Tanta University
Faculty of Dentistry
Department of Pathology

Final exam of General pathology for first year dental students Year 2017

Total Marks : 60 marks Date : 22/5/2017 Time Allowed : 3 hours

ALL QUESTIONS ARE TO BE ANSWERED:

GIVE AN ACCOUNT ON: - **(5 marks each)**

1) Pyaemia.
2) Pathological calcification.
3) Complications of wound healing.
4) Embolism (definition &types).
5) Actinomycosis.
6) AIDS.
7) Complications of portal hypertension.
8) Atrophy (definition & causes).
9) Squamous cell carcinoma.
10) Tumour markers.
11) Compare between benign & malignant tumours.
12) Define each of the following: (1mark each)
    a. Lymphoma.
    b. Shock.
    c. Chemotaxis.
    d. Virchow's gland.
    e. Thrombosis.

GOOD LUCK!

تنبيه هام: تعقد الإمتحانات الشفهية والعملية بالمدرج المركزى (ا) بالدور الاول طبقا لأرقام الجلوس التالية:

- يوم الاثنين الموافق ٢٢\٥\٢٠١٧: من رقم ١- ٢٥٠ . (عقب امتحان النظرى ابتداء من الساعه الواحده والنصف ظهرا)
- يوم الثلاثاء الموافق٢٣ \٥ \٢٠١٧: من رقم ٢٥١الى اخر الكشف. (الساعة الثامنه صباحا)

May examination 2017 **Tanta University**
Time allowed three hours **Faculty of Dentistry**
First year Dentistry
Total Assessment Marks: 90 **15/5 /2017**

Physiology

Each question should be answered in a separate page
All questions should be answered

Q.1.Mention: (9 marks)

a. Characters of autonomic reflex arc. (6marks)
b. Sites of release of acetyl choline.(3 marks)

Q.2.Mention: (12 marks)

a. Differences between adaptation and fatigue. (8 marks)
b. Mechanisms of referred pain. (4 marks)

Q.3. Explain briefely: (26 marks)

a. Normal value and significance of A/G ratio. (3 marks)
b. Effects of incompatible blood transfusion. (8 marks)
c. Causes and significance of negative intrapleural pressure. (10 marks)
d. Definition and causes of anaemic hypoxia.(5 marks)

Q.4. Write notes on: (18 marks)

a. Definition of basal metabolic rate, physiological factors affecting it.(5 marks)
b. Definition and significance of O2 debt. (3 marks)
c. Functions of gastric HCl. (4 marks)
d. Cause of secretin release, its function and mechanism of action.(6 marks)

Q.5. Enumerate : (10 marks)

a. Clinical features of critinism. (4 marks)
b. Functions of cortisone hormone.(6 marks)

Q.6.: Mention (15 marks)

a. Factors that affect refractory period. (6 marks)
b. Factors that affect venous return. (9 marks)

(oral exam. at 8 a.m. at physiology department on Tuesday 16 /5/2017)

Tanta University
Department of Oral Biology

Faculty of Dentistry
Date: 4 June, 2017

Final Exam of Oral Biology
Course code: 00.01
Time: 3 hours

First year
Marks: 60 Marks

1. This exam consists of 2 pages.
2- Answer all questions

First Question

***Complete the following statements* (25 marks one each)**

1- Modification of salivary fluid from isotonic to hypotonic is a function of .....

2- The attachment epithelial cuff is composed of epithelium derived from .....

3-Meckel's cartilage is derived from .....

4-The most numerous cellular type in the maxillary sinus epithelium is the .....

5-The orifice of Stenson's duct is found opposite to .....

6-The presence of matrix vesicles is limited to ..... dentine

7-Maxillary sinus drains into the middle meatus through .....

8-Regarding the salivary gland , the Actin and myosin filaments are seen in .....

9-Regarding the early embryology, the bilaminar disc consists of .....

10-All cells of periodontal ligament are mesenchymal origin EXCEPT.....

11-The initial crowding in developing teeth in infant jaw's anterior segment is relieved by .....

12-The true pulp stone is formed by ... .

13-The only form of sensation displayed by the pulp tissue in response to all kinds of stimuli is .....

14-Early degeneration of the epithelial root sheath may cause .....

15-With advancing age, the pulp chamber becomes smaller and difficult to locate the root canals due to physiologic formation of.....

16-The pre-eruptive phase ends with .....

