Revised Syllabus
of
II & III Year Diploma in Dental Mechanic
(Previously first/second year certificate course/
I year DDM/II DDM)

2017
Second Year Diploma in Dental Mechanic

DENTAL MATERIALS INCLUDING METALLURGY: Q P Code: 5171

Composition, properties, uses, advantages, disadvantages of the following materials
1. Plaster of paris
2. Investment materials
3. Impression materials
4. Tray materials
5. Denture base materials
6. Waxes
7. Dental cements
8. Metallurgic terms
9. General properties of metals
10. Metals used in dentistry like gold, silver, zinc, lead, mercury and titanium.
11. Alloys used in dentistry like casting alloys, wrought gold, silver, stainless steel, Nickel and chrome cobalt alloys
13. Solders, fluxes and anti fluxes
14. Tarnish and corrosion
15. Electrodeposition.

Applied Oral Anatomy: Q P Code: 5172

Elementary anatomy of structure of denture/bearing area.
Human dentition and occlusion.
Functions teeth and morphology of crowns of teeth.
Tooth carving in wax and plaster.
Muscles of mastication and facial expression.
Mastication deglutition and phonation.
Movement of tempera-mandibular joint.

QUOTA OF PRE CLINICAL WORK
1. Cubes-5
2. Cubes-3
3. Preparation of cast, bending and boxing impression and cast preparation
4. Marking anatomical landmark
5. Fabrication of special tray
   a. Shellac
   b. Resin
   c. Vacuum adapted tray
6. Fabrication of record base
   a) Shellac
   b) Resin-self cure & hest cure
7. Fabrication of occlusal rim  
   a) Different material-compound, plaster, wax  
   b) Wax-class I, class II, class III  
8. Arrangement of teeth in  
   a) class I-10 sets  
   b) class II-5 sets  
   c) class III-5 sets  
9. Acrylisation of denture in  
   a) class I  
   b) class II  
   c) class III  
10. Teeth carving of 28 teeth-incisors, canines, premolars, molars  

**PRACTICALS**  
Preclinical work for PUC passed (newly admitted) students followed by clinical works and minimum clinical work for all the students  
Complete Dentures - 25  
Removal Partial Dentures - 100  
Single Dentures - 10  

**SCHEME OF TEACHING AND EXAMINATION FOR PRELIMINARY DDM**  
**THEORY AND PRACTICALS**  

<table>
<thead>
<tr>
<th>PAPER</th>
<th>TEACHING HOURS</th>
<th>EXAMINATION MARKS</th>
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<td>PAPER I</td>
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**THEORY QUESTION PAPER PATTERN (PAPER-I AND PAPER-II)**  

I. SHORT ESSAY (5 question) Any four - 5x4=20  
II. SHORT ANSWER (12 question) Any ten - 3x10=30  
   TOTAL - 50
PRACTICALS (SCHEME OF PRACTICAL EXAMINATION FOR PRELIMINARY DDM)

Practical Exam(100)

a. Records and Log books maintains 20 marks
b. Teeth arrangement in class | relation 50 marks
c. Wax pattern for given Kennedy’s cl for RPD Model or CD Laboratory devices 30 Marks

<table>
<thead>
<tr>
<th>Paper</th>
<th>SUBJECT</th>
<th>SECTION</th>
<th>Question paper Code</th>
<th>MAX. MARKS</th>
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<tr>
<td>Paper 1</td>
<td>Dental Materials &amp; Metallurgy (N.S)</td>
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<td>5171</td>
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<td>Paper 2</td>
<td>Applied Oral Anatomy (N.S)</td>
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<td>Practical</td>
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COMPLETE DENTURES  Q P Code: 6171

- Beading and boxing of impressions and cast preparation
- Marking the anatomical land marks in the edentulous casts
- Special trays
- Bite blocks and wax rims
- Articulators, classification and uses
- Mounting of casts, articulation, occlusal plane, curve of spec and balancing
- Principles of teeth selection and arrangement, waxing of trial dentures.
- Flasking, dewaxing, packing, curing and deflasking
- Finishing and polishing of dentures
- Repair and relining, rebasing
- Immediate dentures
- Making of splints, acrylic teeth

