

**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II Year Diploma / III Year Certificate Course in**  
**Medical Laboratory Technology**  
**Q.P. CODE – 3101**  
**Subject : Biochemistry**

**Time: 3 Hours**

**90 Marks**

**I. Long Essay Answer any Two**

**2 X 10 = 20**

1. Describe, Principal, different types and applications of Electrophoresis.
2. Quality Control in Laboratory.
3. Describe Liver function tests. Add a note on normal values of all parameters of LFT (7+3=10)

**II. Write Short Notes on any Ten.**

**10X 5 = 50**

4. Regulation of Blood glucose.
5. Principles of ELISA and its application.
6. Ion Selective Electrodes (ISE).
7. Absorption of lipids.
8. Metabolic acidosis.
9. Chromatographic techniques and its application.
10. Urea and creatinine clearance test.
11. Semi Automated Analyser.
12. Abnormal Constituents of Urine.
13. Blood buffers and their role in maintenance of pH.
14. GTT

**III. Write Short Answer**

**10X2=20**

15. Name Organic constituents of Normal urine.
16. Name electrolytes and their normal value.
17. Name two Phospholipids.
18. Name amino acids involved in synthesis of creatinine.
19. Name four enzymes involved in digestion of carbohydrates.
20. Write two differences between plasma and serum.
21. Uses of spectrophotometer and colorimeter.
22. Application of RIA.
23. Name two Cardiac Markers.
24. Record keeping in Laboratory.

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II Year Diploma / III Year Certificate Course in**  
**Health Inspector**  
**Q.P. CODE – 3111**  
**Subject : Paper I**

**Time: 3 Hours**

**90 Marks**

**I. Long Eassy Answer any Two**

**2 X 10 = 20**

1. How do youinvestigate an epidemic of gastroenteritis in a village. What measures will you take to control them.
2. Enumerate the risk factors for coronary heart disease. Explain briefly the prevention and control measures for it.
3. Name the Nation health programmes of India. Discuss Nation Leprosy eradication program.

**II. Write Short notes on any Ten**

**10 X 5 = 50**

4. USES of health related statistics.
5. Audio visul aids.
6. Anti retroviral treatment.
7. Road traffic accidents and its prevention.
8. DOTS treatment in tuberculosis.
9. Subcentre.
10. What are the function of integrated child development scheme (ICDS).
11. Causes of blindness. Write briefly on vitamin A prophylaxis programme.
12. Enumerate functions of primary health center.
13. Risk factors for Diabetes mellitus.
14. Scabies.
15. Prevention of hepatitis B

**III. Write Short Answers**

**10 X 2 = 20**

16. Marriage counseling.
17. Complication of Rubella.
18. AID prevention
19. Dai training programme.
20. Preventable blindness.
21. Typhoid vaccine.
22. Name four zoonotic diseases.
23. Define incubation period.
24. Herd immunity.
25. Function of anganwadi centre.

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II Year Diploma in Medical X-Ray Technology/III Year Certificate In**  
**Medical X-ray Technology**  
**RADIOGRAPHY INCLUDING RADIOLOGY PHYSICS, (N.S) R-I**  
**QP CODE – 3121**

**Time: 3 Hrs**

**Max Marks: 90**

**I. LONG ESSAY – ANSWER ANY TWO**

**2 x 10 = 20**

- 1) Explain in detail the types of interaction of radiation with matter.
- 2) Discuss factors affecting image formation on a conventional radiographic film.
- 3) What are isotopes? Name few isotopes used in radiology department. Write a note on half-life of an isotope?

**II. WRITE SHORT NOTES**

**10 x 5 = 50**

- 4) Mammography cassettes
- 5) Dental Film
- 6) Chemical Artifacts
- 7) Tube rating
- 8) I.I.T.V.
- 9) Cassettes
- 10) High mA technique
- 11) Safe Light
- 12) Half wave rectification
- 13) Wet bench and dry bench

**III. WRITE SHORT ANSWERS**

**10 x 2 = 20**

- 14) Computerized Radiography
- 15) Lethal dose
- 16) Secondary barriers
- 17) Filters
- 18) Auto transformer
- 19) Beam hardening artefact
- 20) Stationary Anode
- 21) Space charge effect
- 22) Tele-Roentgenogram
- 23) Ten day rule

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II Year Diplomain OT Technology/III Year Certificate course In**  
**OT Technology**  
**ANAESTHESIA AND ALLIED TOPICS (N.S)**  
**QP CODE – 3131**

**Time : 3 Hrs**

**Max Marks : 90**

**I. LONG ESSAY – ANSWER ANY TWO** **10 x**  
**2 = 20**

- 1) Describe perioperative management of 10 year old child posted for tonsillectomy.
- 2) Boyle's machine.
- 3) Describe in detail about cardio – pulmonary resuscitation (BLS algorithm)

**II. WRITE SHORT NOTES ON ANY TEN** **5 x 10 = 50**

- 1) Prone Position
- 2) Hypovolemic shock
- 3) Phenylephrine
- 4) Succinylcholine
- 5) Central venous pressure
- 6) Ringer lactate
- 7) OT Sterilization
- 8) Recovery room
- 9) Hypotension
- 10) Laryngoscope
- 11) Ketamine
- 12) Dopamine

**III. WRITE SHORT ANSWERS** **2 x 10 = 20**

- 1) Neostigmine
- 2) Nasopharyngeal Airway
- 3) Soda bicarbonate
- 4) Pin index
- 5) Inter costal drain
- 6) Ranitidine
- 7) Blood transfusion set
- 8) Epidural needle
- 9) Prevention of radiation hazards
- 10) Pediatric endotracheal tube

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II ND YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORDS TECHNOLOGY**  
**MEDICAL TERMINOLOGY**  
**QP CODE-3141**

**TIME :3 HRS**

**MAX MARKS:90**

**I. ANSWER THE FOLLOWING QUESTIONS.**

**3X5=15**

1. Purpose of learning the Medical Terminology?
2. Write any two commonly used diseases and Operation Terms of Eponyms and their meaning?
3. What are the important value and objectives of Medical Terminology?

**II. WRITE THE MEANING OF SUFFIXES**

**5X1=5**

1. Centesis
2. Lysis
3. Pexy
4. Pathy
5. Megaly

**III. WRITE THE MEANING OF ROOTS.**

**10X1=10**

- |          |            |           |                |           |
|----------|------------|-----------|----------------|-----------|
| 1. Aer   | 2. Blephar | 3. Cephal | 4. Cheil, Chil | 5. Chondr |
| 6. Costa | 7. Costa   | 8. Mening | 9. Metr        | 10. Lith. |

**IV. WRITE THE MEANING OF PREFIXES**

**5X1=5**

- |         |          |         |        |          |
|---------|----------|---------|--------|----------|
| 1. Hypo | 2. Macro | 3. Meso | 4. Sub | 5. Retro |
|---------|----------|---------|--------|----------|

**V. GIVE THE MEANING OF FOLLOWING THE PHOBIAS.**

**10x1=10**

- |                  |                  |                 |                 |
|------------------|------------------|-----------------|-----------------|
| 1. Anthro phobia | 2. Biblio Phobia | 3. Cyno Phobia  | 4. Dipsu Phobia |
| 5. Gato Phobia   | 6. Kyno Phobia   | 7. Lalo Phobia  |                 |
| 8. Myso Phobia   | 9. Naso Phobia   | 10. Zoo Phobia. |                 |

**PARAMEDICAL BOARD, BANGALORE**

**Annual Examination October 2016**

**VI. EXPAND THE FOLLOWING ABBREVIATIONS**

**10x1=10**

- |        |        |        |         |         |
|--------|--------|--------|---------|---------|
| 1. ASD | 2. BBB | 3. CVA | 4. DAMA | 5. EDD  |
| 6. MRT | 7. VD  | 8. WHO | 9. RHD  | 10. WBC |

**VII. GIVE THE MEANING FOR FOLLOWING THE COLOURS 5X1=5**

1. GREEN. 2. BLUE. 3. VOILET 4. BROWN 5. PURPLE

**VIII. GIVE THE MEANING FOR FOLLOWING THE NUMBERS. 5X1=5**

1. SEMI, 2. BI, DIS, DI 3. QUINQUE,  
4. SEX, HEX, 5. SEPTUM, HEPTA

**IX. WRITE THE MEDICAL TERMS FOLLOWING.**

**10X1=10**

1. ENLARGEMENT OF LIVER
2. REPAIR OF HERNIA.
3. HAIR LOSS
4. CRUSHING OF KIDNEY STONES
5. REMOVAL OF UTERUS.
6. HIGH BLOOD PRESSURE.
7. INFLAMMATION OF LIP
8. INFLAMMATION OF APPENDIX.
9. ABSENCE OF MENSTRUAL CYCLE.
10. FIXATION OF KIDNEY.

**X. DIFFERENTIATE FOLLOWING THE TERMS.**

**5X2=10**

1. HYDROCELE-BUBONOCELE.
2. SUPPRESSION- SUPPURATION.
3. HYPERPLASIA- HYPERPHASIS.
4. FRICTION-FRACTION
5. HERNIOTOMY-HERNIOPLASTY.

**XI. MATCH THE FOLLOWING**

**5X1=5**

1. MEGALY – LIKE
2. OSIS – CONDITION
3. PATHY – PUNCTURE
4. CENTESIS – DISEASE
5. OID I – ENLARGEMENT.

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II DDT Fundaments of Hemodialysis and Components**  
**QP Code 3151**

**Fundamentals of Haemodialysis & Components**

**TIME 3 HOURS**

**Max Marks: 90**

**I. LONG ESSAYS- ANSWER ANY TWO**

**10 x 2 = 20**

- 1) Describe in detail about initiation of haemodialysis in a new patient for the first time add a note on monitoring of the patient.
- 2) What are the complications during hemodialysis and there management
- 3) Describe Ultra filtration in Acute Renal Failure and Chronic Renal Failure patient.