17-The physiological mesial drift of teeth caused by the contraction of .....

18-The Secondary palate is developed from .....

19-The gubernacular cord contains remnants of.....

20-The function of Langerhan's cell in oral mucosa is .....

21-During proper orthodontic tooth movement the cementum does not undergoing resorption because of .....

22-The interdental and interradicular trabeculae are seen in ladder like arrangement in ----------

23-The reversal lines represent the activity of .....

24-Regarding PDL , the .....fibers though to regulate vascular flow in relation to tooth function.

25-Failure of fusion between lateral lingual swellings gives rise to .....

Second Question

Answer the following question with drawing (20 marks 10 each)

1- Describe the histological section in the vermilion border of the human lip

2- Mention the structure of secretory end piece of adult parotid salivary gland.

Third Question

Write short note about the following (10 marks 2.5 each)

a- Synovial membrane of TMJ

b- Circumvallate papilla of the tongue

c- Secondary cartilage (its definition and state its importance in mandibular development).

d- Acellualr cementum

Fourth Question (5 marks)

In a conversation between dentin and enamel, dentin said that he is the first dental tissue to be formed. How enamel could reply to this statement (mention five **unique** features of enamel)?

Good Luck

Oral Biology Department's staff members

Tanta University
Faculty of Medicine
Medical Biochemistry Department

Biochemistry Final Exam for Dentistry
Time allowed: 3 hours
Total marks :30 marks

Q1 Write on the following:6 marks

1. Lipoproteins`and their relation to atherosclerosis.
2. Functions and deficiency of vitamin K
3. Factors affecting iron absorption and its distribution in the body.
4. Factors affecting enzyme activity.

Q2 Give an account on the following:6 marks

1. Denaturation of protein.
2. Trace elements
3. Favism.
4. Vitamin B 1.

Q3 Compare between:6 marks

1. Tissue fat and depot fat.
2. Functional and non-functional plasma enzymes
3. Maltose and sucrose.

Q4 Give reason of the following: 6 marks

1. lactose is a preferred sugar for babies .
2. Glycine is not optically active.
3. Alkaptonuria.
4. Brain never use fatty acids as a source of energy.
5. Rickets.
6. Occurrence of saponification.

Q5 Define the following :6 marks

1. Iodine value.
2. Rancidity.
3. Essential amino acids
4. Cooperativity
5. Antioxidants.
6. Lipotropic factor.

Good luck

Tanta University-Faculty of Medicine

Department of Medical Microbiology and Immunology

Dental Students – Grade 1

18/6/2017 **Time allowed: 3 Hours** **Total Marks :30 Marks**

Answer the following Questions:

1- Give an Account on bacterial Growth Curve with illustration. (3 Marks)
2- Mention the principle of action, and methods to test the efficiency of the autoclave and enumerate uses of it. (3 Marks)
3- Discuss the mechanisms of antimicrobial drug resistance with examples. (3 Marks)
4- Mention the pathways of complement activation, and discuss the biological activities of the complement. (3 Marks)
5- Discuss the types of antigen with examples. (3 Marks)
6- Give an account of:
   a) MRSA. (1.5 Marks)
   b) Tuberculin test (1.5 Marks)
7- Give short account on:
   a) Lactobacilli. (1.5 Marks)
   b) Antifungal chemotherapy. (1.5 Marks)
8- Describe the basic elements of infection control in dental units (3Marks)
9- Mention theories, causative microorganisms, and susceptibility tests of dental caries .(3Marks)
10- Describe the pathogenic mechanisms of periodontitis (3 Marks)

رئيس القسم

ا.د.محمد زكريا حسين

يعقد الامتحان الشفوي يوم الاثنين الموافق ٢٠١٧/٦/١٩ بقسم الميكروبيولوجي بكلية الطب الساعة العاشرة صباحا

Good Luck

TANTA UNIVERSIYT | **FIRST YEAR**
FACULTY OF DENTISTRY | **FINAL EXAMINATION**
11 /6/ 2017 | **TOTAL MARKS: 40**
TIME: 3 HOURS

ANATOMY

عدد صفحات الامتحان: ٤ صفحات

ANSWER THE FOLLOWINGS QUESTIONS

1. **A. Venous drainage of face and scalp.....(4)**
   B. Relations of lateral pterygoid muscle.....(3)
   C. Relations of the surfaces of the parotid gland. Mention its surface anatomy.....(4)

