

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 3101, BIOCHEMISTRY**

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

1. What are the normal and abnormal constituents of Urine? Describe any one tests to detect any one abnormal constituents of urine(3+3+4)
2. How is Blood Glucose regulated in the body add a note on hormones regulating blood sugar levels in the body (6+4).
3. Write in detail about digestion and absorption of Proteins (5+5)

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

4. Glycolysis
5. Internal quality control
6. Formation of ketone bodies.
7. Renal Function Tests
8. Urea Cycle
9. Electrophoresis – principle, types and applications.
10. Tests for Inorganic constituents of normal urine.
11. Constituents of gastric juice
12. Importance of isoenzymes.
13. ISE – Definition, principle and applications.
14. Creatinine formation.
15. Radio Immuno Assay (RIA)- Principle and applications

**III. WRITE SHORT ANSWERS** **10x2=20**

16. Reagent kits
17. Name two hormones of blood glucose regulation
18. Two uses of ELISA
19. Significance of Statistics in Biochemistry
20. Applications of chromatography
21. Vandenberg test.
22. Batch analyzer.
23. Hay`s test.
24. Cardiac enzymes
25. Write the normal range of serum electrolytes.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**III YEAR DIPLOMA IN  
MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 6101, BIOCHEMISTRY**

**I. SHORT NOTES - ANSWER ANY EIGHT QUESTIONS**

**8x5= 40**

- 1) Write in detail about spectrophotometer and its applications.
- 2) Types of Jaundice. Write Characteristic features of Hepatic Jaundice.
- 3) Random access auto analyzer.
- 4) Liver function tests.
- 5) Name the different methods of Glucose Estimation. Mention their Advantages & Disadvantages.
- 6) Hypertension.
- 7) ELISA.
- 8) RIA.
- 9) Respiratory acidosis and Respiratory alkalosis.
- 10) Post analytical factors importance in clinical chemistry.

**II. SHORT ANSWERS**

**20x3=60**

- 11) Benedict's test.
- 12) Iodine test.
- 13) Van den berg test.
- 14) Reference values and its Interpretation.
- 15) Chloride shift.
- 16) Normal serum levels of chloride, Na<sup>+</sup>, K<sup>+</sup>.
- 17) List of causes of Hypokalaemia.
- 18) Principles of Quality assurance.
- 19) Explain the terms : Accuracy, precision, specificity and sensitivity.
- 20) Basic principles of estimation of Blood gases and P<sup>H</sup>.
- 21) Types of analysers and its benefits.
- 22) Isoenzymes.
- 23) Electrophoresis.
- 24) Cardiac enzymes.
- 25) Fasting blood sugar.
- 26) Formation of Bilirubin.
- 27) Renal regulation of Acid Base Balance.
- 28) Serum Cholesterol level and its interpretation.
- 29) Tests for Bile salt and Bile pigments.
- 30) Write about colorimetric absorbance and transmission of light.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR CERTIFICATE COURSES**

**TIME: 1.30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 45**

**QP CODE: 1101, PHYSICS**

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

**1 x 10 = 10**

1. Explain work, power and energy with units.
2. Define radioactivity. Explain emission of  $\alpha$ ,  $\beta$  and  $\gamma$  rays with sketch.

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

**5 x 5 = 25**

3. Refraction of light with sketch
4. State Ohm's law and its expression
5. Capacitor with sketch and uses
6. Newton's law of gravitation
7. Surface tension and effects
8. Perfect gas and equation
9. Coulomb's law

**III. WRITE SHORT ANSWER**

**5 x 2 = 10**

10. Speed and its unit
11. Units of temperature
12. Resistance and its unit
13. Dispersion
14. Scalars and vectors

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR CERTIFICATE COURSE/III YEAR DIPLOMA IN**  
**HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3111, PAPER-I**

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

**2X10=20**

1. Write on causes, effects, indicators and control measures of air pollution.  
(2+2+2+4)
2. What is health education? Discuss the principles of health education. Write the steps in planning health education session in a village. (2+4+4)
3. Explain various modes of transmission of Acquired Immunodeficiency Diseases (AIDS) in detail and write about Health education message for HIV/ AIDS prevention. (6+4)

**II. SHORT NOTES- ANSWER ANY TEN**

**10 x 5 = 50**

4. Balanced diet
5. Food adulteration
6. Janani Suraksha Yojana
7. Functions of Primary health centre
8. Nutrition supplementation at Anganwadi centre
9. Roles and responsibility of health inspectors
10. Role of family in health and disease
11. Habits and Customs affecting health and disease
12. Audio visual aids used in health education
13. Sanitation barrier
14. Housing standards
15. Food safety and standards act 2006 (FSSAI)

**III. SHORT ANSWERS**

**10 x 2 =20**

16. What are the Vaccines to be given to one and half month old baby according to National Immunization Schedule?
17. Mention two modifiable and two non- modifiable risk factors for Non Communicable diseases
18. Mobiles as Health Education tool
19. What is Role Play?
20. Types of learning
21. Sanitary survey
22. First aid for unconscious person
23. Below Poverty Line (BPL) card
24. Occupational hazard of waste handlers
25. Triage in disaster management

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN HEALTH INSPECTOR(DHI)**  
**TIME:3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 6111, COMMUNITY MEDICINE, PAPER-I**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8 X 5 = 40**

1. Preventive measures to control Mosquito breeding
2. What are the harmful effects of tobacco on health? Mention two measures to control and prevent tobacco use in the population.
3. BCG vaccine
4. Road traffic accidents and its prevention
5. Pulse polio Immunization
6. Enlist the major non-communicable diseases in India. Write risk factors for stroke.
7. What is cancer? Write briefly on screening for cancer.
8. Types of Plague.
9. Vision 2020
10. Describe the epidemiology of Cholera. Discuss prevention and control of it.

**II. SHORT ANSWERS**

**20 X 3 = 60**

11. Domestic accidents
12. Write about challenges faced in public health due to "Antigenic Variations of Influenza virus"
13. Explain the "Rule of Halves" in hypertension
14. Integrated Counselling and Testing Centre (ICTC)
15. Diseases transmitted by faeco-oral route
16. Prevention of coronary heart disease
17. Active surveillance Malaria
18. Name three causes for neonatal tetanus in India. List any three control measures
19. Rehabilitation in Leprosy
20. Vaccine carrier
21. Nosocomial infection
22. What is self-care in Diabetes mellitus?
23. Explain Sanitation barrier with neatly labelled diagram
24. List causes of blindness in India
25. Expand RNTCP, NVBDCP & NMHP
26. Tracking of BP
27. Congenital Rubella
28. Janani Shishu Suraksha Karyakrama
29. Hazards of obesity
30. Function of anganwadi centre

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**X-RAY TECHNOLOGY (DMXT)**

**TIME:3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3121, RADIOGRAPHY INCLUDING RADIOLOGY PHYSICS**

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

**2 x 10 = 20**

- 1) What is Electromagnetic radiation? Discuss different types of rays emitted from electromagnetic radiation with their wavelengths. Discuss properties of X-rays.
- 2) Discuss factors affecting image formation on a conventional radiographic film
- 3) Draw a cross-section of conventional x-ray film. Label the different layers of x-ray film with their thickness.