**II. WRITE SHORT NOTES ON ANY TEN**

**5 x 10 = 50**

4. Clinical Assessment of adequacy of Hemodialysis
5. Non-infectious complications with dialysis by Catheter
6. Discontinuing dialysis and Saline Rinse
7. How do you reuse hollow fiber dialyzer
8. Various alarms in Hemodialysis machines
9. Two methods of Heparin Administration
10. Mention various medical problems in chronic hemodialysis patients
11. Sterilization and disinfection
12. Water treatment plant
13. Ultrapure Dialysate
14. Techniques of AV fistula canulation
15. Dialyzer reaction

**III. WRITE SHORT NOTES**

**10 x 2 = 20**

16. Two Drugs used in hypotension
17. Two antibiotics commonly used in Dialysis by Catheter patients
18. Two causes of vomiting in dialysis patients
19. Two types of Erythropoietins
20. Two disinfectants used in Dialyzer reprocessing
21. Two drugs which are dialyzable
22. Normal pulse and blood pressure
23. Normal values of Sodium and Potassium
24. Two viral infections which spread in haemodialysis unit
25. What are the cardiac complications in CKD patients

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPHTHALMIC TECHNOLOGY**  
**PAPER-I**  
**QP CODE – 3161**

*Your answers should be specific to the question asked.  
Draw neat labelled diagrams wherever necessary.*

**Time : 3 Hrs**

**Max Marks : 90**

**I. LONG ESSAY – ANSWER ANY TWO** **10 x**  
**2 = 20**

- 1) How to set up a trolley for patient undergoing eye surgery.
- 2) Bed making for all admitted patients.
- 3) Trial set

**II. WRITE SHORT NOTES ON ANY SIX** **5 x 6 = 30**

- 1) How to Ocular bandaging
- 2) In-Direct ophthalmoscopy
- 3) Sterilisation of tonometer
- 4) Post-operative care of eye patient
- 5) Epilation
- 6) How to perform Lensometry
- 7) Surgical instruments used in chalazion surgery
- 8) Back vertex distance and its importance
- 9) How to differentiate eye drops and ointment
- 10) Differences between direct and In-direct ophthalmoscopy
- 11) Pin hole
- 12) Types of Illuminations in slit lamp

**III. WRITE SHORT ANSWERS** **2 x 10 = 20**

- 1) Mention two types of ectropion
- 2) Contra-indication for bandaging of eyes
- 3) Sub-conjunctival injection
- 4) Uses of bandage contact lens
- 5) Types of glaucoma
- 6) Two types of retinoscopy
- 7) Two types of bifocals
- 8) What is focimeter
- 9) Mention two modes of treatment for squint
- 10) What are the causes of movement of glow at pupillary area when retinoscopy done at 1 meter

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II Year Diploma / III Year Certificate Course in**  
**Dental Mechanics**  
**Q.P. CODE – 3171**  
**Subject : Complete Dentures**

**Time: 1. 1/2 Hours**

**45 Marks**

**I. Long Essay**

**1 X 10 = 10**

1. Describe in detail the principles of teeth arrangement

**II. Write Short Notes**

**10X 5 = 50**

2. Relining and Rebasing
3. Anterior teeth selection principles
4. Immediate dentures
5. Mean value Articulator
6. Flasking and deflasking

**III. Write Short Answer**

**5X2 = 10**

7. Acrylic teeth.
8. Repair of denture
9. Splints
10. Dewaxing
11. Zero Degree Teeth

**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II ND YEAR DIPLOMA IN DENTAL HYGIENE / III YEAR**  
**CERTIFICATE**  
**COURSE IN DENTAL HYGIENE**  
**DENTAL HYGIENE & ORAL PROPHYLAXIS**  
**QP CODE-3181**

**TIME :1 1/2 HRS**

**MAX MARKS:45**

**I. LONG ESSAY.**

**1X10=10**

1. Define Chronic periodontitis. Describe the Clinical features of Chronic periodontitis.

**II. WRITE SHORT NOTES.**

**5X5=25**

1. Mode of attachment of calculus.
2. Dental stains.
3. Structure of periodontal ligament.
4. Periodontal pocket.
5. Ultrasonic scalers.

**III. WRITE SHORT ANSWERS.**

**2X5=10**

1. Periodontal pathogens.
2. Finishing and polishing instruments.
3. Cemento enamel junction.
4. Oral Cancer.
5. Gingival abscess.

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**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**II Year Diploma in DPT**  
**Q.P. CODE – 3191**  
**Subject : PATHOLOGY**

**Time: 3 Hours**

**90 Marks**

**I. Long Essay Answer any Three**

**3 X 10 = 30**

1. Classify anaemias. Write in detail about pathogenesis, clinical features and laboratory investigations of iron deficiency anaemia.
2. Write the stages of wound healing by secondary intention and write the factors affecting the healing of wound
3. What is pneumoconiosis and its consequences.
4. Define infarction. Write the risk factors, morphology and complication of myocardial infarction.

**II. Write Short Notes any 12**

**12X 5 = 60**

5. Pathologic calcification.
6. Shock
7. Differences between benign and malignant tumours
8. Pathogenesis and consequences of obesity
9. Pathogenesis and morphology of pulmonary tuberculosis.
10. Osteoarthritis.
11. Acute myeloid leukemia
12. Myasthenia gravis
13. Rheumatic heart disease
14. Morphology of aneurysms
15. Seminoma testis
16. Disseminated intravascular coagulation
- 17. Chemical Carcinogens**

**PARAMEDICAL BOARD, BANGALORE**  
**Annual Examination October 2016**  
**CERTIFICATE COURSE**  
**PHYSICS**  
**Q P CODE – 1101**

**Time: 1. 1/2 Hours**

**45 Marks**

**Long Eassy Answer any one**

**1 X 10 = 10**

1. Explain work, energy and power.
2. State Ohms law. Explain combination of resistances in series and in parallel.

**II. Write Short Notes on any Five.**

**5 X 5 =25**

3. Newton's laws of motion.
4. Refraction of light.
5. Longitudinal and transverse waves.
6. Laws of Electromagnetic induction
7. Coulombs law
8. PN junction
9. Nuclear reaction.

**III. Write Short Answer**

**5 X 2 = 10**

10. Velocity.
11. Vectors.
12. Dimensional formula
13. Lens
14. Expansion of solids.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical Laboratory Technology**

**TIME: 3 Hours**

**Max. Marks: 90**

**Section - A ANATOMY (Write in separate answer book)**

**QP CODE – 2101**

**I. LONG ESSAY – ANSWER ANY ONE**

**1 x 10 = 10**

- 1) Name the parts of respiratory system. Describe the lungs in detail.
- 2) Name the parts of gastro-intestinal system. Describe the stomach in detail.

**II. WRITE SHORT NOTES ON ANY FIVE**

**5 x 5 = 25**

- |                                 |                   |
|---------------------------------|-------------------|
| 3) Cerebellum                   | 7) Shoulder joint |
| 4) Inferior vena cava           | 8) Ear            |
| 5) Histology of skeletal muscle | 9) Testis         |
| 6) Coronary arteries            |                   |

**III. WRITE SHORT ANSWERS**

**5 x 2 = 10**

- 10) Name any four joints of lower limb
- 11) Name any four muscles of eyeball
- 12) Name any four types of synovial joint
- 13) Name any four cranial nerves
- 14) Name the parts of excretory system

**Section - B PHYSIOLOGY (Write in separate answer book)**

**QP CODE – 2102**

**I. Long Essay. Answer any one**

**1 X 10 = 10**

- 1) Name the hormones secreted by Posterior pituitary gland. Explain the actions of any one such hormone.
- 2) Describe the Pulmonary Volumes and capacities with their normal values.

**II. Write Short notes on any five.**

**5 X 5 = 25 marks**

- 3) Functions of saliva
- 4) Differences between the 2 types of muscles
- 5) Composition and functions Cerebrospinal Fluid
- 6) 2 Refractive Errors of Eye and their corrections
- 7) Family planning methods in females
- 8) Liver Function Tests

**III. Write Short answers .**

**5 X 2 = 10 marks**

- 9) Hypoxia
- 10) Importance of Blood grouping
- 11) 2 functions of Plasma proteins
- 12) Name the enzymes of Gastric juice
- 13) Define Apnoea and Dyspnoea

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY**  
**GENERAL PHYSICS**  
**QP CODE - 2121**

**Time: 1.1/2 hrs**

**Max. Marks: 45**

**I. LONG ESSAY — ANSWER ANY ONE**

**1 x 10 =10**

- 1) What is rectification? Discuss about Half wave and Full wave rectification.
- 2) What is Atomic number? Draw a neat diagram of an Atom and explain its structure.

**II. WRITE SHORT NOTES ON ANY FIVE**

**5 x 5=25**

- 3) Step down Transformer
- 4) Ammeter
- 5) Potential energy
- 6) Inverse square law
- 7) Anode heel effect
- 8) Production of X-rays.

**III. WRITE SHORT ANSWERS**

**5 x 2 =10**

- 9) K- edge
- 10) Film focus distance
- 11) Focusing cup
- 12) Electromagnetic spectrum
- 13) Secondary radiation

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY**  
**Q P CODE: 2131**

**TIME: 3 Hours**

**Max. Marks: 90**

**I. Long Essay Answer any Two**

**2 X 10 = 20**

1. Discuss various sources of contamination in Operation Theatre and Describe ways to prevent contamination of Operation Theatre.
2. Describe Pre – Operative and Post Operative care of abdominal surgery.
3. Discuss role of different members of Health care team.

**II. Short Notes Answer any Ten**

**10 X 5 = 50**

4. Operation Theatre cleanup procedure.
5. Autoclave
6. Skin Stapler
7. Absorbable Sutures
8. Surgical Scrubbing
9. Exchange area.
10. Disinfection
11. Abdominal Drain
12. Minor OT
13. Specimen preservation
14. Bio Medical waste.
15. Fumigation

**III. Short Answers**

**10 X 2 = 20**

16. Solution Drain
17. Vicryl
18. Endoscopy
19. Enema
20. Draping
21. Ambu Bag
22. Team Work
23. Ryles Tube
24. Consent
25. Ultrasound

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORDS TECHNOLOGY**  
**MEDICAL RECORD SCIENCE (MRS)**  
**QP CODE-2141**

**Time:3 Hrs**

**Max, Marks:90**

**I. Long Essay answer any Two**

**2X10=20**

1. Explain organization of Medical Records Department?
2. What is Medical Audit & Medical Records Committee? Explain
3. What is Assembling and Deficiency Check ? Explain with Medical Records formats?

**II. Write short notes any Ten.**

**10X5=50**

4. Explain the Medico Legal Aspects?
5. Types of Index Used in Medical Record Department?
6. Briefly explain Preservation and Retention Schedule of Medical Records?
7. Duties and Responsibilities of Qualified Medical Records officer in Hospital Administration?
8. Rules and Regulation of Birth and Death Act?
9. What types of Certificates issued in Medical Records Department?
10. What is Evidence? Write types of Evidence?
11. What is Census? Explain with design the format?
12. Explain the Forms Control Programme?
13. What types of Registers used in Medical Record Department? Explain
14. What is Qualitative Analysis and Quantitative Analysis of Medical Records?
15. Admission procedures

**III. Write short Answers**

**10X2=20**

16. High Court
17. Decree
18. Government Pleader
19. Public officer
20. Judgement
21. Length of Stay
22. OPD Chit
23. Summary Sheet
24. Diagnostic Index Card
25. Filing

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY**

**TIME: 3 Hours**

**Max. Marks: 90**

**SECTION — A, PHARMACOLOGY (Write in separate answer book)**

**Q P CODE: 2151**

**I. LONG ESSAY — ANSWER ANY ONE** **1 X 10 =10**

1. Classify Non Steroidal Analgesic Drugs (NSAIDs). Discuss the mechanism of action, uses and adverse effects of Aspirin.
2. Discuss the types of hypersensitivity reactions giving suitable examples.