2. **A. Discuss the superior alveolar nerves and vessels.....(4)**
   B. Relations of tempromandibular joint.....(2)
   C. Course of sphenopalatine artery. What is the Little's area.....(3)

3. **A. Draw a diagram showing deep relation of mylohyoid muscle...(3)**
   B. Describe the roots and branches of submandibular ganglion...(3)
   C. Mention the origin, course and branches of the lingual artery.(3)

4. **A. Describe the relations and blood supply of the thyroid gland...(4)**
   B. Mention the origin and insertion of the muscles of the palate..(4)
   C. Discuss the blood and nerve supply of the larynx.....(3)

امتحان الشفوى يوم الاثنين ١٢/٦/ ٢٠١٧ بقسم التشريح بكلية الطب بالدور الأرضى:

- الساعة ٩ صباحا من ١- ١٢٠
- الساعة ١٠ صباحا من ١٢١ – ٢٤٠
- الساعة ١١ صباحا من ٢٤١ –٣٦٠
- الساعة ١٢ صباحا من ٣٦١ –اخر الكشف

- اجابة **M.C.Q** فى كراسة الاجابة فى ورقة منفصلة

Multiple choice questions (20 marks)
Choose the most appropriate answer for each of the followings

1-*One of the following is wrong about the maxillary nerve*

(A) runs in the medial wall of cavernous sinus
(B) Enter the pterygopalatine fossa through the foramen rotundum.
(C) Its continuation in the orbit is called the infraorbital nerve
(D) zygomatic nerve is one of its branches

2-*All the following are true EXCEPT:*

(A)The mandibular nerve enter the infratemporal fossa through foramen ovale
(B) Zygomaticofacial nerve carry parasthmpathetic fibre of lacrimal gland
(C) sphenopalatin nerve is a branch of sphenopalatine ganglion
(D) The third part of maxillar artery is one of the contents of sphenopalatine fossa

3-*Which one of the followings is wrong :*

(A) The lateral nasal artery is a branch of facial artery
(B) Infratrochlear nerve is a branch of frontal branch of ophthalmic nerve
(C) inferior alveolar nerve arise from posterior division of mandibular nerve
(D) Cervical branch of facial nerve supply platysma muscle

4. *Which one of the following is wrong about the scalp*

(A) It forms the soft tissue covering the skull cap.
(B) Subaponeurtic layer is a danger area of the scalp.
(C)it is formed of four layers.
(D) Temporal branch of facial nerve is one of its motor supply

5-*Which one of the following is wrong about the cavernous sinus:*

(A) One of its tributaries is central vein of retina .
(B) it is related superiorly to the internal carotid artery.
(C)One of its contents is the abducent nerve
(D) it is connected inferiorly to the basilar plexus of veins.

6- *Which one of the following is wrong about the lingual nerve*

(A) It joint by chorda tympani.
(B) Descend superficial to medial pterygoid muscle.
(C) Carry the tast sensation from the anterior two third of tongue.
(D) It relatetd to third molar tooth.

7- *Which one of the following is wrong*

(A) Buccinator muscle supplied by buccal branch of facial nerve
(B) Medial pterygoid supplied by branch from trunk of mandibular nerve
(C) Temporalis muscle supplied by branch from anterior division of mandibular
(D) Superior oblique supplied by superior division of oculomotor nerve

8- ***Which one of the following is wrong about sphenopalatine ganglion***

(A) it the largest parasympathetic ganglion.
(B) Greater palatine nerve is one of its branches.
(C) the lesser petrosal nerve passes through it without relay.
(D) The Videan nerve is formed of deep petrosal and great petrosal nerves.

9- ***Which one of the following is wrong about the dural venous sinus***

(A) The continuation of the sigmoid sinus is the internal jugular vein.
(B) Superior sagittal sinus ends as right transverse sinus
(C) Inferior sagittal sinus occupies the free lower margin of falx cerebri
(D) Straight sinus formed by the union of inferior sagittal with occipital sinus

10- ***Which one of the following is Wrong about the face***

(A) Skin is very vascular.
(B The muscles of face supplied by facial nerve
(C) Superficial fascia contains the nerves and vessels
(D) All the sensory nerves supplying the face arise from trigeminal

11- The submandibular salivary gland is divided into superficial and deep parts by:

(A) Mylohyoid
(B) Geniohyoid
(C) Hyoglossus
(D) Genioglossus

12- Which structure lies deep to the hyoglossus muscle?

