



# SunRise University

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**SRU COLLEGE OF PARAMEDICAL  
TECHNOLOGY**  
SunRise University Campus,  
Alwar, Rajasthan, India

## Syllabus

II & III Year Diploma in Dental Mechanic Technology

[First & Second Year for Lateral Entry Students]

## Second Year Diploma in Dental Mechanic Technology

### **DENTAL MATERIALS INCLUDING METALLURGY:**

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
12. Heat treatment –Annealing and Tempering.
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. Vaccum adapted tray

6. Fabrication of record base

a) Shellac

b) Resin-self cure & heat cure

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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 DDMT** **THEORY AND PRACTICALS**

PAPER	TEACHING HOURS		EXAMINATION MARKS		
	THEORY HRS	PRACTICAL DAYS	INT ASS	BOARD EXAM	TOTAL
PAPER I (Dental Materials Including Metallurgy)	60	-	-	50	50
PAPER II (Applied Oral Anatomy)	60	-	-	50	50
PRACTICALS	-	200	-	100	100

### **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

Paper	SUBJECT	SECTION	Question paper Code	MAX. MARKS
Paper 1	Dental Materials & Metallurgy (N.S)		5171	50
Paper 2	Applied Oral Anatomy (N.S)		5172	50
	Practical			100

FINAL YEAR DDMT DENTAL MECHANICS:THEORY

**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 Metal 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

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## 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 |

Paper	SUBJECT	SECTION	Question paper Code	MAX. MARKS
Paper 1	Complete Dentures (N.S)		6171	50



Paper 2	Partial Dentures, Orthodontia, Maxiofacial Prosthesis(N.S)		6172	50
	Practical			100

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d. REFERENCE BOOKS:

SL NO	TEXTBOOK TITLE	AUTHOR	PUBLICATION	EDITION
1	Manual of Training Dental Technicians		HerMajesty's Stationery Office	
2	Laboratory Procedures for Inlay, Crowns and Bridges	Derek Stananought	Blackwell Scientific Publications Ltd.	
3	An Atlas of Removable Partial Denture design	Russel.Stratton/ Frank J.Wiebelt	Quintessence	
4	Science and Technic of Cast Restoration	George M. Hollenback		
5	Guide to Occusal Waxing	Shillingburg/ Wilson/Morrison	Quintessence	2nd
6	Dental Mechanics For Student	John Osborne		4th
7	Dental Implants Fundamental And Advanced Laboratory Technology (color atlas)	RobertWikelman Kenneth Orth	Wolfe	
8	Quintessence of Dental Technology		Quintessence	
9	Dental Laboratory Technology	Nicholas Martielli	Mosby	3rd
10	Practical Exercise in Dental Mechanics	F.G.Shaw D.C.Scott		3rd
11	Introduction to Metal Ceramic Technology	W.Patrick Naylor	Quintessence	

12	Precision Fixed Prosthodontics Clinical and Laboratory Aspects	M.Martignoni/ A.Schonenberger	Quintessence	
13	Dental Laboratory procedures in Complete Denture Vol-1 Removable Partial Dentures Vol-2 Fixed Partial Dentures Vol-3	Rhoads.Rudd Morrow	Mosby	2nd
14	A Text Book of Dental Anatomy	Wheeler's	Saunders	8th
15	Color Atlas of Ceramo-Mental Technology Vol- 1 and Vol-2	Masahiro Kuwata		
16	Essentials of Dental Ceramics- An Artestic Approach	Gerard J Chiche Alain Pinault	Year Book Medical Publishers,Inc.	
17	The Science and Art of Dental Ceramics Vol-1	John.W.Mclean	Quintessence	
18	Creative Ceramic Color-A Practical System	Ernest.A. Hegenbarth	Quintessence	
19	The Design and Construction of Removable Orthodontic Appliances	C.Philip Adams	John Wright and Sons Ltd.	
20	A Manual of Practical Orthodontics	W.J.Tulley A.C.Campbell	John Wright and Sons Ltd.	3rd