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

**10 x 5 = 50**

- 4) TLD badge
- 5) Dental film
- 6) Chemical Artifacts
- 7) Coherent and Compton scattering
- 8) I.I.T.V.
- 9) Cassettes
- 10) High mA technique
- 11) Safe light
- 12) Half wave rectification
- 13) Ultrasound
- 14) Space charge effect
- 15) Alpha decay

**III. WRITE SHORT ANSWERS**

**10 x 2 = 20**

- 16) Molybdenum
- 17) Diaphragms
- 18) Moving Grids
- 19) Ammeter
- 20) Permissible dose
- 21) High kV technique
- 22) Tele-Roentgenogram
- 23) Ten day rule
- 24) Computerized Radiography
- 25) Lethal dose

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
III YEAR DIPLOMA IN MEDICAL IMAGING  
TECHNOLOGY(DMIT)**

**TIME:3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 6121, RADIOGRAPHY POSITIONING & RADIOGRAPHIC  
PHOTOGRAPHY**

**I. SHORT NOTES - ANSWER ANY EIGHT**

**8 x 5 = 40**

1. Linear attenuation coefficient
2. Grids- Functions and construction
3. Somatic and genetic effects of radiation
4. ALARA concept
5. Collimators
6. Skull views
7. Beam limiting devices
8. Radiation detectors
9. Management of contrast reactions
10. Sources of radiations

**II.SHORT ANSWERS**

**20 x 3 = 60**

11. Source to image distance
12. Views for scaphoid
13. Name any three Skull lines
14. Removal of items that cause artefacts
15. Filters
16. Lead masks
17. Stochastic effects of radiation
18. Milli ampere second
19. Environment protection agency
20. Steps followed during bedside procedures
21. Genetic effects of radiation
22. Personal radiation protectors
23. General planes in radiography
24. Radiography of paranasal sinuses
25. Shielding
26. Patient positioning for pelvic bone radiography
27. Use of cones
28. Skyline view of patella
29. Bone survey
30. Importance of clinical history

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY(DOTT)**

**TIME:3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 3131, ANAESTHESIA & ALLIED TOPICS**

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

1. What are local anaesthetic agents? Classify local anaesthetics. Write briefly about local anaesthetic toxicity. (2+3+5)
2. Mention different types of centrineuraxial blockade. Describe the effect of centrineuraxial blockade on various organ systems. (2+8)
3. Classify anaesthesia breathing systems. Write a note on Bain's circuit. (4+6)

**II. SHORT NOTES - ANSWER ANY TEN 10 X 5 =50**

4. Pulse Oximetry
5. Colloids
6. Morphine
7. Nitrous Oxide
8. Jackson Ree's circuit
9. Minimum Alveolar Concentration
10. Pin Index safety System
11. Glycopyrrolate
12. Combitube
13. Electrical hazards in the Operation Theater
14. Informed written consent
15. Vecuronium

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

16. Name four opioid analgesics
17. Name four blood components
18. Name four neuromuscular blocking agents
19. Name two indications for endotracheal intubation
20. Name four complications of general anaesthesia
21. Name four crystalloids
22. Name two approaches to brachial plexus block
23. What is the colour of Oxygen and Nitrous oxide cylinder?
24. Name four cartilages of larynx.
25. Name two contraindications for spinal anaesthesia

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**TIME:3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN MEDICAL**  
**RECORDS TECHNOLOGY (DMRT)**

**TIME:3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3141, MEDICAL TERMINOLOGY**

**Note: Question Paper contains 2 pages**

- I. Answer the following** **5X3=15**
- 1) Definition of Medical Terminology? Objectives of Medical Terminology?
  - 2) Write any Two Commonly used Disease and Operation Terms of Eponym"s and their meaning.
  - 3) Sources of Medical Terminology?
- II. Give meaning for the following Prefixes:** **5X1=5**
- 1) Orchi      2) Phleb      3) Kerat      4) Hysster      5) Macro
- III. Give the meaning for the following Suffixes:** **5X1=5**
- 1) Plasty      2) Cele      3) RRhaphy      4) Ptoxis      5) RRhoea
- IV. Give the meaning for the following Roots:** **5X=5**
- 1) Thrombo      2) Spondyle      3) Salphing      4) Mix      5) Radi
- V. Write the Phobias for the following** **10X1=10**
- 1) Zoophobia      2) Death      3) Galeophobia      4) Pain      5) Dislike books      6) Panophobia
  - 7) Number 13      8) Neophobia      9) Red      10) Hydrophobia
- VI. Differentiate the following terms:** **5X2=10**
- Gavage - Lavage      Stasis - Staxis      Epidemic - Endemic  
Contusion - Concussion      Corpus - Corpes
- VII. Match the following** **5X1=5**
- 1) Hypertention      - Milk
  - 2) Angio      - Skin Cancer
  - 3) Galact      - Chronic Liver Disease
  - 4) Melanoma      - Vessel
  - 5) Cirrhois      - Low Blood Pressure
- VIII. Give the medical Terms for the following:** **10X1=10**
- 1) Morbid enlargement of an Organ
  - 2) Suture of an Injured Nerve
  - 3) Region over Pit of the Stomach
  - 4) Lithotripsy
  - 5) Removal of Testis
  - 6) A drug reduces the Fever

- 7) Excessive of food intake
- 8) Replacement of Hip
- 9) Inflammation of the Thyroid Gland
- 10) Excessive of urinary output

P.T.O.

**IX. Define the following:**

**10X1=10**

- 1) Polydipsia
- 2) Thrombocytopenia
- 3) Dementia
- 4) Anxiety
- 5) Hydronephrosis
- 6) Bell's Palsy
- 7) Vagotomy
- 8) Amputation
- 9) Myocardium
- 10) Siderosis

**X. Expand the Following Abbreviation:**

**10X1=10**

- 1) GOO   2) IUGR   3) GERD   4) ADPKD   5) DNS   6) IDDM
- 7) VSD   8) ICSOL
- 9) STD   10) BPH

**XI. Give the meaning for following the Numerical**

**5X1=5**

- 1) Kilo   2) Multi   3) Hemi   4) Mono   5) Dio

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN MEDICAL RECORDS**  
**TERMINOLOGY(DMRT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 6141, MEDICAL TERMINOLOGY**

**I.SHORT NOTES - ANSWER ANY EIGHT QUESTIONS**

**8x5= 40**

1. Explain the chief sources of Medical Terminology and give each examples.
2. Brief about the Objectives and Values of Medical Terminology.
3. Define Plane and mention any five planes of the Body.
4. Define Roots of Stem.
5. Define Prefix, Suffix and Roots.
6. Define abortion and list the types of abortion.
7. Write brief about the Eponyms and mention any five eponyms.
8. Write any five operation procedure medical terms.
9. Define Phobia.
10. Define Fracture and mention any types of fractures.