(A) Lingual artery
(B) Lingual nerve
(C) Deep part of submandibular salivary gland
(D) Submandibular ganglion

13- The following nerve lies between the external and internal carotid arteries:

(A) Glossopharyngeal nerve
(B) Vagus nerve
(C) Superior laryngeal nerve
(D) Hypoglossal nerve

14- Which of the following is a tributary of the External jugular vein?

(A) Anterior division of retromandibular vein
(B) Anterior jugular vein
(C) Common facial vein
(D) Superior thyroid vein

15- Which muscle is supplied by glossopharyngeal nerve?

(A) Stylopharyngeus
(B) Palatopharyngeus
(C) Salpinopharyngeus
(D) Styloglossus

16- Cranial root of the accessory nerve is distributed in the following branch of vagus nerve:

(A) Internal laryngeal nerve
(B) External laryngeal nerve
(C) Recurrent laryngeal nerve
(D) Auricular branch of vagus nerve

17- Which muscle of the tongue is supplied by pharyngeal plexus:

(A) Styloglossus
(B) Hyoglossus
(C) Genioglossus
(D) Palatoglossus

18- The following structure lies between middle and inferior constrictors of the pharynx:

(A) External laryngeal nerve
(B) Superior laryngeal artery
(C) Recurrent laryngeal nerve
(D)Stylopharyngeus muscle

19- The following nerve gives sensory innervations to the roof of the mouth:

(A) Greater palatine nerve
(B) Lingual nerve
(C) Lesser palatine nerve
(D) Buccal nerve

20- Inferior thyroid vein drains into:

(A) External jugular vein
(B) Internal jugular vein
(C) Anterior jugular vein
(D) Left brachiocephalic vein

END OF THE EXAM
WITH BEST WISHES

Chairman of Department: Prof. Dr. Mona Zoair

Tanta University
Faculty of Dentistry
Department of Dental Biomaterials

Final Exam of Dental Biomaterials for First Year Students

Course Code : TDEN 01:06 Course Title: Dental Biomaterials II.
Date : 28 May, 2017
Time Allowed : 3 Hours. Total Marks : / 60 marks

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48

I. Choose the most correct answer, and transfer your answers in the above table: (24 marks, 1/2 mark for each):

24

1. Homogenisation of amalgam alloy ingot is done by:
- **a)** Heating at 100°C for 6-8 hours.
- **b)** Heating at 400 °C for 6-8 hours.
- **c)** Heating at 1000°C for 6-8 hours.
- **d)** None of the above.

2. Surface oxidation and sedimentation of one type of the particles in the bottom of the container are disadvantages of:
- **a)** Admixed high copper amalgam.
- **b)** Unicompositional high copper amalgam.
- **c)** Low copper amalgam.
- **d)** a and b.

3. Dimensional changes during setting of amalgam restoration are:
- **a)** Initial expansion followed by contraction.
- **b)** Initial contraction followed by expansion.
- **c)** The net total dimensional change is slight contraction.
- **d)** b & c.

4. Moisture contamination during amalgam trituration or condensation causes excessive delayed expansion in:
- **a)** Zinc free amalgam alloys.
- **b)** Zinc containing amalgam alloys.
- **c)** Low copper amalgam
- **d)** All of the above.

5. The use of silanted mega filler insert (0.5-2mm) in large composite restoration.
- **a)** Increases polymerization shrinkage
- **b)** Decreases polymerization shrinkage
- **c)** Increases polymerization shrinkage and mechanical properties
- **d)** Decreases polymerization shrinkage and increases mechanical properties.

6. **Which of the following statements represent the setting reaction of Unicompositional amalgam:**
   a) (γ) particles react with Hg to form (γ_1) and (γ_2)
   b) (γ) particles react with Hg to form (γ_1) and (γ_2). Then (γ_2) is eliminated around Ag-Cu eutectic particles in a second step reaction to form (γ_1) and (η)
   c) Particles containing (γ) and Epsilon (ε) react with Hg to form (γ_1) and (η) without formation of (γ_2).
   d) None of the above.

7. **The coefficient of thermal expansion of composite restoration is**
   a) Higher than amalgam restoration.
   b) Lower than amalgam restoration.
   c) Similar to amalgam restoration.
   d) None of the above.