**II. WRITE SHORT NOTES ON ANY FIVE** **5 X 5 = 25**

3. Vitamin D
4. Lignocaine
5. Heparin
6. Oral antidiabetic drugs
7. Calculate the amount of ingredients required to prepare one litre of normal saline.
8. Solid dosage forms

**III. WRITE SHORT ANSWERS** **5X2=10**

9. Mention the antidotes for Iron and Mercury poisoning
10. Name two Live attenuated vaccines
11. Name two drugs used in peptic ulcer
12. Name two antiseptics
13. Expand the abbreviations — a) TID b) HS

**SECTION — B, THEORY OF DIALYSIS (Write in separate answer book)**

**Q P CODE: 2152**

**I. Answer Any One :** **1 X 10 =10**

1. What are various Access used in Hemodialysis? Describe two types of Catheters and their complications.
2. How do you wash the accessories in Hemodialysis and describe the methods of Reuse of dialyzer and Disinfection of Dialyser.

**II. Write short notes on Any five :** **5 X 5 = 25**

3. Describe various Anticoagulants used in Hemodialysis and Complications of Heparin.
4. Prevention and management of Catheter infection.
5. Hardness of water
6. What are the lab investigations done in Hemodialysis patients.
7. Efficiency of Dialysis
8. Functions of Artificial kidney.

**III. Write short notes on (Any 5) :** **5 X 2 = 10**

9. Normal values of Urea, Creatinine
10. Two principle used in Hemodialysis
11. Normal Respiratory rate and Body temperature
12. Two types of Dialyzer
13. Two infections which spread in dialysis unit
14. Two sites of Arterio-Venous(AV) fistulas.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**OPHTHALMIC TECHNOLOGY**

**Paper-I**  
**Q.P Code : 2161**

**Time : 3 Hrs.**

**Max. Marks : 90**

**Your answers should be .specific to the questions asked.**  
**Draw neat labelled diagrams wherever necessary.**

**I.        LONG ESSAY (Answer any two)**

**2 X 10 = 20 Marks**

1. Describe layers of cornea with diagram .
2. Describe gross anatomy of lens.
3. Optical aberrations of eye.

**II.        SHORT ESSAY (Answer any ten)**

**10 X 5 = 50 Marks**

4. How to write prescription format ?
5. Uses of keratometer
6. Uses of A-scan and B-scan
7. Advantages of executive Bifocal lenses
8. Materials used in making contact lenses
9. What is non contact tonometry
10. Diagrammatic representation of myopia
11. How do you do neutralization of lenses?
12. Advantages of contact lenses in aphakic patients
13. Astigmatic fan
14. Draw diagram of anterior segment of eye
15. Myopia

**III.        Write Short Answers**

**10X2=20**

- 16 Drugs used for acute attack of angle closure glaucoma
- 17 2 systemic investigations before cataract surgery
- 18 What are high index glasses
- 19 Direct ophthalmoscopy
- 20 Therapeutic contact lenses
- 21 Uses of bandage contact lenses
- 22 Layers of eyeball
- 23 What are spherocylindrical lenses
- 24 Describe duction movents in eye
- 25 Types of bifocals

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANIC**  
**DENTAL MATERIAL AND METALLURGY (NS)**  
**QP CODE — 2171**

**TIME: 1.1/2 Hours**

**Max. Marks: 45**

**I. LONG ESSAY - ANSWER ANY ONE**

**1 X 10 = 10**

- 1) Classify dental investment materials. Write the composition and function of each ingredient of gypsum bonded investment.
- 2) Classify dental cements. Write the composition, setting reaction and uses of zinc oxide eugenol cement

**II. WRITE SHORT NOTES ON ANY FIVE**

**5 X 5 = 25**

- 3) Ductility and malleability
- 4) Write the difference between fluxes and antfluxes. Mention their examples
- 5) Steps in compression moulding techniques
- 6) Types of waxes
- 7) Dental plaster
- 8) Materials used in fabrication of denture base
- 9) Reversible hydrocolloid

**III. WRITE SHORT ANSWERS**

**5X2=10**

- 10) Mention different types of separating media
- 11) Crazeing
- 12) Imbibition and Syneresis
- 13) Electrodeposition
- 14) Duplicating materials

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE**

**Note : Write section A & section B in separate answer books**

**TIME: 1. 1/2 hrs**

**Max. Marks: 45**

**Section — A, GENERAL ANATOMY & HISTOLOGY (Write in separate answer book)**

**QP CODE - 2181**

**i. LONG ESSAY- ANSWER ANY ONE**

**1 x 9 = 9**

- 1) Describe the course and distribution of IX (glossopharyngeal) cranial nerve.
- 2) Describe the sensory and motor nerve supply of face.

**II. WRITE SHORT NOTES ON ANY TWO**

**2 x 5 = 10**

- 3) Branches of facial artery
- 4) Development of face
- 5) Thyroid gland

**III. WRITE SHORT ANSWERS**

**3 x 2 = 6**

- 6) Name four muscles of mastication
- 7) Parts of mandible
- 8) Name four bones of face

**Section — B, GENERAL PHYSIOLOGY (write in separate answer book)**

**QP CODE — 2182**

**I. Write short notes on any FOUR**

**4 x 4 = 16**

- 1) Stages of Erythropoiesis.
- 2) Functions of testosterone.
- 3) Deglutition.
- 4) E.C.G. (Electro cardio gram).
- 5) Posterior pituitary hormones.
- 6) Heart sounds.

**II Write short answers**

**2 x 2 = 4**

- 7) Name any two types of White blood corpuscles.
- 8) Name any two taste sensations.

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**PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**I YEAR DIPLOMA IN PHYSIOTHERAPY**

**Q P CODE: 2191**

**ANATOMY**

**TIME: 3 hrs**

**Max. Marks: 90**

**I. ANSWER ANY TWO**

**2 x 10 = 20**

- 1) Name the parts of the cardiovascular system. Describe the heart.
- 2) Name the endocrine glands. Describe thyroid gland in detail.
- 3) Name the parts of gastro-intestinal system. Describe liver in brief.

**II. WRITE SHORT NOTES ON ANY TEN**

**10 x 5 = 50**

- 4) Lungs
- 5) Ovary
- 6) Appendix
- 7) Histology of bone
- 8) Biceps brachii
- 9) Systemic circulation
- 10) Reflex arc
- 11) Skin
- 12) Cartilagenous Joint
- 13) Neuron
- 14) Stomach
- 15) Hamstring muscles

**III. WRITE SHORT ANSWERS**

**10 x 2 = 20**

- 16) Name four muscles of mastication
- 17) Name four muscles of lower limb
- 18) Mention the structures at hilum of the left lung
- 19) Name the layers of eyeball
- 20) Name four joints of upper limb
- 21) Mention four functions of cerebellum
- 22) Name any four bones forming skull
- 23) Name types of epiphyses
- 24) Mention two features of small intestine
- 25) Mention two features of hyaline cartilage

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**PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**III YEAR DIPLOMA IN PHYSIOTHERAPY**

**Q P CODE: 3201**

**SPORTS SCIENCE & PHYSIOTHERAPY**

**Time: 2 hrs**

**Max. Marks: 65**

**I. Long Essay - Answer any FOUR**

**4 X 10 = 40**

1. List five regional sports conditions in detail.
2. Write in detail about the principles of Physical education.
3. How will you handle Sports injury (Soft tissue) for early and better prognosis?
4. What will you achieve by physical education in pre-school children?
5. Define First aid in sports. How will you organise first aid coverage on the fields in the athletic competition?

**II. Write short notes on any FIVE**

**5 X 5 = 25**

6. Golfer's elbow
7. Plantar Fascitis
8. Carpel Tunnel Syndrome
9. Adhesive Capsulitis
10. Strain V/s Sprain
11. Anterior Cruciate Ligament (ACL) injury

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**Medical Laboratory Technology**

**QP CODE — 3102**

**Subject: Pathology**

**Time: 3 Hours**

**Max. Marks : 90**

**I. Long Essay : (Answer any two)**

**2x10=20**

1. Mention the various methods of haemoglobin estimation. Explain in brief the principle and procedure of cyanmethaemoglobin method. [2+2+6]
2. Mention the various blood components. Write in brief about the storage of blood components. [4+6]
3. Write the principle and procedure of Haematoxylin & Eosin (H & E) staining. [2+8]

**II. Short Essay : (Answer any ten)**

**10x5=50**

4. Coomb's cross match
5. APTT ( Activated Partial Thromboplastin time)
6. Barr body
7. Microtome knives
8. Honing
9. EDTA ( Ethylene diamine tetra acetic acid)
10. Uses of cytology
11. Factors affecting decalcification
12. Bence Jones Protein in urine
13. Crystals found in acidic urine
14. Advantages of formalin fixative
15. Preparation of Leishman stain

**III. Short Answer :**

**10x2=20**

16. Draw a hyaline and a granular casts
17. Name two Romanowsky stain
18. Draw any two poikilocytes.
19. Two indications of clotting time
20. Two advantage of Fine Needle Aspiration Cytology (FNAC)
21. Mounting of slide
22. Two different sites of Bone marrow aspiration.
23. Normal Sperm count [ value with unit]
24. Mention the normal values of Cerebro Spinal Fluid (CSF) protein. [ value with unit]
25. Name any two types of embedding moulds

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR**

**QP CODE — 3112**

**Subject: Paper II**

**Time 3 Hrs.**

**Marks:90**

**I. Long Essay — Answer any TWO**

**2x10=20.**

1. Mention MCH indicators. Discuss briefly about causes and measures to reduce maternal mortality.
2. Discuss the role of health worker in the treatment of minor ailments.
3. Define Health education .Discuss briefly about the principles of health education.

**II. Write Short notes on any TEN.**

**10x5=50.**

4. Objectives of antenatal care.
5. Community participation.
6. Causes of low birth weight
7. Complications of post natal care.
8. Advantages of breastfeeding.
9. Aims and objectives of health education.
10. Medical Termination of Pregnancy (MTP) act.
11. Temporary methods of family planning.
12. Job responsibilities of health worker female.
13. Functions of village health guide.
14. Advantages and disadvantages of oral contraceptive pills.
15. Indian Red Cross Society.

**II. Write Short Answers.**

**10x2=20**

16. Exclusive breast feeding.
17. Couple protection rate.
18. Five cleans of intranatal care.
19. Four types of communication.
20. Traditional birth attendant.
21. Four causes of infant mortality rate.
22. Medico Social Worker.
23. Uses of condom.
24. Four essential drugs.
25. Name two live vaccines.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**Medical X-Ray Technology**

**QP CODE — 3122**

**Subject: RADIOGRAPHY INCLUDING MEDICAL RECORDS R — II**

**Time: 3 hrs**

**Max. Marks: 90**

**I. LONG ESSAY — ANSWER ANY TWO**

**2 x 10 = 20**

- 1) What are Medico legal records? How do you maintain them in Radio diagnosis department?
- 2) What is Hysterosalpingogram (H.S.G)? Describe the procedure in detail and indications for H.S.G.
- 3) What is Intravenous urography? Explain the procedure in detail and add a note on contrast reaction.