PARTIAL DENTURES, MAXILLOFACIAL PROSTHESIS AND ORTHODONTIC APPLIANCE  

Q P Code: 6172

- Kennedy’s classification
- Components of Removable Partial Dentures
- Principles of partial denture design, surveyors, surveying and block out procedures
- Casting machines, principles of casting and technics for fixed partial dentures and cast partial, dentures.
- Principals of wire bending
- Mechanical principles of orthodontic appliance
- Maxillofacial prosthesis

FIXED PARTIAL DENTURES

- Introduction, definition, classification of Fixed Partial Dentures
- Components of FPD’s
- Die preparation and different die systems
- Waxing principles for crowns and FPD’s
- Casting and finishing of FPD’s
- Fabrication of Porcelain Fused to Mental crown and FPD’s

THEORY QUESTION PAPER PATTERN (PAPER-I AND PAPER-II)

I. SHORT ESSAY - 5x4=20
II. SHORT ANSWER - 3x10=30
       TOTAL - 50
PRACTICALS:

All concerned practical exercises according to theory topics and clinical work.

FINAL YEAR D.D.M CLINICAL WORK
1. CD-Acrylic 100
   -Metal 5
2. SD-20
3. R.P.D-Acrylic-200
   -Cast R.P.D-2
4. Repair/relining/rebasing-25 each
5. Inlays-2
6. Post core-2
7. Acrylic crown-5
   Metal ceramic crown Anterior-5
   Posterior-5
8. F.P.D Anterior-5
   Posterior-5
9. Splints-5
10. Obturator and other surgical appliance-2
11. Ortho appliance-5
   a. Wire bending:
      Labial bow, Adams clasp, Finger spring, Expansion screws...etc
   b. Removable appliances
   c. Oral screen, Myofunctional appliances...etc

PRACTICALS
SCHEME OF PRACTICAL EXAMINATION FOR FINAL DDM

Practical Exam(100)
   a. Records and Log books maintains 20 marks
   b. Teeth arrangement in class I relation 25 marks
   c. Die preparation Wax pattern for 3 unit FPD 25 Marks
   d. Ortho appliance (wire bending) 30 Marks

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<tr>
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<td>Complete Dentures (N.S)</td>
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<tr>
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### Reference Books:

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<tr>
<td>1</td>
<td>Manual of Training Dental Technicians</td>
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<td>Her Majesty's Stationery Office</td>
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<td>2</td>
<td>Laboratory Procedures for Inlay, Crowns and Bridges</td>
<td>Dereck Stananought</td>
<td>Blackwell Scientific Publications Ltd.</td>
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<td>Science and Technic of Cast Restoration</td>
<td>George M. Hollenback</td>
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<td>Guide to Occusal Waxing</td>
<td>Shillingburg/Wilsom/Morrison</td>
<td>Quintessence</td>
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<td>Dental Mechanics For Student</td>
<td>John Osborne</td>
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<td>Dental Implants Fundamental And Advanced Laboratory Technology (color atlas)</td>
<td>Robert Wikelman/Kenneth Orth</td>
<td>Wolfe</td>
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<td>Nicholas Martielli</td>
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<td>F.G. Shaw/D.C. Scott</td>
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<td>W. Patrick Naylor</td>
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<td>Precision Fixed Prosthodontics Clinical and Laboratory Aspects</td>
<td>M. Martignoni/A. Schonenberger</td>
<td>Quintessence</td>
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<td>13</td>
<td>Dental Laboratory procedures in Complete Denture Vol-1 Removable Partial Dentures Vol-2 Fixed Partial Dentures Vol-3</td>
<td>Rhoads, Rudd, Morrow</td>
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<td>A Text Book of Dental Anatomy</td>
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<td>Masahiro Kuwata</td>
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<td>John W. Mclean</td>
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<td>Ernest A. Hegenbarth</td>
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<td>The Design and Construction of Removable Orthodontic Appliances</td>
<td>C. Philip Adams</td>
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<td>W.J. Tulley, A.C. Campbell</td>
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