8. **Ormocer is**
   a) Low shrink organic resin.
   b) Low shrink inorganic-organic resin instead of whole organic Bis-GMA or UDMA.
   c) Lower abrasion resistance resin than Bis-GMA.
   d) Aesthetically unacceptable.

9. **Early macrofilled composite restorations showed**
   a) Good strength but poor surface finish and esthetics
   b) Good surface finish and esthetic but poor strength
   c) Good surface finish, esthetic and high strength
   d) Poor esthetic and low strength

10. **The following characteristics best describes flowable composite**
   a) Low modulus of elasticity.
   b) Higher polymerization shrinkage.
   c) High wear resistance.
   d) a and b.
   e) a and c

11. **To make restorative composite fillings radiopaque**
   a) UDMA is used as a matrix.
   b) Colloidal silica is used as filler.
   c) Barium glass filler is added.
   d) All of the above.

12. **One of the main advantages of chemical cure composite restorative material:**
   a) Unlimited working time.
   b) The presence of air voids.
   c) Rapid increase in viscosity after mixing that increases polymerization stresses.
   d) Gradual increase in viscosity after mixing that decreases polymerization stresses.

13. **The impression material which can technically be reused is :**
   a) Alginate.
   b) Agar agar.
   c) Condensation silicon.
   d) Poly sulphide.

14. **Addition silicones are the most popular type of rubber impression materials. The reason for this is cost.**
    a) The first sentence is true, and the second sentence is false
    b) The first sentence is false, and the second sentence is true
    c) Both are true
    d) Both are false.

15. **All of the following statements are true about the "working time" of alginate material <u>except:</u>**
    a) Working time begins when water and powder come together
    b) Cooler water increases working time
    c) Warmer water decreases working time
    d) Working time begins when the impression is seated

16. **When examining the Poly-vinyl silicon impression you made of your preparations, you notice that the surface of the impression is irregular, and the material on the surface is not polymerized. The rest of the material is properly polymerized. What is/are the possible causes of this problem?**
    a) Powder of the gloves
    b) Chloroplatinic acid in the impression material was old
    c) Moisture on gloves
    d) A,C
    e) None of the above.

17. **The following is a list of elastomeric impression materials, which has the highest tear strength**
    a) Polyether
    b) Polysulfide
    c) Addition silicone
    d) Condensation silicone

18. **The first reaction after mixing of water with Alginate is reaction of sodium phosphate with?**
    a) Insoluble Ca ions.
    b) Soluble Ca ions.
    c) Soluble K ions.
    d) Insoluble K ions.
    e) Mg ions.

19. **Linear contraction of elastomeric impression materials by time is highest in**
    a) Addition silicon.
    b) Poly ether.
    c) Poly sulphide.
    d) Condensation silicon.

20. **Which of the following is the desirable quality of impression material?**
    a) The need of separating medium before pouring.
    b) Minimal amount of permanent deformation upon removal from the mouth.
    c) Low fluidity during insertion in the mouth.
    d) Dimensional instability during storage.

21. Type of Calcium Hemihydrate in Dental Stone is?

a) Alpha
b) Beta
c) Delta
d) Gamma
e) None of the above

22. The hardest type of dental stone is manufactured by:

a) Removing it directly from the earth
b) Calcining gypsum in open air
c) Calcining gypsum in open kettles
d) Calcining gypsum by boiling it 30% solution of calcium chloride

23. For most dental materials that include water in the composition, the setting is indicated by :

a) Heat generation.
b) Change of color.
c) Change in translucency.
d) Loss of gloss.
e) Decrease the amount of water.

24. Increasing W/p ratio of gypsum will increase:

a) Setting shrinkage
b) Hygroscopic expansion
c) Strength
d) Setting time.

25. The "dentin debris" that is created when dentin is cut or prepared by dental instruments is termed:

a) Adhesive layer.
b) Smear layer.
c) Primer layer.
d) Chelating agent.

26. A hybrid layer in adhesive mechanism of dentinal bonding system is:

a) The smear layer and adhesive resin.
b) Dentin primer and decalcified enamel.
c) Adhesive resin and decalcified enamel.
d) Adhesive resin and decalcified dentin.

27. Dentine porcelain is used to:

a) Form the bulk of the restoration.
b) Cover the body porcelain.
c) Mask the color of metal or cement.
d) Decrease the abrasion of the opposing teeth.