**II. WRITE SHORT NOTES ON ANY TEN**

**10 x 5 = 50**

- 4) Fistulogram
- 5) Optic foramen view
- 6) Collimators
- 7) MilliSeivert
- 8) Data acquisition in C.T.
- 9) Grids
- 10) Developing solution
- 11) Tele-Roentgenogram
- 12) Penetrated view and its applications
- 13) Image unsharpness
- 14) Abdominal binder
- 15) Picture Archiving And Communication System (PACS)

**III. WRITE SHORT ANSWERS**

**10 x 2 = 20**

- 16) Radiography of thoracolumbar spine
- 17) Scaphoid view.
- 18) Stenver's view
- 19) Wet bench
- 20) Non-ionic contrast
- 21) Gonadal shield
- 22) Beam restrictors
- 23) Indications for Barium enema
- 24) Orthopantomogram
- 25) Single emulsion film

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**OT Technology**  
**QP CODE - 3132**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I LONG ESSAY- ANSWER ANY TWO** **2x10=20**

1. What is Caesarian Section.? Discus Emergency Lower segment Caesarean section (LSCS)
2. Describe Laparoscopic Surgery. How do you sterilize Laparoscopic instruments
3. Describe Day care surgery? What are its benefits.

**II. WRITE SHORT NOTES ON ANY TEN** **10x5=50**

4. Burr hole
5. Appendectomy
6. Cataract Surgery
7. Hydrocele
8. Bronchoscopy
9. I C D Tube
10. Diabetic foot care
11. Burns
12. External Fixation
13. Slab Splinting
14. Skin Graft
15. Electro cautery

**III WRITE SHORT ANSWERS** **10 X2=20**

16. Excision Biopsy
17. Foreign body in ear
18. Local Anesthesia
19. Dendon repair
20. Sims position
21. Chemotherapy
22. Intraocular Lens (IOL) Implantation
23. Transurethral Resection of the Prostate (TURP)
24. Lipoma
25. Retractors

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**Medical Record Technology**

**HOSPITAL STATISTICS & BIOSTATISTICS**

**QP CODE — 3142**

**Time : 3 Hours.**

**Max. Marks:90.**

**I. Long Essays.**

**2x10=20**

1. Write about analysis of hospital organization.
2. Mention the classification of hospital and write the relationship of nursing department with medical record department.
3. Mention types of laboratories. Add a note on quality assurance program in the laboratory.

**II. Write briefly on any TEN**

**10x5=50**

4. Role of hospital in primary health care.
5. Mention general principles of hospital management.
6. Role of dietary department in hospital management.
7. What are the outpatient services provided in the hospital.
8. Nosocomial infection.
9. Mention four occupational hazards in hospital.
10. Public health care system in India.
11. Planning cycle with types of plan.
12. Evaluation of hospital services.
13. Types of emergency services provided in hospitals.
14. Hospital consultant.
15. Emergency Services.

**III. Write briefly on any FIVE**

**10x2=20**

16. Classification of hospital waste.
17. Medico-social services department.
18. Laundry services.
19. Medical records importance in hospital administration.
20. Sources of hospital records.
21. Mention functions of laboratory.
22. Role of pharmacy in hospital medical records department.
23. Man made disasters.
24. Physical medicine.
25. Types of security in hospital organization.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY**  
**Renal Replacement Therapy Other Than Haemodialysis**  
**& Patient Teaching**  
**QP CODE - 3152**

**Time: 3 hrs**

**Max. Marks: 90**

**I. LONG ESSAYS - ANSWER ANY TWO** **2 x 10 = 20**

- 1) What are various complications of Peritoneal dialysis patients and add a note on CCPD(Continuous Cyclical peritoneal Dialysis)
- 2) Composition of Dialysis Team and Functions of each member of Team
- 3) What are types of Continuous Renal Replacement Therapy (CRRT) and mention in detail about Sustained Low-Efficiency Dialysis (SLED)

**II. WRITE SHORT NOTES ON ANY TEN** **10 x 5 = 50**

- 4) What are the various solutions in Peritoneal dialysis
- 5) Financial Issues of Dialysis patients
- 6) Mention indications of Plasmapheresis
- 7) Various Anticoagulations in plasmapheresis
- 8) Continuous arteriovenous hemodialysis (CAVHD)
- 9) Peritoneal Equilibration Test(PET test)
- 10) Monitoring of patient while on Plasmapheresis
- 11) Complications of Plasmapheresis
- 12) Replacement solutions in plasmapheresis
- 13) Non Surgical management of Chronic Renal Failure Patients without Hemodialysis (HD), Peritoneal dialysis (PD), or Transplant
- 14) Causes of Seizures in Dialysis patient
- 15) Maintenance of record book of patients of Hemodialysis

**III. WRITE SHORT ANSWERS** **10 x 2 = 20**

- 16) Two causes of Acute Renal failure
- 17) Two Poisons removed by Dialysis
- 18) Icodextrin
- 19) Two Non Infectious complications of Continuous ambulatory peritoneal dialysis (CAPD)
- 20) Two contraindications for Peritoneal dialysis
- 21) Two Antihypertensive drugs
- 22) Two Angiotensin-Converting Enzyme (ACE) inhibitors
- 23) Normal Values of Sodium and Potassium
- 24) Two Types of Antibodies in plasma
- 25) Two causes of Exit blockage in Peritoneal dialysis (PD)

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**Ophthalmic Technology**

**PAPER –11**  
**QP CODE-3162**

**Time: 3hrs**

**Max.Marks:90**

**I. Long essay — Answer any Two.**

**2 x10 = 20**

- 1) What are the causes of preventable blindness. Mention steps taken to reduce the burden of blindness by Nation Programme for Control of Blindness (NPCB).
- 2) What is Eye bank. What are various methods adopted to increase collection of donar cornea.
- 3) What are Low visual aids, where is it used.

**II. Write short notes on any TEN.**

**10 x 5 = 50**

- 4) Survey methodology.
- 5) Snellin's Visual acuity chart .
- 6) Consent format.
- 7) SAFE strategy.
- 8) Health education for a patient with Diabetes Mellitus.
- 9) Disease index.
- 10) Various methods of preservation of donar cornea.
- 11) School screening.
- 12) International classification of Diseases.
- 13) Prism and it's uses.
- 14) Rehabilitation of the blind.
- 15) Tinted Glasses.

**III. Write short answers**

**10 x2 = 20**

- 16) Name two causes of sudden painful loss of vision.
- 17) Classification of Diabetic Retinopathy
- 18) Bitot's spot.
- 19) Irregular astigmatism.
- 20) Name two causes of dry eye.
- 21) Name two objectives of vision 20 20.
- 22) Name instruments used to see fundus.
- 23) various routes of drug delivery in the eye.
- 24) Name instruments used to check intraocular pressure of the eye
- 25) Advantages of using a Streak Retinoscope.

**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS**  
**PARTIAL DENTURES, ORTHODONTIA, MAXIOFACIAL PROSTHESIS**  
**QP CODE - 3172**

**Time: 1 '1/2 hrs**

**Max. Marks: 45**

**I. LONG ESSAY**

**1 X 10 =10**

**1)** Define Pontic. What are different types of pontic and discuss the principles of pontic design.

**II WRITE SHORT NOTES**

**5 X 5=25**

- 2) Direct retainers
- 3) Connectors in fixed partial dentures
- 4) Principles of wire bending
- 5) Parts of a cast partial denture
- 6) Adams clasp

**III. WRITE SHORT ANSWERS**

**5 X2 =10**

- 7) Pickling
- 8) Gingivally approaching clasp
- 9) Arbitrary blackout
- 10) Mention different die materials used
- 11) Centrifugal casting machine

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS**  
**DENTAL HEALTH EDUCATION, SOCIAL & PUBLIC HEALTH & PREVENTIVE**  
**DENTISTRY**  
**QP CODE - 3182**

**Time: 1 '1/2 hrs**

**Max Marks: 45**

**I. Long essay**

**1 x10=10**

1. Describe in Indian population prevalence and prevention of Periodontal diseases.

**II. Write short notes**

**5x5=25**

2. Dental caries.
3. Aims and objectives of Dental Health education.
4. Community water supply and implication on dental health.
5. Effects of deleterious habits on dental structure.
6. Dental camps.

**III. Write short answers**

**2x5=10**

7. Dental audio-visual aids
8. Child care counseling
9. Bass method of tooth brushing.
10. Inter dental cleaning aids.
11. Oral health in handicapped.

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**PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**II D.P.T- PHARMACOLOGY**

**QP CODE – 3192**

**Time: 3 hrs**

**Max. Marks: 90**

**I. Long Essay (Answer any FOUR)**

**4 X 15 = 60**

1. Discuss the pharmacology of adrenergic drugs.
2. Discuss the pharmacology of competitive neuromuscular blockers
3. Discuss the pharmacology of first line anti - TB drugs
4. Discuss the pharmacology of Angiotensin-Converting Enzyme (ACE) Inhibitors.
5. Discuss the pharmacology of drugs used in Bronchial Asthma

**II. Write short notes on any FOUR**

**4 X 5 = 20**

6. Atropine
7. Intravenous route of drug administration
8. Cephalosporins
9. Diazepam
10. Pre- anaesthetic medications

**III. Write short answers**

**5 X 2=10**

11. Name two antiseptics
12. Name two immunosuppressants
13. Name two opioid analgesics
14. Name two oral antidiabetic drugs
15. Name two glucocorticoids

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**CERTIFICATE COURSE**  
**CHEMISTRY**  
**QP CODE 1102**

**Time: 1. ½ hrs**

**hrs**

**Max. Marks: 45**

**I. LONG ESSAY-ANSWER ANY ONE**

**1 x 10 = 10**

- 1) Explain the manufacture of sulphuric acid by contact process and give the uses
- 2) Discuss any two preparations of halogens and their uses

**II. WRITE SHORT NOTES ON ANY FIVE**

**5x5=25**

- 3) Difference between colloids and crystalloids
- 4) Henderson's equation
- 5) Types of buffer solutions
- 6) Radioactivity
- 7) DNA and RNA
- 8) Functional properties of enzymes and antibodies
- 9) Preparation and uses of ethyl acetate

**III. WRITE SHORT ANSWERS**

**5 x 2 = 10**

- 10) Glycine and alanine
- 11) Preparation of acetone
- 12) Manufacture of ethyl alcohol from molasses
- 13) Ring structure of maltose and sucrose
- 14) Saturated and unsaturated hydrocarbons

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical Laboratory Technology**

**QP CODE — 2103**

**Subject: Biochemistry**

Time 3 Hrs.