**II. SHORT ANSWERS**

**20 X 3 = 60**

11. Write the meaning for phobia 1.Andro phobia, 2.Hydrophobia, 3. Pyrophobia, 4. Zoophobia, 5.Kynophobia.
12. Give the definition for the Anemia, Malacia, Megaly.
13. Give numerals for Deca, Octo, Tri.
14. Write definition for Operation procedures, 1.Septoplasty, 2. Lithotripsy, Herniorrhaphy.
15. Write colours name for these terms, 1. Melan, 2. Niger, 3.Cirrhos.
16. Expand the (ABCD, LMP, and IDDM).
17. Write the difference between Palpation and Palpitation.
18. Write the surgical procedure term for ( Removal of Ovary, Removal of Tonsil, Removal of Breast )
19. Analyse these suffixes ( Hydrocele, Spleenomegaly, Hepatomegaly ).
20. Write meaning for Operative suffixes, ( Ectomy, RRhaphy, rrhexis ).
21. Write the medical terms for ( eye, teeth, heart ).
22. Write the definition for ( Anaesthesia, Hypertension, Hyperglycemia ).
23. Name the root for ( Eyelid, Bladder, Vertebra ).
24. Give the meaning for these suffixes ( Spasm, Algia, Osis ).
25. Write suffixes for ( Pathy, Emia, Cele ).
26. Define ( Apnea,Dyspepsia, Empyema )
27. Write root term for ( Adenomalacia, Cardiomegaly, Haemotoma )
28. Write meaning for ( Abasia, Cancer, Fracture ).
29. Give the correct meaning of
  - a. Related to both eyes.
  - B.imperfect digestion
  - c.Situated outside the kidney.

**30. Match the following**

- |                      |                   |
|----------------------|-------------------|
| a. Loss of Sensation | Glossectomy       |
| b. Removal of Tongue | Removal of Ovary. |
| c. Oophorectomy      | Anaesthesia.      |

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY(DDT)**

**TIME:3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3151**

**FUNDAMENTALS OF HEMODIALYSIS & COMPONENTS**

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

**2 x 10 = 20**

1. Write about pre, intra and post dialysis patient monitoring. Add notes on the machine alarms and their causes. (5+5=10)
2. Explain the anticoagulation techniques used in Hemodialysis.
3. Define the three main principles of dialysis. Define, write the steps of measurement, the formulae for calculation and the interpretation Urea reduction ratio and Kt/V in the assessment of adequacy of dialysis. What are the clinical symptoms and signs of inadequate dialysis?(3+3+4)

**II. SHORT NOTES - ANY TEN**

**10X5=50**

4. write a note on access recirculation
5. Name some common medications used in dialysis patients and their uses.
6. Tabulate the composition of dialysate used for hemodialysis.
7. Describe anatomy and blood supply of peritoneal membrane
8. Priming and initiating of hemodialysis machine
9. Define hemodiafiltration. What are the advantages and disadvantages? (1+2+2)
10. Advantages and disadvantages of Peritoneal dialysis compared to hemodialysis
11. How to diagnose PD peritonitis? How to prevent PD peritonitis?(2+3)
12. Describe Apparatus for peritoneal dialysis
13. Advantages and disadvantages of dialyser reuse
14. non infectious complications of peritoneal dialysis catheter
15. Acute hemodialysis prescription

**III. SHORT ANSWERS**

**10X2=20**

16. Enumerate different types of transporters in PET.
17. Management of hyperkalemia in a hemodialysis patient
18. Name 2 intradialytic complications
19. Define flux and efficiency of dialysis
20. Name 2 Chemicals used for dialyser reuse
21. Name 2 anti hypertensive drugs
22. Renal function test
23. Draw a dialyser and label parts.
24. Normal level of blood urea and serum creatinine
25. Name two antibiotics used for catheter related sepsis

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN DIALYSIS TECHNOLOGY(DDT)**  
**TIME:3 HRS (RS -2 SCHEME) MAX. MARKS:100**

**QP CODE: 6151, PAPER-I**

**I. SHORT NOTES , ANSWER ANY EIGHT**

**8X5=40**

1. Explain about reverse osmosis plant with diagram
2. Draw and describe extra corporeal dialysis circuit
3. Enumerate acute complications of haemodialysis
4. Function of kidney
5. Anemia in ckd
6. Dialyser reuse
7. Adequacy of dialysis
8. Heparin free dialysis
9. Universal precaution
10. Emergency indications of dialysis

**II SHORT ANSWERS**

**20 X 3= 60**

11. Sodium remodelling during dialysis
12. Monthly biochemical test in HD
13. Different methods AV fistula cannulation
14. Antibiotic lock in catheter
15. Complications of AV fistula
16. Write short note on acute renal failure
17. Iron administration
18. What is AAMI?
19. Name 3 antihypertensive
20. Backwash
21. Renal function test
22. Fibre bundle volume
23. Write about erythropoietin use in dialysis
24. What are the various adequacy tests for PD?
25. Name 3 common medications taken by hemodialysis patient
26. Priming of haemodialysis
28. CYCLERS
29. PD SOLUTION DEXTROSE concentration
30. Plasmapheresis -define and draw circuit

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**OPHTHALMIC TECHNOLOGY(DOT)**

**TIME:3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3161, PAPER-I**

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

**2 × 10 = 20**

- 1). What is Asepsis? How do you do sterilization of instruments in OT?
- 2). What is trial set? Mention different components of Trial set.
- 3). Laying of Trolley for Cataract surgery.

**II. SHORT NOTES - ANSWER ANY TEN**

**5X10=50**

- 4). Write a note on cutting of eyelashes before Cataract surgery.
- 5). How to do Ocular Bandaging?
- 6). What is Autoclaving?
- 7). Write a note on subconjunctival injection.
- 8). How to sterilise a Tonometer?
- 9). What is Lensometer? Mention its uses.
- 10). What is Synoptophore?
- 11). Name all the instruments in Chalazion Surgery.
- 12). How to do bedmaking in the ward?
- 13). What are the post operative instruction given to patient after Cataract Surgery?
- 14). Instructions given before surgery to a patient.
- 15). Lacrimal Syringing and its Interpretation.

**III. SHORT ANSWERS**

**2X10=20**

- 16). Mention 2 Types of Tonometers.
- 17). Making of swabs.
- 18). What is instrument used to check spectacle power?
- 19). Mention 2 instruments used in squint surgery
- 20). Mention 2 Indication for Ocular Bandaging.
- 21). How to clean a Slit Lamp?
- 22). Laying a Trolley for dressing in the ward.
- 23). How to give Enema?
- 24). When do you wash the eyes?
- 25). Agents used in Fumigation.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY(DOT)**  
**TIME:3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 6161, PAPER-I**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8x5=40**

1. Method & indication of ETO Sterilization
2. What is fumigation? Describe methods of fumigation in OT (Operation Theatre)
3. Phacoemulsification machine
4. What Is CSSD . Describe various function of CSSD.
5. Describe various sutures used in ophthalmology
6. Describe various Gas cylinders used in OT & their colour coding
7. Anaesthesia Machine
8. Endotracheal Tubes
9. Describe the various drugs used in inhalation anaesthesia ( General Anaesthesia)
10. Describe the various drugs used in intra venous anaesthesia ( General Anaesthesia)

**II. SHORT ANSWERS**

**20x3=60**

11. Describe type of anaesthesia used for eye surgery
- 12 . Applying indicators for autoclaving
13. Describe methods of eye Bandaging
14. Types of autoclaves
15. How to shift Blind patient from ward to OT
16. Describe Prophylaxis following exposure to HIV in OT
17. Maintenance of operating microscope
18. Describe Temperature settings for sterilization in Autoclave
19. Steps of chalazion surgery
20. Describe Various Instruments used in small Incision cataract surgery
21. Colour coding of Bio medical waste disposal
22. Uses of suction apparatus
23. Commonly used IV fluids
24. Packing sterilization bin
25. Calibration of Applanation tonometer
26. Uses of indirect ophthalmoscope
27. Uses of slit lamp biomicroscope
28. Describe ophthalmic trial set & various lenses
29. Types of tonometer
30. Describe procedure for calculating IOL Power