28. In comparing metallic and ceramic materials:

a) Ceramics are less durable chemically than metals
b) Most metals are more brittle than most ceramics
c) Most ceramics are more brittle than most metals
d) Ceramics has higher thermal coefficient of expansion than metals.

29. All of the followings are true about denture porcelain teeth, except:

a) The difficulty of polishing the surface after occlusal adjustment
b) Poor resistance to abrasion
c) The clicking sound that makes noise,
d) Wear of the opposite natural teeth

30. Feldspars are:

a) Naturally occurring anhydrous aluminosilicates
b) Synthetic anhydrous aluminosilicates
c) Naturally occurring hydrous aluminosilicates
d) Synthetic hydrous aluminosilicates.

31. The typical volumetric firing shrinkage of a conventional powder-slurry ceramic is:

a) 1-5%
b) 70-80%
c) 20-25%
d) 30-40%.

32. In terms of flexural strength, the strongest ceramic is:

a) Glass-infiltrated alumina
b) Zirconia ceramics.
c) Castable ceramics
d) Feldspathic porcelain

33. Mineral Trioxide aggregate (MTA) is best material for the following except:

a) Direct pulp capping .
b) Root resorption repair.
c) Apexofication.
d) Core material with prefabricated post.

34. With time, when Gutta Percha is exposed to light, air, it:

a) Does not change its physical properties significantly.
b) Will decompose and lose mass.
c) Becomes more brittle.
d) Changes, but can be restored by freezing.

35. Highly alkaline cement which can stimulate the pulp to form secondary dentin and used as pulp capping agent

a) Zinc Phosphate cement
b) Calcium hydroxide
c) Zinc Oxide Eugenol
d) Resin Cement

36. The film thickness of the luting cement decreases with:

a) Increased powder/liquid ratio.
b) Increased viscosity of the liquid.
c) Decreased particle size of the powder.
d) Decrease the amount of force applied to a restoration during cementation.

37. Addition of 30% alumina to the powder of zinc oxide eugenol cement is:

a) To improve compressive strength of the cement
b) To improve the fluoride release
c) To render the cement light curable
d) To improve ease of manipulation of cement

38. Glass ionomer cement can be applied for the following <u>except</u>:

a) Luting of orthodontic brackets.
b) Base under restorations.
c) Temporary cementation of crowns.
d) Restoration of anterior teeth.

39. Freeze-dried polyacrylic acid is added to the powder of:

a) Zinc oxide-eugenol cement
b) Zinc polycarboxylate cement
c) Zinc Phosphatecement
d) Resin-based Cement

40. Dental cement used as soft tissue packs or surgical dressing:

a) Zinc oxide-eugenol cement
b) Zinc polycarboxylate cement
c) Zinc Phosphatecement
d) Resin-based Cement

41. The least amount of fluoride release obtained with:

a) High-viscosity Glass Ionomer Cement.
b) Nanoionomer.
c) Calcium Aluminate Glass Ionomer.
d) Cermet glass ionomer.

42. HEMA (Hydroxyethyl methacrylate) added to the liquid of:

a) High-viscosity glass ionomer cement
b) Resin modified glass ionomer
c) polyacid modified composite resin
d) Calcium Aluminate Glass Ionomer Cement

43. Dough-Forming Time of acrylic resin is shortened when:

a) The molecular weight of the polymer is high
b) The size of the polymer particles is large
c) Increased polymer/Monomer Ratio
d) Copolymerization with ethylacrylate,

44. Lack of pressure during curing of acrylic resin produces porosity:

a) On the surface of thin areas of the denture.
b) At the edges of the flanges of the denture.
c) On the superficial surface of the denture.
d) In the thick sections of the denture.

45. The chemical composition of the following denture base materials is similar to the heat cured poly (methyl methacrylate) except:

a) Pour-type Denture Resins.
b) High-Impact Strength Resins.
c) Rapid Polymerized Resins.
d) Gel-Type Acrylic Resin.

46. Heat cured acrylic resin has

a) High abrasion resistance and.high coefficient of thermal expansion.
b) High abrasion resistance and low coefficient of thermal expansion.
c) Low abrasion resistance and high coefficient of thermal expansion.
d) Low abrasion resistance and low coefficient of thermal expansion.

47. Compared with heat-curd acrylic resin, cold-cured resin has the following except:

a) Higher polymerization shrinkage.
b) Higher porosity.
c) Higher residual monomer.
d) Higher color stability.

