relevant diagnosis documentation, which gives grounds for issuing the rulings, SIF(ZUS) may withdraw its authorization to issue medical rulings for the period from the effective day of the withdrawal of not more than:

- A. 1 month.
- B. 3 months.
- C. 6 months.
- D. 9 months.
- E. 12 months.

**Nr 192.** The form of a medical ruling on temporary incapacity to work is made available only to a doctor holding the authorization to issue medical rulings granted by:

- A. State Insurance Fund (ZUS).
- B. Agricultural State Insurance Fund (KRUS).
- C. State Fund for Rehabilitation Disabled Persons (PFRON).
- D. National Health Fund (NFZ).
- E. Ministry of Health.

**Nr 193.** Essential public health functions **do not** include:

- A. prevention of socially important communicable and noncommunicable diseases.
- B. universal and equal access to health care.
- C. monitoring of the population health status.
- D. individual treatment of patients.
- E. legislation on public health matters.

**Nr 194.** According to the national law about health services financed from public resources every insured person is entitled to the following guaranteed services:

- 1) primary health care;
- 2) hospital services;
- 3) psychiatric care and addiction treatment;
- 4) palliative and hospice care;
- 5) nursing care and care in the frame of long-term care in chronic diseases.

The correct answer is:

- A.** 1,2.      **B.** 1,2,3.      **C.** 1,2,3,5.      **D.** 1,2,3,4.      **E.** all the answers are true.

**Nr 195.** Normalization of blood pressure and lipids concentration in a patient after a heart attack is in the field of:

- A.** health promotion.      **D.** special prevention of the third phase.  
**B.** primary prevention.      **E.** all the answers are false.  
**C.** secondary prevention.

**Nr 196.** Which statements concerning health promotion are true?

- 1) health promotion is a process that enables people to improve control over their health condition;
- 2) health promotion first and foremost addresses people at risk of specific diseases and the ill;
- 3) important part of health promotion activities is multisectoral cooperation between e.g. different ministries, scientific societies and social organizations in promoting healthy diets and physical activity;
- 4) important part of health promotion is developing pro-health policies;
- 5) local approach to health promotion means that the activities of this scope can be carried out in places, such as schools, hospitals and sports clubs.

The correct answer is:

- A.** 1,3.      **B.** 1,2,4.      **C.** 1,3,5.      **D.** 1,3,4,5.      **E.** all of the above.

**Nr 197.** Which of the following factors affect the human health the least:

- A.** genetic factors.  
**B.** socioeconomic factors.  
**C.** lifestyle (healthy behavior).  
**D.** factors associated with organization and functioning of health care.  
**E.** environmental factors.

**Nr 198.** The positive measures of the population health status include:

- 1) incidence rate;
- 2) fertility rate;
- 3) life expectancy;
- 4) morbidity rate;
- 5) death rate.

The correct answer is:

- A.** 1,2.      **B.** 2,3.      **C.** 3,4,5.      **D.** 1,2,4.      **E.** 1,4,5.

**Nr 199.** The most common mistakes in the nutrition of the population in Poland include:

- 1) excess intake of sodium chloride;
- 2) high intake of polyunsaturated fatty acids;
- 3) excess of easily absorbed free sugars;
- 4) excess of animal fats high in saturated fatty acids;
- 5) too high a content of fiber.

The correct answer is:

- A.** 1,3,4.      **B.** 1,2.      **C.** 2,3,4.      **D.** 1,3,5.      **E.** 1,2,5.

**Nr 200.** The factors positively affecting the health of society include:

- 1) adequate housing and sanitary conditions;
- 2) employment;
- 3) family income;
- 4) supply of health food and clean water;
- 5) adequate working conditions;
- 6) health education and conditions for physical activity and recreation;
- 7) possibility to benefit from health services and social assistance.

The correct answer is:

- A.** only 7.      **B.** 1,3.      **C.** 2,4,5,7.      **D.** 1,3,5,6.      **E.** all of the above.

**Thank you!**