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS(DDM)**

**TIME:1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**  
**QP CODE: 3171, COMPLETE DENTURES**

**I. LONG ESSAY**

**1X10=10**

- 1) Describe in detail the principles of teeth arrangement

**II.WRITE SHORT NOTES**

**5 X 5 = 25**

- 2) Immediate dentures
- 3) Mention the uses and materials used in fabrication of occlusal rims
- 4) Mention various materials used in fabrication of record base
- 5) Difference between Acrylic and porcelain teeth
- 6) Posterior teeth- type

**III.WRITE SHORT ANSWERS**

**5 X 2 = 10**

- 7) Relining
- 8) Overjet and overbite
- 9) Bench curing
- 10) Thermoplastic sheets
- 11) Master cast

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN DENTAL MECHANICS(DDM)**  
**TIME:1.30 HRS (RS -1 SCHEME) MAX. MARKS: 50**  
**QP CODE: 6171, COMPLETE DENTURES**

**I. SHORT NOTES ANSWER ANY FOUR QUESTIONS** **4X5=20**

1. Define balanced occlusion and factors affecting it.
2. Write in detail about special tray designs with diagram.
3. Principles of teeth arrangement.
4. Denture porosity.
5. Classify articulators and write in detail about mean value articulator.

**II. SHORT ANSWERS** **10X3=30**

6. Significance of incisive papilla.
7. Mention purposes of articulator
8. Boundaries of buccal shelf area.
9. Remounting of the cast.
10. Repair of the denture.
11. Different types of polishing agents used in dentistry.
12. Different types of Single denture.
13. Posterior tooth form.
14. Retromolar pad.
15. Teeth selection.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE(DDH)**

**TIME:1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**  
**QP CODE: 3181, DENTAL HYGIENE & ORAL PROPHYLAXIS**

**I. LONG ESSAY 1X10=10**

1. Define and classify dental calculus. Write the difference between supra and subgingival calculus.

**II. WRITE SHORT NOTES 5x5=25**

2. Define gingiva and name parts of the gingiva.
3. Principal fibres of periodontal ligament..
4. Mention functions of periodontal ligament.
5. Define cementum. Write types of cementum.
6. Attached gingiva

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

7. Indications of ultrasonic scalers.
8. Gingival abscess.
9. Gingival massage.
10. Name 4 brushing techniques.
11. Periodontal probes

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE(DDH)**

**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 6181, ETIOLOGY & PATHOGENESIS OF PERIODONTAL DISEASES**

**I. SHORT NOTES: ANSWER ANY EIGHT QUESTIONS 8X5=40**

1. Define gingival, write types of gingiva and explain each.
2. Principal fibres of periodontal ligament.
3. Name types of saliva and composition of saliva.
4. Fibres of gingiva.
5. Define dental plaque and explain stages of dental plaque.
6. Write differences between supra and subgingival calculus.
7. Root surface changes of periodontal pocket.
8. Write clinical features of gingivitis.
9. Classify gingival enlargement.
10. Define and classify cementum.

**II. SHORT ANSWERS 20X3=60**

11. Attached gingiva
12. Alveolar bone proper.
13. Periodontal abscess.
14. Name theories of calculus formation.
15. Non keratinized structures of gingiva.
16. Treatment of ANUG.
17. Name crystal of dental calculus.
18. Classification of gingival recession.
19. Classification of dental calculus.
20. Basal bone.
21. Cemento enamel junction (CEJ).
22. Gingival col.
23. Name acute gingival lesions.
24. Blood supply to gingival.
25. Dehiscence.
26. Osteoblasts.
27. Color of gingiva.
28. Ankylosis of tooth.
29. Classify dental plaque.
30. Gingival col.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**

**I YEAR DIPLOMA COURSES**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 4101, PHYSICS**

**I SHORT NOTES –Answer any EIGHT questions.**

**8×5=40**

1. State and explain Bernoulli's theorem.
2. Explain potential energy and kinetic energy with example.
3. What is surface tension? Write a note on capillarity.
4. What is thermometer? Explain the types.
5. Match the following
  - a) Velocity i. Steady flow of liquid
  - b) Pressure ii. Temperature remains constant
  - c) Stress iii. Force/area
  - d) Streamline motion iv. deforming force
  - e) Isothermal process v.  $\text{ms}^{-1}$
6. What is reflection? State the laws.
7. State and explain Ohm's law.
8. Write a note on ultrasonography.
9. Explain the production of X-rays.
10. Multiple choice questions
  - a) Distance between two consecutive crests and troughs is .....
    - i) Amplitude ii) Wavelength iii) Wave motion iv) Frequency
  - b) Atomic number is number of .....
    - i) Protons ii) Neutrons iii) Electrons iv) Molecules
  - c) The device which converts light energy into electrical energy is called .....
    - i) Transistors ii) Photoelectric cell iii) Diode iv) Thermistor
  - d) A substance which does not allow current to pass through it is.....
    - i) Conductor ii) Semiconductor iii) Insulator iv) Resistor
  - e) S.I Unit of frequency is.....
    - i) Metre ii) Hertz iii) Watt iv) Second

**II.SHORT ANSWERS**

**20×3=60**

11. Define physical quantity and unit with example.
12. Write a note on acceleration due to gravity.
13. Explain modulus of elasticity.
14. Explain floatation with example.
15. Define cohesion and adhesion.
16. Explain conduction of heat.
17. State and explain Charles' law for volume.
18. What is optical fibre? Write two applications.
19. Write a note on interference of light.
20. Fill in the blanks
  - i) Dimension of work is .....ii) Rate of change of velocity is.....
  - ii) The substance which reflects light is called.....
21. Define real image and virtual image.
22. Write properties of  $\alpha$ -rays.
23. Write a note on radioactive safety measures.
24. Explain the action of NPN transistors.
25. What is an ammeter? Explain.
26. Explain p-type semiconductor.
27. Define i) Electric intensity ii) Electric field iii) Electric potential
28. Write a note on interference of light.
29. What is a thermistor? Mention the uses.
30. Answer the following
  - A) What is doping? B) What is spectrophotometer?
  - C) Name the lens which converges the beam of light after refraction.

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 5191, SECTION-A, PATHOLOGY**

**I.SHORT NOTES - ANSWER ANY FOUR QUESTIONS** **4 X 5 = 20**

1. What are the types of cell injuries ? Write in detail about necrosis.
2. Fracture healing.
3. Write differences between congestion and hyperemia with examples.
4. What is protein energy malnutrition?
5. Myocardial Infarction.