48. Soft liners are used in the following cases except:

a) The oral mucosa covering the denture-bearing area is thin.
b) The oral mucosa is very sensitive.
c) Mild undercuts.
d) In patients who have bruxism (teeth grinding).

II. Give Reason (s) of the following: (15 marks, 1 mark for each) :

15

1. **Mercuroscopic expansion.**

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2. **Dental staff is most at risk than patients from mercury contamination during amalgam restorations.**

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3. **Adding triethylene glycol dimethacrylate (TEGDMA) resin to the essential resin in composite resin.**

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4. **The use of directional curing technique for curing light cured composite.**

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5. **Application of surfactant over an impression taken by old type of addition silicon impression material.**

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6. **Thickness of elastomers should be 2-3 mm however; in alginate should not less than 4mm.**

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7. **Chemicals are added to the composition of gypsum products.**

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8. **Possible root canal obturation failure if calcium hydroxide sealer is used.**

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9. **Addition of tin and indium to Noble ceramo-metallic alloys is important.**

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10. **In dental porcelain restorations, Self glaze is preferred to an add-on glaze.**

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11. ZOE cement should never be used as a temporary luting agent if the permanent cementation will be performed by resin-based cements.

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12. Resin cements are the luting agents of choice for all-ceramic inlays, crowns and bridges.

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13. Acrylic resin shouldn`t be packed at the rubbery or stiff stage.

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14. Residual monomer of heat cured acrylic resin should be avoided.

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15. Tissue Conditioners are not permanent and must be replaced every 3 days

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III. <u>Complete the following sentences: (6 marks, 1/2 mark for each):</u>

6

1- The main benefit of adding high amounts of copper to an amalgam alloy is to eliminate ..... which is the weaker phase in dental amalgam.

2- C-factor is the ratio of .....

.....

.....

3- The rapid rate of removal of the alginate impression from the mouth increases .....

4- The Condensation polymerization reaction of silicon is characterized by release of.....as a byproduct.

5- The desirable strength of gypsum materials is..... related to the amount of water used.

6- The chemical formula of set gypsum mass is.....

7- If a dentin primer has the ability to both etch and prime, it is categorized as a ..... primer.

8- ..... are not widely used now in root canal obturation, as they tend to corrode, causing apical soft tissues discoloration.

9- Sintering of dental ceramics is defined as

.....

10- .....is a property means that the flow of the cement increases as the spatulation increases.

11- .....is a cement that has the ability of hydroxyapatite (HA) formation and remineralization of tooth structure.

12- ..... is a soft liner which remains permanently soft.

15

IV. <u>Write short notes on (15 marks):</u>

1. Reduction of corrosion in dental amalgam restorations (2marks)

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2. **Nanocomposite is highly esthetic restoration. (2 marks)**

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3. **Factors affecting setting time of gypsum products and controlled by the technician (at least 2 factors) (1 mark)**

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4. **Compare between aqueous and non-aqueous elastic impression materials as regard to; dimensional accuracy and stability, adhesion to the tray, and compatibility with gypsum model material. (3 marks).**

	Aqueous impression	**Non-aqueous impression**
Dimensional accuracy & stability		
Adhesion to the tray		
Compatibility with gypsum model.		

5. **Enumerate the requirements of a successful dentin bonding system (1 mark)**

6. **Two different methods to strengthen dental ceramics through interruption of crack propagation (Illustrate your answer with drawings): (2 marks)**

7. **Compare between Zinc phosphate cement and Glass Ionomer cement. (3 marks)**

	Zinc phosphate cement	Glass ionomer cement
Biological properties		
Film thickness		
Solubility		
Strength		
Bonding to tooth structure		
Optical Properties		

8. **Properties of polyamide flexible denture base material. (1 marks)**

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تنبيه هام

ان شاء الله امتحان الشفوي يوم الإثنين 5/29 تمام الساعة التاسعة صباحا في مبني الإتاحة.

Oral examination will be 9 o`clock, Monday, 29/5 at Availability building.

With our best wishes.....

Examiners :	***Head of the department:***
Prof. Dr. Usama Abdel-kareem	**Prof. Dr. Manal El-Ebiary**
Dr. Hend El-kafrawy	
Dr. Gehan El-Olimy	
Dr.:Nancy Farghal	