**Max. Marks: 90.**

**I LONG ESSAY- ANSWER ANY TWO**

1. Explain photoelectric colorimeter with diagram and its uses in laboratory.  
**(7+3 =10)**
2. Define Carbohydrates. Classify them with suitable examples and add a note on its functions.  
**(2+5+3 =10)**
3. Explain enzymes under following headings.  
a) Definition b) Classification c) Specificity d) Active site e) Diagnostic enzymes  
**(2+2+2+2+2=10)**

**II. WRITE SHORT NOTES ON ANY TEN**

**10 x 5=50**

4. Compound Lipids
5. Functions of Proteins
6. Theory of Acid- base titration
7. Explain Normality and Molarity with examples
8. Chemical balance
9. Arrangement of reagents, glassware in laboratory
10. Sterilisation methods of glass wares
11. Explain atomic number, atomic weight and molecular weight with examples
12. Hot air oven
13. Isoenzymes
14. Protein denaturation
15. Functions of Calcium and Phosphates

**III WRITE SHORT ANSWERS**

**10X2=20**

16. Essential amino acids
17. Give Two examples each for strong acids and weak acids
18. Define pH. What is normal pH of blood
19. Structure of atom
20. Epimers
21. Definition of Buffers
22. Uses of indicators
23. Triacylglycerol
24. Equivalent weight
25. Primary standard

**PARAMEDICAL BOARD, BANGALORE**  
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**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR**  
**QP CODE — 2111**  
**Subject: Paper I**

Time 3 Hrs.

**Max. Marks: 90.**

**I. Long Essay — Answer any TWO** 2x10=20.

1. Enumerate different types of Family. Discuss advantages and disadvantages of Nuclear family and joint family.
2. Describe the anatomy of female reproductive system. Describe the menstrual cycle.
3. Describe the function of Skin, Liver, Heart and Kidney.

**Write II. Short notes on any TEN.** 10x5=50.

4. What do you mean by Rehabilitation. Mention different types of rehabilitation.
5. Iceberg Phenomenon of disease.
6. Break point chlorination.
7. Acculturation.
8. Describe Briefly Indicators of Health.
9. Effects of smoking on Health.
10. Germ theory of disease.
11. Function of Blood.
12. Socio —Economic classification.
13. With help of diagram, explain Epidemiological traid.
14. Two function of Skeletal system.
15. Write the difference between incidence and prevalence.

**III. Write Short Answers.** 10x2=20.

16. Primordial prevention.
17. Mention different dimension of health.
18. Positive Health.
19. III — effects of alcoholism on family.
20. Pancreatic harmones.
21. Is poverty a disease- explain.
22. Anthropology.
23. Pandemic.
24. Difference between disease elimination and eradication.
25. Blood groups.

**PARAMEDICAL BOARD, BANGALORE**  
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**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical X-Ray Technology**

**QP CODE — 2122**

**Subject: Anatomy**

Time : 1. ½ Hrs

Max marks: 45

**I Long Essay – answer any two**

**2x10=20**

1. Name the parts of central nervous system. Describe cerebrum in detail.
2. Name the parts of respiratory system. Describe right lung in detail.
3. Name the parts of alimentary system. Describe pancreas in detail

**II Short Notes – answer any three**

**3x5=15**

4. Thyroid gland
5. Ligaments of uterus
6. Kidney
7. Synovial joint

**III Short answers**

**5x2=10**

8. Name 4 muscles of upper limb
9. Name parts of a typical vertebra
10. Name the parts of eyeball
11. Name the layers of skin
12. Name the parts of a long bone

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**OT Technology**

**Time 3 Hrs.**

**Max. Marks: 90.**

**SECTION – A Biochemistry (Write in separate answer book) QP CODE – 2132**

**I LONG ESSAY- ANSWER ANY ONE**

**1x10=10**

1. Write briefly about functions of Carbohydrates .And add a note on its digestion and absorption. (5+5=10)
2. Define acids, Bases and salts. Write a note on body buffers (2+2+2+4=10)

**II. WRITE SHORT NOTES ON ANY TWO**

**2x5=10**

3. Maintenance of blood glucose.
4. Urea and creatinine Clearance tests.
5. Normal constituents of Urine.

**III WRITE SHORT ANSWERS**

**5X2=10**

6. Heat and acetic acid test
7. Normal values of serum electrolytes.
8. Normal values of blood urea and serum creatinine.
9. Normal values of fasting and post prandial blood glucose.
10. Specific gravity of urine

**SECTION – B, PHARMACOLOGY (Write in separate answer book) QP CODE – 2133**

**I. ANSWER ANY ONE**

**1 x 10 =10**

1. Enumerate the various Routes of Drug Administration. Write the Advantage and Disadvantage of Intravenous route. ( 4+3+3=10)
2. Classify Non-Steroidal Anti-Inflammatory Drugs (NSAID). Discuss the mechanism of action, therapeutic uses and adverse reactions of Aspirin. ( 3+5+2=10)

**II. WRITE SHORT NOTES OF ANY TWO**

**2 x 5 =10**

3. Diazepam.
4. Semi-synthetic penicillin's.
5. Lignocaine.

**III. WRITE SHORT ANSWERS**

**5 x 2 =10**

6. Name two uses of Atropine.
7. Mention two Disinfectants.
8. Name two drugs used in emesis.
9. Write two uses of Co-trimoxazole.
10. Name two Inhalational Anaesthetics.

**SECTION – C, MICROBIOLOGY (Write in separate answer book) QP CODE – 2134**

**I. Answer any one**

**1X10=10**

1. Define nosocomial infections. Write in detail about biomedical waste management
2. Define sterilization. Discuss in detail about dry heat sterilization

**II. Write short notes on any two**

**2X5=10**

3. Cryptococcosis
4. Pasteurization
5. Tetanus

**III. Write short answers**

**5X2=10**

6. Name four DNA viruses
7. Name four vaccines
8. Name four contributions of Louis Pasteur
9. Name two bacteria causing diarrhea
10. Name two gram positive cocci

**PARAMEDICAL BOARD, BANGALORE**  
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**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**

**Medical Record Technology**

**SECTION – A Anatomy (Write in separate answer book) QP CODE – 2142**

- I. Long Essay – answer any one** **1x10=10**
1. Name the parts of male reproductive system. Describe testis in detail.
  2. Name the parts of alimentary system. Describe stomach in detail
- II. Short Notes – answer any two** **2x5=10**
3. Coronary arteries
  4. Trachea
  5. Histology of cross section of compact bone
- III. Short answers** **5x2=10**
6. Name 2 muscles of neck
  7. Name the salivary glands
  8. Name the parts of uterus
  9. Name 2 branches of brachial artery
  10. Name the parts of brain

**Section B —Physiology (Write in separate answer book) Q-P code -2143**

- I. Write short notes on any four** **4x5=20**
1. Name plasma proteins. Explain their functions.
  2. Lung volumes & capacities
  3. Composition of bile.
  4. Normal and abnormal constituents of urine.
  5. Functions of thyroid hormone.
  6. Family planning methods in males and females.
- II. Write short answers** **5x2=10**
7. Define cardiac output and stroke volume
  8. Aeromegaly
  9. Composition of CSF
  10. Functions of middle ear
  11. Types of muscles.

**SECTION –C, PATHOLOGY& MICROBIOLOGY (Write in separate answer book) 2144**

- I. Long Essay (Answer any one)** **1 x 10= 10**
1. What is Microbiology? Write briefly about the different sections in the Microbiology department
  2. Write the different types of Hemoglobin estimation. Briefly write about Sahli's method
- II. Short Essay on any two** **2x 5 = 10**
3. Draw a neat diagram of Binocular Light Microscope
  4. Write difference between gram positive and gram negative organisms
  5. Define tuberculosis. Write the different type of tuberculosis
- III. Short Answers** **5x 2 = 10**
6. Normal components in urine microscopy
  7. Why WIDAL Test is done ?
  8. What is Lab Information System (LIS)?
  9. Terminology used in Sperm count
  10. Two fixatives used in histopathology

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# **PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

## **I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN DIALYSIS TECHNOLOGY**

### **SECTION – A Biochemistry (Write in separate answer book) QP CODE – 2153**

#### **I LONG ESSAY- ANSWER ANY ONE**

1. Explain urea cycle under following headings  
a) Sources of nitrogen and site of urea synthesis b) urea cycle c) normal blood urea level  
(3+5+2=10)
2. What are the normal physical and chemical compositions of urine? Name six abnormal constituents of urine. (6+4=10)

#### **II. WRITE SHORT NOTES ON ANY FIVE**

**5x5=25**

3. Write briefly on digestion and absorption of carbohydrates
4. Metabolic acidosis
5. Chromatographic techniques and its application in dialysis
6. Urea and creatinine clearance tests
7. Hormones involved in blood glucose maintenance.
8. Uses of spectrophotometer and colorimeter.

#### **III WRITE SHORT ANSWERS**

**5X2=10**

9. Write two differences between plasma and serum.
10. Name two monosaccharides
11. Name amino acids involved in synthesis of creatinine.
12. Name electrolytes and their normal values.
13. Biuret test.

### **SECTION – B Microbiology (Write in separate answer book) QP CODE – 2154**

#### **I. Long essay**

**1\*10=10**

1. Define and classify immunity. Write in detail about active immunity
2. Write a neat labeled diagram of bacterial cell. Write about bacterial spore

#### **II. Write short notes on any five**

**5\*5=25**

3. Fumigation
4. Sterilization of dialysis room
5. Bacteria growth curve
6. Standard precautions
7. Anaphylaxis
8. Robert Koch

#### **III. Write short answers**

**5\*2=10**

9. Name two gram positive cocci
10. Name four articles sterilized by autoclave
11. Name four bacteria present as normal
12. Name two bacteria causing infections in ICU
13. Name two gaseous disinfectants

**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Ophthalmic Technology**  
**Q.P Code : 2162**

Time : 3 Hrs.

Max. Marks : 90

*Your answers should be specific to the questions asked.*

*Draw neat labelled diagrams wherever necessary.*

- I. **LONG ESSAY (Answer any two)** **2 X 10 = 20 Marks**
1. What is chemical injuries in eye ?first aid given to such patients
  2. How to screen for camp patients
  3. What are the pathological examinations done for ophthalmic patients routinely
- II. **Short Essay** **10 X 5 = 50**
4. Diabetic retinopathy
  5. Types of blocks used in cataract surgery
  6. How to do lacrimal syringing
  7. Types of tonometry
  8. Steroids used in ophthalmic conditions
  9. Uses of pilocarpine
  10. Difference between drops and ointments into eye
  11. WHO classification of Vitamin-A deficiency
  12. Stages of corneal ulcer
  13. Uses of fluorescein dye in eye
  14. How to classify glaucoma
  15. Types of amblyopia
- III. **Write Short Answers** **10X2=20**
16. Voriconazole eye drops
  17. Mention some antiviral drugs used
  18. Local anaesthetics used in ophthalmology
  19. Types of senile cataract
  20. Uses of glycerol in ophthalmology
  21. Causes of night blindness
  22. 2 causes of paralytic squint
  23. Antiglaucoma drugs
  24. Types of amblyopia
  25. What is back vertex distance? Importance



**APPLIED ORAL ANATOMY Q.P Code : 2172**

**Max. Marks : 45**

1) Describe the Anatomy of Mandibular permanent first molar.