**II. SHORT ANSWERS** **10 x3 =30**

6. Rickets
7. Gangrene
8. Atherosclerosis
9. Definition of anemia
10. Differences between hyperplasia and hypertrophy
11. Tuberculosis Osteomyelitis
12. Types of jaundice.
13. Ulcerative lesion of intestine
14. Tuberculosis Meningitis.
15. Fatty liver

**QP CODE: 5192, SECTION - B, MICROBIOLOGY**

**I.SHORT NOTES - ANSWER ANY FOUR QUESTIONS** **4 X 5 = 20**

1. Define and classify Immunity. Explain Innate Immunity.
2. Different modes of transmission of Infection
3. Type I hypersensitivity
4. Moist heat sterilization
5. Lab diagnosis of typhoid fever

**II. SHORT ANSWERS** **10 x3 =30**

6. Name three bacteria causing sexually transmitted diseases
7. Name three diseases caused by streptococcus pyogenes
8. Name three gram positive bacteria
9. List typhoid vaccines
10. Name three bacteria causing UTI
11. List serological Markers of hepatitis B
12. List three bacteria causing wound Infections
13. List any three components universal safety precautions
14. IgG Antibody (Draw & Label)
15. Name three pandemic diseases

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 2101 SECTION -A, ANATOMY**

(WRITE IN SEPARATE ANSWER BOOK)

**I. LONG ESSAY- ANSWER ANY ONE** **1X10=10**

1. Classify Bones with examples. Describe Histology of Compact Bone. (6+4)
2. Name the parts of Female Reproductive System with a labelled diagram.  
Describe Uterus in brief. (5+5)

**II. WRITE SHORT ESSAYS ON ANY FIVE** **5 X5 = 25**

3. Hyaline Cartilage
4. Right Lung
5. Right Atrium
6. Biceps Brachii Muscle
7. Thyroid Gland
8. Histology of Oesophagus
9. Eyeball

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

10. Name any two Muscles of Upper Limb
11. Name any four Cranial Nerves
12. Name any two Joints of Lower Limb
13. Name branches of Arch of Aorta
14. Name the Carpal Bones

**QP CODE: 2102 SECTION -B, PHYSIOLOGY**

(WRITE IN SEPARATE ANSWER BOOK)

**I. LONG ESSAY- ANSWER ANY ONE** **1X10=10**

1. What is Cross matching? Describe the effects of mismatched blood transfusion.  
(2+8)
2. List the hormones of Pancreas. Describe the actions of Glucagon. (5+5)

**II. WRITE SHORT ESSAYS ON ANY FIVE** **5 X5 = 25**

3. Intra uterine contraceptive devices (IUCD)
4. Hypermetropia
5. Conducting system of Heart
6. Pulmonary function tests (PFT)
7. Functions of gastric juice
8. Draw a neat labeled diagram of Nephron and mention its functions

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

9. Give the normal values of A) Platelet count B) Clotting time
10. Two types of WBC's
11. Name two functions of CSF
12. What is Apnoea?
13. Name two functions of long bones

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA COURSE IN MEDICAL LABORATORY TECHNOLOGY**  
**(DMLT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 5101 SECTION -A, ANATOMY**

**(WRITE IN SEPARATE ANSWER BOOK)**

### I. SHORT ANSWERS- ANSWER ANY FOUR

$$4 \times 5 = 20$$

1. Classify bones with examples
2. Describe the Humerus bone
3. Describe the Shoulder joint
4. Describe Gluteus maximus muscle
5. Describe Urinary bladder

## II. SHORT NOTES

$$10 \times 3 = 30$$

6. Name the bones of Lower limb
7. Name the muscles of Leg
8. Name the parts of the Stomach
9. Name the arteries of the Lower limb
10. Give examples for Synovial joint
11. Name the Cell Organelles
12. Tendon
13. Name the branches of arch of Aorta
14. Name the muscles of Tongue
15. Name the parts of Pituitary gland

**QP CODE: 5102 SECTION -B, PHYSIOLOGY**

**(WRITE IN SEPARATE ANSWER BOOK)**

### I. SHORT ANSWERS - ANSWER ANY FOUR

$$4 \times 5 = 20$$

1. Composition & Functions of Plasma Proteins.
2. Normal Constituents of Urine.
3. Oxygen Dissociation Curve.
4. List the Anterior Pituitary hormones. List the functions of Thyroid hormone.
5. Spermatogenesis.

## II. SHORT NOTES

**10 X3 = 30**

6. List the muscles of ventilation.
7. Conducting System of Heart.
8. Functions of Haemoglobin.
9. Draw a neat labelled diagram of Neuron.
10. Deglutition.
11. Types of Muscle.
12. Define Cardiac output & its normal value.
13. Name three Contraceptive methods in Female.
14. Name three Anticoagulants.
15. Mitochondria.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**  
**TIME: 1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**

**QP CODE: 2121**

**GENERAL PHYSICS**

**I. LONG ESSAY - ANSWER ANY ONE** **1 X10 = 10**

1. **A.** Define electron and proton .  
**B.** Draw a neat labelled diagrammatic representation of X-ray production  
**C.** Write about types of anodes. (2+5+3)
2. **A.** Define law of conservation of energy. Give one example.  
**B.** Write the properties of electromagnetic radiation  
**C.** Draw a neat labelled diagram of transformer and one use. (3+4+3)

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

3. Capacitors and its uses
4. Write differences between AC and DC current.
5. Define charge and properties of charge
6. Tube rating chart
7. Modes of propagation of electromagnetic waves with one example
8. Full wave rectifier with neat diagram

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

9. Ohm's law
10. Volta-meter
11. Define work and mention SI unit
12. Space charge
13. Insulators

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORDS TECHNOLOGY (DMRT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2141, MEDICAL RECORD SCIENCE**

**I. LONG ESSAY-ANSWER ANY TWO** **2X10=20**

1. Briefly write the History of Medical Records?
2. Duties and responsibility of MRO, AMRO and MRT? Explain
3. Define Centralized and Decentralized Filing system?

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

4. Explain Bailable and Non Bailable Offences?
5. What is Assembling and Deficiency Check list? Explain
6. Retention and Shredding procedure of Medical Records?
7. Functions of OP and IP Registration counters.
8. Right to Information Act.
9. Characteristics of Medical Records?
10. Forms Control Programme.
11. What types of Certificate Issued in Medical Records Department?
12. Explain briefly role of Medical Records in Quality Care reviews?
13. What is HIMS? Explain.
14. What is e-Janma. How to provide the Birth and Death Certificates in this Software?
15. Briefly write the Medico Legal Section Procedures?

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

16. Public Officer
17. UHID
18. Plaintiff
19. Bed Occupancy Rate
20. Decree Holder
21. Name correction procedure
22. Contents of Medical Records
23. Tracer Card
24. Mid Night Census
25. Documentary Evidence.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY (DOTT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE- 2131**  
**FUNDAMENTALS OF OT & BASIC CONCEPTS IN SURGERY**

**I LONG ESSAY - ANSWER ANY TWO 2X10 = 20**

1. What is ambulatory surgical care? Describe in brief the intra operative, discharge and advantages of ambulatory surgery.
2. Discuss the role of OT technicians in day care surgery
3. Describe the types of wound healing. Describe the factors influencing wound healing.

**II WRITE SHORT NOTES ON ANY TEN 10X5=50**

4. Methods of sterilization
5. Sterile team members
6. Surgical scrub
7. Various types of cautery and precautions in using cautery
8. Harmonic scalpel
9. Patients skin preparation
10. Check list
11. Wound dressing
12. Ryles tube
13. Fumigation
14. Suction device
15. Positions in surgery

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

16. AMBU bag
17. Disinfection
18. Daily OT cleaning
19. Vacuum suction
20. Enema
21. Draping
22. Hospital waste management
23. Gowning
24. CPR
25. Gauze

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPHTHALMIC TECHNOLOGY (DOT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE- 2161, PAPER-I**

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

**2X10 = 20**

1. Draw a labelled neat diagram of eye. Write a note of conjunctiva.
2. What are extraocular muscles . what are ductions and versions.
3. What is myopia. Different methods to correct myopia.