### 3) Balanced occlusion

### 5) Significance of incisive papilla

### 7) Centric relation

8) Maxillary lateral incisor

## 9) Mandibular supporting structures

10) Rugae

### 11) Bilabial sounds

## 12) Freni and its significance

13) Mid-palatine raphe

14) Overjet

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS**

**Section- A, GENERAL PATHOLOGY & MICROBIOLOGY**

**(Write in separate answer book) QP code - 2183**

**Time : 1.1/2 Hrs.**

**Max. Marks : 45**

**I. Long Essay (Answer any one)**

**1 x 9= 9 Marks**

01. Classification of vitamins; write in detail manifestation of vitamin D deficiency
02. Define necrosis. What are the types of necrosis? Write in brief coagulative necrosis.

**II. Short Essay on any four**

**4x 5 = 20 Marks**

03. Briefly describe oral leukoplakia
04. Difference between Benign and Malignant Neoplasia
05. Define an ulcer. Write the causes for aphthous ulcer
06. Classify odontogenic cyst
07. Pyogenic granuloma
08. Write briefly the cellular event of inflammation

**III. Short Answers**

**3x 2 = 6 Marks**

09. Define immunity with example
10. Name two special stains for candida
11. What are Acid fast bacilli? Give two examples

**Section- B, GENERAL PHARMACOLOGY (Write in separate answer book)**

**QP CODE- 2184**

**I. Write short answers**

**5 x 2 = 10**

1. Define Pharmacokinetics.
2. Write therapeutics uses and adverse effects of Lignocaine.
3. Mention 1 use and 1 adverse effect of Morphine.
4. Write two uses of Anticoagulants.
5. Vitamin D

# **PARAMEDICAL BOARD, BANGALORE**

## **ANNUAL EXAMINATION OCTOBER - 2016**

### **III D.P.T- YOGA & MENTAL HEALTH**

**QP CODE – 3202**

**Time: 2 hrs**

**Max. Marks: 65**

**I. Long Essay - Answer any FOUR**

**4 X 10 = 40**

1. Describe the techniques of Suryanamakara.
2. Discuss about Meditational asanas.
3. Effects of Bandha's and Kriya's.
4. Discuss the psycho-physiological concepts of Yoga.
5. What are the main asanas to control Diabetes and its uses.

**II. Write short notes on any FIVE**

**5 X 5 = 25**

6. Matsyasana
7. Jala Neti
8. Matured Personality
9. Bhujangasana
10. Dhanurasana
11. Padmasana

# **PARAMEDICAL BOARD, BANGALORE**

## **ANNUAL EXAMINATION OCTOBER - 2016**

**I DPT - Section A —PHYSIOLOGY (Write in separate answer book)**

**Q-P code -2192**

**1. Long essay (Answer any THREE)**

**3x10=30**

1. Name clotting factors, Explain steps involved in Hemostasis.
2. Define blood pressure, Explain regulation of BP.
3. Explain transport and exchange of oxygen and carbon dioxide in lungs & tissues.
4. Explain composition and function of Bile

**11. Write short notes on any five**

**5x5= 25**

5. Function of Glucocorticoids
6. Function of progesterone
7. Define GFR. What are the factors affecting GFR
8. Structure & transmission across neuromuscular junction.
9. Classification of nerve fibres
10. Hemisection of spinal cord.
11. Nuclei and functions of basal ganglia.

**111. Write short answers**

**5x2=10**

12. Components of Reflex arc
13. Saltatory conduction
14. Female contraceptive methods
15. Hemophilia
16. Clinical features of Cushing's syndrome

### **Section B —Biochemistry (Write in separate answer book)**

**I LONG ESSAY- ANSWER ANY ONE**

1. Define Lipids. Classify them suitable examples. Add a note on its functions of lipids in our body. **(2+5+3=10)**
2. Name fat soluble Vitamins. Discuss function and deficiency of any two of them. **(2+4+4=10)**

**II. WRITE SHORT NOTES ON ANY ONE**

**1x5=5**

3. Water soluble Vitamins
4. Functions and deficiency manifestation of calcium

**III WRITE SHORT ANSWERS**

**5X2=10**

5. Beri Beri
6. Conjugate Protein
7. Essential Amino acids
8. Normal Range of serum electrolytes
9. BMR

**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**Medical Laboratory Technology**

**QP CODE — 3103**

**Subject: Microbiology**

**Time: 3 Hours**

**Max. Marks: 90**

**I. Long essay-Answer any two**

**2\*10=20**

1. Enumerate the bacteria causing urinary tract infections. Write a note on lab diagnosis
2. Describe in detail ELISA test
3. Discuss the laboratory diagnosis of pulmonary tuberculosis

**II. Write short notes on any ten**

**10\*5=50**

4. Standard precautions
5. Anaphylaxis
6. Oxidase test
7. Methicillin-resistant Staphylococcus aureus (MRSA)
8. Cryptococcosis
9. Laboratory diagnosis of enteric fever
10. Laboratory diagnosis of malaria
11. Antibiotic sensitivity testing
12. VDRL test
13. Life cycle of Ascaris lumbricoides
14. Agglutination reactions
15. Indole test
16. Biomedical waste management

**III. Write short answers**

**2\*10 = 20**

17. Name two anaerobic bacteria
18. Name two h<sub>2</sub>S producing bacteria
19. Name two pigment producing bacteria
20. Name two bacteria causing nosocomial infections
21. Name two yeast like fungi
22. Name two bacteria causing dysentery
23. Rheumatoid arthritis (RA) test
24. Name two spore forming bacteria
25. Name two bacterial vaccines
26. Name two intradermal tests

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR**

**QP CODE — 3113**

**Subject: Paper III**

**Time 3 Hrs.**

**Max. Marks: 90**

**I. Long Essay — Answer any TWO**

**2x10=20.**

1. Enumerate the occupational diseases. Write briefly about the prevention and control measures for it.
2. Mention International health agencies. Write briefly about the functions of WHO.
3. Enumerate the public health acts. Discuss the ESI act.

**II. Write Short notes on any TEN.**

**10x5=50.**

4. Functions of UNICEF.
5. Mention four functions of primary health centre.
6. Common problems of the aged.
7. First aid in burns.
8. Street children.
9. Eligible couple.
10. International Red Cross society.
11. Juvenile delinquency.
12. Community participation.
13. Millennium development goals.
14. Functions of subcentre.
15. Social security.

**III. Write Short Answers.**

**10x2=20**

16. Nuclear family.
17. Child labour.
18. Dowry prohibition.
19. Medico social worker.
20. Indian factory act.
21. Diarrheal disease control programme.
22. The all India blind relief society.
23. Importance of breast feeding.
24. Panchayat raj.
25. ASHA Worker.

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# **PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN  
Medical X-Ray Technology**

**QP CODE — 3123**

**Subject: RADIOGRAPHY INCLUDING NEWER IMAGING TECHNOLOGY R — III**

**Time: 3 hrs**

**Max. Marks: 90**

**I. LONG ESSAY — ANSWER ANY TWO**

**2 x 10 = 20**

- 1) Mention different components of Ultrasound machine and its functioning. What are sonic waves? Write a note on properties of ultrasonic waves.
- 2) Write a note on principle of CT scan machine. Explain briefly about Multidetector computed tomography (MDCT).
- 3) What is Digital Mammography? Mention the differences between conventional and digital mammography. Explain the key features of conventional mammography with respect to cassettes and intensifying screens.

**II. WRITE SHORT NOTES ON ANY TEN**

**10 x 5 = 50**

- 4) Peripheral limb CT Angiography
- 5) Skyline view for patella
- 6) Artifacts in radiography
- 7) Double contrast barium swallow
- 8) Hysterosalpingography
- 9) T-tube cholangiogram
- 10) Precession and Larmour frequency
- 11) Thermoluminescent Dosimeter(T.L.D) Badge
- 12) Portable X-ray machine
- 13) Digital subtraction angiography
- 14) Swimmer's view.
- 15) Foreign body localization

**III. WRITE SHORT ANSWERS**

**10 x 2 = 20**

- 16) T1 weighted image
- 17) .Water's view
- 18) Double emulsion film
- 19) Routine views in conventional mammography
- 20) Digital fluoroscopy
- 21) Apicogram
- 22) Tungsten
- 23) Radio isotopes
- 24) CT number
- 25) Axial view of shoulder

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**Medical Record Technology**  
**Computer Sciences**  
**QP CODE — 3143**

**Time: 1.30 Hours.**

**Max. Marks: 40**

**I. LONG ESSAE -ANWER ANY ONE**

**1X10=10**

1. Write brief note about Medical Record Department(MRD) Software?
2. Uses of Computers in Medical Record Department(MRD)?

**II. WRITE SHORT NOTES ANY FOUR**

**4X5=20**

3. Define hardware and Software?
4. Central Processing Unit (CPU)
5. What is Server? Explain
6. What is Random Access Memory (RAM) and Read only Memory (ROM)?
7. Explain MS Word Clipboard Contents?

**III. WRITE SHORT ANSWERS**

**5X2=10**

8. Hard Disk
9. MS Word
10. Net working
11. Laptop
12. MS Access database

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE**  
**Operating room Technique, Chair side Assts. & Dental Materials,**  
**Ethics & Jurisprudence**  
**QP CODE - 3183**

**Time: 1 '1/2 hrs**

**Max Marks: 45**

**I. Long essay**

**1x10 = 10**

1) Describe various instrument grasps, finger rest and fulcrums used during periodontal instrumentation.

**II. Write short notes**

**5x5 = 25**

- 2) Dental auxiliary.
- 3) Sterilization of dental instruments.
- 4) Social factors in dental progress.
- 5) Dentist Act 1948.
- 6) Patient's instructions and recall.