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

**10X5=50**

4. What are bifocal spectacles . different types of bifocals.
5. What is hypermetropia and different types of hypermetropia.
6. What is perimetry and how to check for the same.
7. Draw picture of corneal layers.
8. What are progressive lens. Types of progressive lenses.
9. Advantages and disadvantages of contact lens uses.
10. Write a note on components of vision.
11. What are prism and how are prisms used.
12. What are BSV? mention grades of BSV .
13. Write a note on aqueous drainage with a neat diagram.
14. What are transposition of lenses ? mention the types.
15. What are materials used in spectacle making.

**III. WRITE SHORT ANSWERS**

**10X2=20**

16. Components of tear film.
17. Mention 3 methods to correct aphakia.
18. Types of glass given to corneal presbyopia.
19. How to check for accommodation ?
20. Bones forming orbit.
21. Components of trial set.
22. What is keratometry?
23. Mention 2 indications for axial length measurement.
24. Mention 2 uses of projective glasses.
25. Advantages of contact lens over spectacles.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE- 2151, SECTION-A, PHARMACOLOGY**

**(WRITE IN SEPARATE ANSWER BOOK)**

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

**1X10 = 10**

1. Mention the various routes of drug administration with examples. Write the advantages and disadvantages of oral route of drug administration.
2. Name SIX opioid analgesics. Mention TWO therapeutic uses, TWO adverse effects and TWO contraindications of Morphine

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

**5X5=25**

3. Aspirin
4. Uses and adverse effects of Corticosteroids
5. Oral contraceptives
6. Enzymes in therapy
7. Cotrimoxazole
8. Drug Hypersensitivity reactions

**III. WRITE SHORT ANSWERS**

**5 X 2 = 10**

9. Mention the disease caused due to deficiency of
  - a) Vitamin A
  - b) Thiamine
  - c) Vitamin D
  - d) Folic acid
10. Name four first line Antitubercular drugs
11. Name TWO killed vaccines
12. Name TWO colouring agents
13. Mention TWO solid dosage forms.

**QP CODE- 2152, SECTION-B, THEORY OF DIALYSIS**

**(WRITE IN SEPARATE ANSWER BOOK)**

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

**1X10 = 10**

1. What are the different types of dialysers? What are the complications of hemodialysis? How to monitor a patient on hemodialysis? (2+5+3)
2. Draw a line diagram to illustrate the process of water purification in a dialysis unit. (5+5)

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

**5X5=25**

3. Precautions to be followed while dialysing an HIV patient
4. What assessment should be carried out prior to construction of AV fistula
5. Draw a dialyser membrane and explain how it works
6. Buffers used in dialysate solutions and their properties
7. Precautions to be taken for haemodialysis for a patient with chronic renal failure
8. Anticoagulation protocols in haemodialysis

**III WRITE SHORT ANSWERS**

**5X2=10**

9. Give 2 indications of starting dialysis in acute renal failure
10. The maximum period of use of a femoral and jugular catheter
11. Current endotoxin standards for low flux and high flux dialysis
12. Mention 2 antihypertensive
13. Mention 2 clinical signs of AV fistula upstream venous stenosis

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS (DDM)**

**TIME: 1.30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 45**

**QP CODE- 2171, DENTAL MATERIALS & METALLURGY**

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

**1X10 = 10**

- 1) What is the composition of Heat cure acrylic resin powder and liquid? Describe the Laboratory steps in fabrication of complete denture. (5 + 5)
- 2) Write any 2 classifications of impression materials. Write the composition and uses of Zinc oxide eugenol impression paste. (3 + 3 + 4 )

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

**5 X 5 = 25**

- 3) Syneresis and imbibition
- 4) Draw the Diagram of impression tray
- 5) Advantages of base metal alloys
- 6) Composition of Alginate
- 7) Galvanic corrosion
- 8) Fluxes and antfluxes
- 9) Advantages of Glass ionomer cement

**III. WRITE SHORT ANSWERS**

**5 X 2 = 10**

- 10) Ni-ti wire
- 11) Hygroscopic expansion
- 12) Types of Inlay waxes
- 13) Ductility and malleability
- 14) Karat and Fineness

**\*\*\*\*\***

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE (DDH)**

**TIME: 1.30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 45**

**QP CODE- 2181, SECTION-A, GENERAL ANATOMY AND HISTOLOGY**  
**(WRITE IN SEPARATE ANSWER BOOK)**

**I. Long Essay (Any 1)**

**1 x 9 = 09**

1. Describe Temporomandibular Joint under the following heading:  
(a) Type of Joint, (b) Bones Forming, (c) Movements, (d) Applied Aspects.
2. Describe Facial Nerve

**II. Short Notes (Any 2)**

**2 x 5 = 10**

3. Maxillary Artery
4. Tongue
5. Histology of Parotid Salivary Gland

**III. Short Answers**

**3 x 2 = 06**

6. Name Muscles of Mastication
7. Name the Basic Tissues in the Body
8. Dental Formula

**QP CODE- 2182, SECTION-B, GENERAL PHYSIOLOGY**

**(WRITE IN SEPARATE ANSWER BOOK)**

**I. Write Short notes on any FIVE**

**4 x 4 =16**

1. Conductive system of Heart
2. Structure of Cell
3. Composition and Function of Bile
4. Blood groups
5. Actions of Growth Hormone
6. Mechanism of Urine Formation

**II. Write short answers**

**2 x 2 =4**

- 7) Name the types of muscles
- 8) Functions of CSF

**\*\*\*\*\***

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY(DMIT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE- 5121, RADIATION PHYSICS**

**I. SHORT NOTES- ANSWER ANY EIGHT QUESTIONS**

**8x5 =40**

1. Construction and working of step up transformer
2. Rectification, purpose and mechanisms
3. IITV
4. Construction of stationary anode.
5. Components and functions of filament and tube circuits.
6. Give electromagnetic spectrum and their uses
7. Write note on Atom
8. Mention types of generators and phases
9. Describe Xray production and interactions
10. Working principle, merits and demerits of digital fluoroscopy

**II .SHORT ANSWERS**

**20x3**

11. Computed radiography
12. Pair production
13. Half life period in radioactivity
14. Automatic brightness control.
15. Ct collimators.
16. State Ohm's law with equation
17. Write note on overloading of an X-Ray tube.
18. Define potential, current and resistance
19. Write note on fuses
20. Define: primary, secondary and scattered radiation
21. Ct numbers
22. Ct artifacts.
23. Filters
24. Bone densitometry
25. Single and three phase AC
26. State the importance of earthing of an electrical device
27. Production and properties of beta rays
28. Examples for elements, Isotopes and Isomers
29. Write note on cooling techniques used in X-ray tube.
30. State working principle of MRI .