**III. Write short answers**

**2x5 = 10**

- 7) Dental specialties.
- 8) Charting and recording of cases.
- 9) Photography and computers in dental practice.
- 10) Malpractice.
- 11) Maintenance of office room and clinic

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**PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**II D.P.T- GENERAL MEDICINE INCLUDING CARDIOLOGY & NEUROLOGY**

**QP CODE – 3193**

**Time: 3 hrs**

**Max. Marks: 90**

**I. Long Essay (Answer and FIVE)**

**5 X 12 = 60**

1. Describe the etiology, clinical features, complications and management of Gastro enteritis.
2. Describe the etiology, clinical features and management of cirrhosis of liver.
3. Describe the etiology, clinical features and management of acute Poliomyelitis. Write a note on prevention of Poliomyelitis.
4. Discuss etiology, clinical features and management of Urinary tract infections.
5. Describe the etiology, clinical features, complications and management of motor neuron disease.
6. Discuss etiology, clinical features, investigations and management of Typhoid fever.

**II. Write short notes on any five**

**6X5=30**

7. AIDS
8. Chicken Pox
9. Transverse myelitis
10. Amoebiasis
11. Pulmonary Function Test (PFT)
13. Emphysema

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**CERTIFICATE COURSE**  
**BIOLOGY**  
**QP CODE 1103**

**Time: 1. ½ hrs**

**Max. Marks: 45**

**I. LONG ESSAY- ANSWER ANY ONE**

**1x10= 10**

1. Explain Mechanism of working heart.
2. Draw a neat labeled diagram of the Nephron and describe the formation of urine.

**II. WRITE SHORT NOTES ON ANY FIVE**

**5X5 = 25**

3. Define tumor and types of tumor.
4. DNA & RNA.
5. Structure of Neuron.
6. Define Enzymes. Explain lock & Key model,
7. Placenta-Structure and Function.
8. Write a note on mitosis.
9. Structure of Sperm.

**III. WRITE SHORT ANSWERS**

**5x2=10**

10. Heart valves.
11. Fertilization.
12. Name two diseases caused by bacteria.
13. Pacemaker.
14. Ribosomes

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical Laboratory Technology**

**QP CODE — 2104**

**Subject: Pathology**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. LONG ESSAY : ANSWER ANY TWO : (2x10=20)**

1. Write briefly on methods of Urine Collection. Write in detail about microscopic examination of urine. (4+6)
2. Describe the various methods of blood collection. Add a note on anticoagulants used in Haematology laboratory. (2+8)
3. Mention the different fixatives used in Histopathology. Add a note on advantages of formalin fixative. (4+6)

**II. SHORT ESSAY : ANSWER ANY TEN: (10x5=50)**

4. Platelet count - Procedure and normal values . (3+2)
5. Preparation and staining of peripheral blood smear. (2.5+2.5)
6. Draw a diagram of Neutrophil development.
7. Bile pigment — Procedure.
8. Cytological fixatives.
9. Sahli's method of haemoglobin estimation.- Procedure and normal values. (3+2)
10. Pre-analytical errors in blood collection.
11. Principle of reticulocyte count.
12. Name the blood indices and mention its significance. (2+3)
13. Draw and label the diagram of Improved Neubauer counting chamber.
14. Benedicts test procedure.
15. Clearing agent.

**III. SHORT Answers (10x2=20)**

16. Draw an ideal peripheral blood smear.
17. Name the two microtome knives.
18. "L' Moulds.
19. Name any two urine preservatives.
20. Mention the normal reticulocyte count.
21. Draw any two abnormal RBCs.
22. Mention any two different types of hematoxylin.
23. Composition of Drabkin's solution.
24. Name any two decalcifying chemicals used for decalcification.
25. Draw a Neutrophil and label its parts.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**

**HEALTH INSPECTOR**

**QP CODE — 2112**

**Subject: Paper II**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Long Essay — Answer any TWO.**

**2x10=20**

1. What are vitamins. Describe manifestation of Vitamin D deficiency. How do you prevent vitamin D deficiency.
2. What are the causes of air pollution. What are the hazards? How do you prevent them?
3. What do you mean by refuse? What are the sources & hazards. Describe methods of disposal of refuse.

**II. Write short notes on any TEN**

**10x5=50**

4. Measures of dispersion.
5. Conservation of water.
6. Management of head louse.
7. Shulabh Souchalaya.
8. Types of ventilation.
9. Essential fatty acids.
10. Mid day meal.
11. Manifestation of Iodine deficiency disorder.
12. Pasturization of milk.
13. Food adulteration.
14. Incineration.
15. Sanitation barrier.

**III. Write short answers.**

**10x2 =20**

16. Aflatoxins.
17. Diseases transmitted by sand fly.
18. Super Chlorination.
19. Pellagra.
20. Dichlorodiphenyltrichloroethane (DDT).
21. Oxidation pond.
22. Low birth weight (LBW).
23. Bilot spots.
24. Comfort zone.
25. Types of Family.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical X-Ray Technology**

**QP CODE — 2123**  
**Subject: Physiology**

**Time : 1. ½ Hrs**

**Max marks: 45**

**I. Long essay - Answer any one.**

**1X10=10**

- 1) Describe different Lung volumes and capacities with neat diagram.
- 2) Name hormones of Thyroid gland and describe their functions

**II. Short essay - Answer any five**

**5X5=25**

- 3) Plasma proteins.
- 4) Contents and functions of middle ear.
- 5) Composition and functions of Bile.
- 6) Cardiac cycle.
- 7) Neuro - muscular junction
- 8) Temporary contraceptive methods.

**III. Short Answers**

**5X2=10**

- 9) Name two types of Hypoxia.
- 10) Name two Gastro- intestinal hormones.
- 11) Give normal platelet count.
- 12) Write two functions of kidney.
- 13) Name three types of muscles.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**OT TECHNOLOGY**

**Time 3 Hrs.**

**Max. Marks: 90.**

**SECTION – A Anatomy (Write in separate answer book) QP CODE – 2135**

**I. LONG ESSAY ANSWER ANY ONE**

**1 x 10 = 10**

- 1) Name the parts of excretory system. Describe kidney in detail.
- 2) Name the parts of the female reproductive system. Describe uterus in detail.

**II. WRITE SHORT NOTES ON ANY FIVE**

**5 x 5 = 25**

- 3) Pancreas
- 4) Right atrium
- 5) Testis
- 6) Stomach
- 7) Spinal reflex arc
- 8) Lymphnodes

**III. WRITE SHORT ANSWERS**

**5 x 2 = 10**

- 9) Name the functions of liver
- 10) Functions of bone
- 11) Name the parts of male reproductive system
- 12) Nucleus
- 13) Name the types of muscles

**SECTION – B, Physiology (Write in separate answer book) QP CODE – 2136**

**I. LONG ESSAY - ANSWER ANY ONE**

**1 x 10 = 10**

- 1) Define Erythropoiesis. With a neat labeled diagram describe the stages of Erythropoiesis.
- 2) Name the hormones of Adrenal cortex. Describe the actions and regulation of aldosterone

**II. WRITE SHORT NOTES ON ANY FIVE**

**5 x 5 = 25**

- 3) Neuromuscular junction.
- 4) Conducting system of Heart.
- 5) Transport of carbon dioxide in blood.
- 6) Juxta Glomerular Apparatus.
- 7) Functions of oxytocin.
- 8) Draw a labeled diagram of Neuron.

**III. WRITE SHORT ANSWERS**

**5 x 2 = 10**

- 9) Name any two Anticoagulants.
- 10) Write the normal values of a) Stroke volume b) Cardiac output.
- 11) Name any two contraceptive methods in females.
- 12) Name any two functions of Liver.
- 13) Name any two errors of refraction.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORD TECHNOLOGY**  
**Subject: Hospital Statistics & Biostatistics**  
**QP CODE – 2145**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Long Essays.**

**4x10=40**

1. Define data. What are different sources of data? Describe presentation of data.
2. Describe measures of central tendency.
3. What are different methods of sampling? Describe systematic random sampling with example.
4. What are different sources of health information? Describe census in detail.

**II. Write briefly on any TEN.**

**10x4=40**

5. Admission and discharge.
6. Birth and Death registration.
7. Death certificate.
8. Record linkage.
9. Disease registers.
10. Bar diagram.
11. Uses of computer in medical record department.
12. Medical Record department.
13. Normal distribution curve.
14. Histogram.
15. Vital statistics.

**III. Write briefly on any Five.**

**5x2=10**

16. Notifiable diseases.
17. Medical audit.
18. Pie diagram.
19. Infant mortality rate.
20. Alpha index card.
21. Preparation of daily statistics of Out Patient (OP) & In Patient (IP).

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY**

**Time 3 Hrs.**

**Max. Marks: 90.**

**SECTION – A Anatomy (Write in separate answer book) QP CODE – 2155**

**I. LONG ESSAY— ANSWER ANY ONE 1 x 10 = 10**

- 1) Name the parts of excretory system. Describe kidney in detail.
- 2) Name the parts of the gastro-intestinal system. Describe liver in detail.

**II. WRITE SHORT NOTES ON ANY FIVE 5 x 5 = 25**

- 3) Testis
- 4) Spinal cord
- 5) Pituitary Gland
- 6) Histology of bone
- 7) Right atrium
- 8) Uterus

**III. WRITE SHORT ANSWERS 5 x 2 = 10**

- 9) Name any four cranial nerves
- 10) Functions of pancreas
- 11) Name four bones of upper limb
- 12) Mitochondria
- 13) Name the muscles of mastication

**SECTION – B Physiology (Write in separate answer book) QP CODE – 2156**

**I. Long essay - Answer any one. 1X10 =10**

- 1) Describe stages of erythropoeisis with neat chiagram
- 2) Describe Renin -Angiotensin system for regulation of Blood pressure

**II. Short essay - Answer any five 5X5=25**

- 3) Functions of Blood
- 4) Describe Micturition Reflex
- 5) Rh Blood group system
- 6) Extrinsic mechanism for Blood clotting.
- 7) Role of kidney in Acid - Base Balance.
- 8) Factors Regulating cardiac output.

**III. Short Answers 5X2=10**

- 9) Write normal values of Blood urea & Serum creatinine levels.
- 10) Name Two anti -coagulants acting outside the body.
- 11) Name the hormones of posterior pituitary gland
- 12) Name Buffer system of Blood.
- 13) Give normal values of RBC count and WBC count.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS**

**Time : 1.1/2 Hrs.**

**Max. Marks : 45**

**Section- A, General Biochemistry (Write in separate answer book)**

**QP code - 2185**

**I. Long Question - Answer any ONE**

**1 x 10 = 10**

- 1) Describe the assessment and charting of individual diet and counseling.
- 2) Describe the general food requirement for growth, maintenance and repair of the body.

**II. Write short notes on any THREE**

**3x5 = 15**

- 3) Special diet in maxillofacial injury cases.
- 4) Vitamin C
- 5) Vitamin D
- 6) Functions of calcium

**Section- B, Radiology (Write in separate answer book)**

**QP code - 2186**

**I. Write short notes:**

**4x5 = 20**

- 1) Parallel cone technique
- 2) Bite Wing radiograph.
- 3) Hazards of radiation and safety
- 4) Orthopantomograph.

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**PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**I DPT Microbiology**

**Q.P code -2194**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Long assay (answer any two)**

**2 x 10 = 20**

1. Describe structure of HIV virus with a neat labeled diagram. Write laboratory diagnosis of HIV.
2. Mention different methods of Sterilization. Write in detail about physical methods of Sterilization.
3. Write about pathogenesis and laboratory diagnosis of Typhoid fever.

**II. Write short notes (any ten)**

**10 x 5 = 50**

4. Write about Robert Koch.
5. Write about Precipitation Reactions.
6. Laboratory diagnosis of Leprosy.
7. Cultural characters of Pneumococcus.
8. Laboratory diagnosis of Neisseria Meningitis.
9. Hospital acquired infection.
10. Write about Ziehl-Neelson staining technique.
11. Reproductive Cycle of Chlamydia.
12. General characteristics of Viruses.
13. Infectious Mononucleosis - lab diagnosis.
14. Life cycle of Taenia.
15. Laboratory diagnosis of Dermatophytosis.

**III. Write short answers**

**10 x 2 = 20**

16. Catalase test.
17. Name four Acid Fast Organisms.
18. Mention different Types of Hypersensitivity Reactions.
19. Morphological classification of Fungi.
20. Name four organisms causing Mycetoma.
21. BCG vaccine.
22. VDRL test.
23. Draw a neat labeled diagram of Cyst of Echinococcus.
24. Name of parasitic diseases caused by mosquito bite.
25. Larval forms present in Nematodes.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**III D.P.T- Disability Evaluation & Community Physiotherapy**  
**QP CODE – 3203**

**Time: 2 hrs**

**Max. Marks: 65**

**I. Long Essay - Answer any FOUR**

**4 X 10 = 40**

1. What is Occupational therapy? Discuss the principles of management of a child with Cerebral Palsy (CP).
2. Evaluation tools to identify disabilities.
3. Explain the importance of assessment and screening test of neonates.
4. Discuss above Knee amputation and role of prosthesis in rehabilitation.
5. Define cerebral vascular accident (CVA). Role of physiotherapist in rehabilitation of cerebral vascular accident (CVA) patient.

**II. Write short notes on any FIVE**

**5 X 5 = 25**

6. ADL training
7. Neonatal reflexes
8. Congenital talipes equinovarus (CTEV)
9. Genu Valgum
10. SACH Foot
11. Amputation

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II YEAR DIPLOMA IN / III YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORD TECHNOLOGY**  
**Subject: Medical Surgical Coding**  
**QP CODE – 3144**

**Time 1 Hrs.**

**Max. Marks: 20.**

**I. ANSWER ANY THREE QUESTIONS**

**3X5= 15**

- 1) Define abortion and write deferent types of abortion?
- 2) Why do we need to Code?
- 3) Explain design and structure of ICD-10?
- 4) Discuss the Coding procedure for External Injuries?

**II. EXPAND THE FOLLOWING ABBRIVATION ANDY FIVE 1X5=5**

1.IHD      2. FTND      3. LFT      4. URI      5. DUB      6. MTP

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**II DPT GENERAL SURGERY AND ORTHOPAEDICS**  
**Q.P code -3194**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Long Essay - Answer any TWO**

**2 X 15 = 30**

1. What are the clinical features of Duodenal Ulcer and discuss the management of chronic duodenal Ulcer.
2. Classify hernia and write in detail the management of inguinal hernia.
3. What is Burns? How do you classify Burns? Write in detail the management of patient with 50% burns.

**II. Write short notes on any THREE**

**3X15=15**

4. Haemorrhage
5. Tendon transfer
6. Hydrocephalus
7. Carcinoma Rectum

**III. Answer any TWO**

**2 X 15 = 30**

8. What is Colle's Fracture? Write down the clinical features and management.
9. Discuss the management of fracture of Clavicle.
10. Explain Amputation. Discuss its different levels and management.

**IV. Write short notes on any THREE**

**3X5=15**

11. Olecranon Fracture
12. Malunion
13. Scaphoid Fracture
14. Fracture Ribs

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**Common paper for all First Year Certificate courses**  
**ENGLISH**  
**QP CODE -1104**

**Time 1.1/2 Hrs.**

**Max. Marks: 45.**

**I. WRITE AN ESSAY ON ANY ONE OF THE FOLLOWING 15 X 1=15**

- 1) Population explosion
- 2) Newspapers

**II. ANSWER ANY ONE 10 X 1=10**

- 3) Write a letter to your Principal for requesting him to issue transfer certificate
- 4) Write a letter to your sister advising her to pay more attention for studies.

**III. WRITE THE OPPOSITE GENDER OF 5X1=5**

- 5) Wife
- 6) Man
- 7) Lion
- 8) King
- 9) Hero

**IV. WRITE THE OPPOSITE OF THE FOLLOWING 5X1=5**

- 10) Thin
- 11) Legal
- 12) Fast
- 13) Big
- 14) Junior

**V. WRITE THE SENTENCES USING THE FOLLOWING 5X1=5**

- 15) Afraid of
- 16) Because
- 17) Neither - nor
- 18) Besides
- 19) To and fro

**VI. FILL IN THE BLANKS 5X1=5**

- 20) The boy is fond ----- dance.
- 21) Latha is talking ----- her teacher.
- 22) The sun rises ----- the east.
- 23) The Clock is----- the wall
- 24) Raju and Ravi-----good friends

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical Laboratory Technology**

**QP CODE — 2105**

**Subject: Microbiology**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Long assay (answer any two)**

**2 x 10 = 20**

1. Draw a labeled diagram of a Bacterial Cell. Write in detail about the Cell Wall.
2. Define Sterilization. Write in detail about Hot air oven.
3. Define and Classify Immunity, write in detail about Acquired Immunity.

**II. Write short notes (any ten)**

**10 x 5 = 50**

4. Louis Pasteur.
5. Acid Fast Stain
6. Flagella
7. Pasteurization
8. Compound Microscope
9. Enriched Media
10. Robertson's cooked meat medium
11. Catalase test
12. Antibody
13. Transport media
14. Koch's postulates
15. Fimbriae

**III. Write short answers**

**10 x 2 = 20**

16. Name two Differential Stains
17. Name two Types of Microscopes
18. Name two Gram Negative Organisms.
19. Name four Chemical Disinfectants
20. Name two Enrichment Media
21. Name two Aerobic Culture Methods.
22. Antigen
23. Name two Sources of Infection
24. Cold Sterilization
25. Differential Media

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**

**HEALTH INSPECTOR**

**QP CODE — 2113**

**Subject: Paper III**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Answer Any TWO.**

**2x10=20**

1. Define statistics. What are the measures of statistics. Name the different branches of statistics. Name the sources of health statistics.
2. Describe the morphology, life cycle and control measures of Aedes mosquitoes.
3. Enumerate methods of excreta disposal discuss. Oxidation pond in detail.

**II. Short Notes on any TEN.**

**10x5=50.**

4. Bias.
5. Measles vaccine.
6. Herd immunity.
7. Advice to travelers.
8. Itch mite.
9. Difference between quarantine and isolation.
10. Insecticides.
11. Types of disinfection.
12. Advantages and disadvantages of case control studies.
13. Swimming pool sanitation.
14. Life cycle of house fly with a diagram.
15. Diseases transmitted through Rat flea and its control measures.

**III. Write Short Answers.**

**2x10=20.**

16. DDT.
17. Disease eradication.
18. Bar Chart.
19. Relative risk.
20. Standard of living.
21. Opportunistic infection.
22. Epidemic curve.
23. Mention ill effects of noise pollution.
24. Secondary attack rate.
25. Write national immunization schedule.

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**I YEAR DIPLOMA IN / II YEAR CERTIFICATE COURSE IN**  
**Medical X-Ray Technology**

**QP CODE — 2124**  
**Subject: Pathology**

**Time : 1. ½ Hrs**

**Max marks: 45**

**I. LONG ESSAY: Answer any one:**

**(1x10=10)**

1. Discuss the etiology, stages and complication of lobar pneumonia.
2. Discuss the stages of healing of fracture bone with neat diagrams.

**II. SHORT ESSAY: Answer any Five:**

**(5x5=25)**

3. Fibroid uterus
4. What is gangrene? Discuss types of gangrene.
5. Osteomyelitis
6. Infarction
7. Rheumatic heart disease.
8. Shock — types and pathogenesis
9. Hepatitis B infection.

**III. SHORT NOTES:**

**(5x2=10)**

10. Hypertrophy. Give two examples.
11. Embolism.
12. Vitamin C deficiency
13. Mention 4 types of emphysema.
14. Cold abscess.

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**PARAMEDICAL BOARD, BANGALORE**

**ANNUAL EXAMINATION OCTOBER - 2016**

**I DPT - PSYCHOLOGY**

**Q.P code -2195**

**Time 3 Hrs.**

**Max. Marks: 90.**

**I. Answer any THREE**

**3 X 15 = 45**

1. Define Psychology. Explain methods of Psychology. Mention uses of Psychology in Physiotherapy.
2. What is Learning? Mention the types of Learning. How the principles of Learning are applied in treatment plan?
3. What are Motives? Explain drives and needs. Bring out the aspects of frustration and conflicts with examples.
4. What is Emotion? Mention physiological changes during emotion & it's types.

**II. Answer any THREE**

**3 X 10 = 30**

5. What is Attitude? How they develop? What are the methods to change attitude.
6. What is Thinking? Explain its types with examples.
7. Give a narration of Memory process.
8. What is Perception? Diagrammatically represent perceptual Organisation.

**III. Write short notes on any FIVE**

**5 X 3 = 15**

9. Study Habits
10. Forgetting
11. Management of stress in modern life style
12. Prejudice
13. Behaviour modification
14. Gender Complex
15. Introverts and Extroverts

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**PARAMEDICAL BOARD, BANGALORE**  
**ANNUAL EXAMINATION OCTOBER - 2016**  
**III D.P.T- PHYSIOTHERAPY IN MEDICAL CONDITIONS**  
**QP CODE – 3204**

**Time: 2 hrs**

**Max. Marks: 65**

**I. Long Essay - Answer any FIVE**

**5 X 12 = 60**

1. Physiotherapy for a 60 year old male suffering from Parkinsonism.
2. Physiotherapy management for Rheumatoid Arthritis.
3. Physiotherapy management of Anterior Cerebral Artery (ACA) infract.
4. Explain the important features of Poliomyelitis. What are the physiotherapy aims and management during the convalescent phase?
5. Discuss about Chronic Obstructive Pulmonary Disease (COPD) and it's management.
6. What is Cerebral palsy? Discuss the role of a Physiotherapist in rehabilitating a case of 3 yrs old child with Spastic Cerebral palsy(CP).

**II. Write short notes on any FIVE**

**5 X 6 = 30**

7. Mitral Stenosis
8. Postural drainage
9. Facial Palsy
10. Pneumothorax
11. Ulcers
12. APGAR Score

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