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN OPERATION THEATRE & ANESTHESIA**  
**TECHNOLOGY (DOT &AT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE- 5131**  
**FUNDAMENTALS OF OT & BASIC CONCEPT IN SURGERY**

**I. SHORT NOTES- ANSWER ANY EIGHT QUESTIONS**

**8x5 =40**

1. Staff nurse personnel team work
2. Intra and post operative evaluation
3. Microbiological safety
4. Concept of Central Supply Department
5. Day Care surgery
6. Electrical hazards and safeguards
7. Control of contamination in OT
8. Wound management and method of Haemostasis
9. Monitoring of vital function and complications of operations
10. Checklist of patient before surgery

**II. SHORT ANSWERS**

**20 X3 =60**

11. Harmonic scalpel
12. Vacuum suction
13. Care and handling of instruments
14. Sterilization
15. Factors influencing wound healing
16. Pros and Cons disposables
17. Catheterization
18. Division of duties
19. Health care team
20. Post operative evaluation
21. Standards of preoperative nursing practice
22. Acceptance of operations
23. Gowning and gloving
24. Operative positions
25. Radiation hazards
26. Precautions on using Cautery
27. Scavenging gases
28. Iodine
29. Pulse oximeter
30. Prevention of infection

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**

**II YEAR DIPLOMA IN DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE- 5151, SECTION-A, APPLIED PHARMACOLOGY**

(WRITE IN SEPARATE ANSWER BOOK)

**I. SHORT NOTES - ANSWER ANY FOUR**

**4X5 = 20**

1. Classify routes of drug administration. Mention the advantages of intramuscular route of drug administration.
2. Mention the uses and adverse effects of diazepam
3. Management of Hypovolemic shock.
4. Write the differences between Metoclopramide and Domperidone
5. Write the regimen of Anti-retroviral drugs used in post exposure prophylaxis

**II. SHORT ANSWERS\_**

**10X3=30**

6. Mention the uses of Adrenaline.
7. Mention the drugs used in acute severe asthma
8. Mention the Parenteral Iron preparation and their uses.
9. Mention three vasopressors.
10. Mention the uses and adverse effects of Aspirin
11. Mention the uses and adverse effects of Insulin.
12. Sodium Bicarbonate
13. Mention three Proton Pump inhibitors and their uses
14. Mention three antibiotics contraindicated in renal failure
15. Name three crystalloids and their uses

**QP CODE- 5152, SECTION-B, THEORY OF DIALYSIS**

(WRITE IN SEPARATE ANSWER BOOK)

**I. SHORT NOTES - ANSWER ANY FOUR**

**41X5 = 20**

1. Define diffusion, osmosis and convection in dialysis setting.
2. Precautions to be taken while dialyzing a sero-positive patient for patient and your safety.
3. Describe the advantages and disadvantages of peritoneal dialysis.
4. What are the types of renal failure? Mention the complications of renal failure.
5. Disinfection of haemodialysis machine- types, agents used and indications for disinfection

**II. SHORT ANSWERS\_**

**10X3=30**

6. What is transmembrane pressure (TMP) and its importance.
7. Mention the laboratory tests done in patients with renal failure.
8. Mention the Types of dialyzers based on flux.
9. Mention steps in storage of dialyzers.
10. Acid concentrate composition
11. Types of vascular access in HD
12. What is proportion of mixture of processed water: acid concentrate: bicarbonate?
13. Disadvantage of dialyzer reuse
14. When to discard the dialyzers during reuse?
15. What are the options for a patient with AV fistula failure?

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY**  
**(DMRT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS:100**

**QP CODE: 5141, MEDICAL RECORD SCIENCE**

**I. SHORT NOTES - ANSWER ANY EIGHT**

**8 x 5=40**

1. Write a procedure to get a Wound Certificate.
2. Write a procedure to get a Physical Fitness Certificate.
3. Write the Values of Medical Records.
4. Define Public Servant.
5. Write the differences between Public documents and private document.
6. Define Personal Documents and Impersonal documents.
7. Define bailable and non bailable offences.
8. Define Warrant and list the types of warrants.
9. Write the duties and responsibilities of Medical Record Officer.
10. Write the procedure to release the information of medical records to the police.

**II. SHORT ANSWERS**

**20x3=60**

11. What is Cross Examination.
12. Define Pleader.
13. Define Judgment.
14. Define Plaintiff.
15. Define Summons.
16. Write the procedure for production of documents in the court.
17. Define Decree.
18. Define Tracer Card and its uses.
19. Define Accession Register.
20. Define Operation Index and its uses.
21. Define Accident Register and its uses.
22. Write the Uses of Medical Records.
23. Write the qualitative analysis of Medical Records.
24. Define Diagnostic Index Card and its uses.
25. Write the procedure for issuing the Medical Records to the Police.
26. Define warrant.
27. Define Accident Register.
28. Define FIR.
29. Define Census and its uses.
30. Define wound certificate

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY(DOT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS:100**

**QP CODE: 5161, PAPER-I**

**I. SHORT NOTES - ANSWER ANY EIGHT**

**8 x 5=40**

1. Write a neat diagram of V/S of the Eye ball and label the parts.
2. Explain laws of reflection. Illustrate with diagram.
3. Write a note on: a) Anisokonia b) Anisometropia
4. What is hyper metropia? How do you correct it, indicate with diagram.
5. Aphakia and its correction.
6. How do you test near and distant vision and materials used for testing.
7. How do you arrange dark room for conducting refraction?
8. Trial lens kit and its contents.
9. Write a diagram of lacrimal oparatus.
10. Write a short note on: a) Ametropia b) Amblyopia

**II. Short Notes answer all the questions of the following:**

**20X3=60**

11. Types and causes of astigmatism.
12. Optical constants of the Eye.
13. What is Presbyopia.
14. Causes of myopia.
15. Types of Lenses.
16. Pinhole.
17. Advantage of contact lens.
18. Types of prescription lenses.
19. Give the prescription for the following refractions conducted:

a) 
$$\begin{array}{c|c} & +2.O_D \\ \hline & \\ \hline & +2.O_D \end{array}$$

b) 
$$\begin{array}{c|c} & - 6.O_D \\ \hline & \\ \hline & - 6.O_D \end{array}$$

c) 
$$\begin{array}{c|c} & \pm 0.2.5_D \\ \hline & \\ \hline & +1.O_D \end{array}$$

20. Types of bifocal lenses.
21. Parts of spectacle.
22. Methods of refraction
23. Diagnose the kind of refractive error for the following prescription given:
  1.  $-2.O_D$  SPH BE
  2.  $+ 5.O_D$  SPH BE
  3.  $-2.O_D/-1.O_D$  90° BE
24. Keratometer
25. Slit lamp
26. Tonometer
27. Colour Vision
28. Drugs used in refraction
29. Refractive media of the Eye ball
30. Diagram of the Eye lens.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN**  
**DENTAL MECHANICS (DDM)**

**TIME: 1.30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 50**

**QP CODE: 5171, DENTAL MATERIALS & METALLURGY**

**I. SHORT NOTES -ANSWER ANY FOUR QUESTIONS**

**4X5=20**

1. What is an alloy and write about base metal alloys.
2. Addition silicon impression material
3. Tarnish and Corrosion
4. Glass ionomer cement
5. Steps in compression moulding technique

**II. SHORT ANSWERS**

**10X 3 =30**

6. Type IV Gypsum
7. Ductility and Malleability
8. Physical stages of polymerisation
9. Soldering and Welding
10. Electroplating
11. Fluxes and antfluxes
12. Niti wires
13. Setting reaction of Alginate
14. Inlay wax
15. Wet strength

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE (DDH)**

**TIME: 1.30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 50**

**QP CODE: 5181, SECTION-A, GENERAL ANATOMY, HISTOLOGY**

**I. SHORT NOTES -ANSWER ANY TWO QUESTIONS**

**2X5=10**

1. Describe facial nerve
2. Describe epithelial tissue with examples
3. Describe nerve supply and blood supply of tooth

**II. SHORT ANSWERS**

**5 x 3 = 15**

4. Name the salivary glands
- 5 Lymphatic drainage of face
6. Name the muscles attached to mandible
7. Name the branches of external carotid artery
8. Name the bone cells

**QP CODE: 5182, SECTION-B, GENERAL PHYSIOLOGY**

**I. SHORT NOTES -ANSWER ANY TWO QUESTIONS**

**2X5=10**

1. Classify White blood cells. Write their functions
2. Draw neat labelled diagram of conducting system of the heart
3. Explain the actions of Parathyroid hormone

**II. SHORT ANSWERS**

**5 x 3 = 15**

4. List the functions of Cell membrane
5. Name the types of movements of gastrointestinal tract
6. Name the different types of muscles
7. List the functions of lungs
8. Draw a neat labelled diagram of Taste bud

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
I YEAR DIPLOMA IN PHYSIOTHERAPY**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 4191, ANATOMY**

**I. SHORT NOTES- ANSWER ANY EIGHT QUESTIONS      8 x 5 = 40**

1. Diaphragm
2. Pleura
3. Hip joint
4. Structures under the cover of Gluteal muscle
5. Stomach
6. First carpometacarpal joint
7. Lymphatic drainage of Breast
8. Cubital fossa
9. Pectoral girdle
10. Urinary bladder

**II. SHORT ANSWERS**

**20 x 03 = 60**

11. Linea aspera
12. Name the parts of Pancreas
13. Nerve supply of Tongue
14. Name the Flexors of forearm
15. Name the contents of Femoral triangle
16. Name the parts of Mediastinum
17. Sesamoid bone
18. Nerve supply of foot
19. Classification of joints
20. Draw a neat labelled diagram of Ventricles of Brain
21. Name the parts of Corpus callosum
22. Draw a neat labelled diagram of Blood supply of thyroid gland
23. Name the parts of Urethra
24. Mention the blood supply of Brain
25. Motor speech area
26. Name the layers of Retina
27. Classification of Connective tissue
28. Great saphenous vein
29. Name the structures in the Hilum of right Lung
30. Name the ligaments of Liver

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**TIME: 2 HRS (RS -1 SCHEME) MAX. MARKS: 65**  
**QP CODE: 3201, SPORTS SCIENCE & PHYSIOTHERAPY**

- I. LONG ESSAY- ANSWER ANY FOUR 4X5=20**
1. List five regional sports conditions in detail
  2. How will you handle sports injury (soft tissue) for early and better prognosis?
  3. Write on the principles of immediate First aid and treatment
  4. Write in detail about the principles of physical education
  5. What is tennis elbow? Explain Patho-mechanism, clinical features and rehabilitation programme for the same.
- II. SHORT NOTES- ANSWER ANY FIVE 5X5=25**
6. Golfer's elbow
  7. Sprain and strain
  8. Foot drop
  9. ACL injury
  10. Achilles tendon
  11. Carpen Tunnel Syndrome

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3102, PATHOLOGY**

**I. LONG ESSAY: ANSWER ANY TWO**

**2X10=20**

1. Write in detail the collection, physical examination, chemical examination and microscopy of CSF fluid. (2+2+2+4)
2. Describe the procedure of blood grouping. Add a note on methods of cross matching (5+5)
3. What is osmotic fragility test? Write its use. And add a note on its procedure. (2+2+6)

**II. SHORT ESSAY: ANSWER ANY TEN**

**10X5=50**

4. Mention the steps of haematoxylin and Eosin staining technique.
5. Describe the procedure of demonstration of Barr bodies.
6. Mention different types of special stains used in histopathology.
7. Describe sickling test in detail.
8. Physical examination and microscopy of seminal fluid.
9. Automation in haematology.
10. Describe the types of blood grouping.
11. What is Coomb's test. Mention its types.
12. Write a note on transfusion reactions.
13. Mention different names of fixatives used in histopathology.
14. Preparation and staining of bone marrow smear
15. Microwave tissue processing.

**III. SHORT ANSWERS**

**10X2=20**

16. Name the components of blood.
17. Name any two histochemical staining techniques.
18. Prothrombin time.
19. Name any four screening tests done in blood bank.
20. Write the normal value of bleeding time and clotting time.
21. Mention the different sites of bone marrow aspiration.
22. Name any two immunohistochemical staining techniques.
23. Mention two fixatives used in cytology.
24. Name four body fluids.
25. Clot retraction time

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**III YEAR DIPLOMA IN  
MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 100**

**QP CODE: 6103, PATHOLOGY**

**I. SHORT NOTES: ANSWER ANY EIGHT**

**8X5=40**

1. Write in detail about Bone marrow examination.
2. Discuss about osmotic fragility test.
3. PT and APTT
4. LIS and HIS
5. Quality control in Blood Bank.
6. Microwave tissue processing.
7. Biological hospital waste management.
8. Frozen section.
9. Automation in coagulation tests.
10. Separation of blood components.

**II. SHORT ANSWERS**

**20X3=60**

11. Differential leucocyte count.
12. Materials required for bone marrow examination.
13. Bleeding time.
14. Foetal Hb.
15. Clot retraction time.
16. Causes of Eosinophilia.
17. Perls stain procedure.
18. Sites of bone marrow aspiration.
19. Importance of calibration and validation in pathology.
20. Indications for bone marrow examination.
21. Equipments used in Blood Bank.
22. Forward and Reverse grouping.
23. Coomb's test.
24. Selection of Donor.
25. Storage of blood components.
26. Embedding.
27. PAS stain procedure.
28. Different types of mounting Jars.
29. Preparation of Harris Haematoxylin.
30. Errors in section cutting

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3112. COMMUNITY MEDICINE, PAPER-II**

**I.LONG ESSAY: ANSWER ANY TWO**

**2X10=20**

- 1 Define infant mortality rate. Write the causes of infant mortality rate and add a note on its prevention.
- 2 Define Family planning. Discuss in detail about terminal methods of contraception
- 3 Define health education. Discuss in detail Principles of health education

**II SHORT NOTES- ANSWER ANY TEN**

**10 X 5 = 50**

- 4 Health problems of the aged people
- 5 School health appraisal
- 6 Intra- uterine devices
- 7 Postnatal Complications
- 8 Types of communication
- 9 Growth chart
- 10 Factors affecting fertility
- 11 Low birth weight
- 12 Baby friendly hospitals initiatives
- 13 Enumerate child health problems
- 14 Street children
- 15 Antenatal advice

**III. SHORT ANSWERS**

**10 X 2 = 20**

- 16 Advantages of condom
- 17 Growth rate
- 18 Target couple
- 19 Weaning
- 20 Audio-visual aids
- 21 Risk infants
- 22 Internet
- 23 Domiciliary care
- 24 Cold chain
- 25 Iron and folic acid tablets

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 100**

**QP CODE: 6113. COMMUNITY MEDICINE, PAPER-II**

**I. SHORT NOTE- ANSWER ANY EIGHT**

**8 X 5 = 40**

1. Define antenatal care. Objectives of antenatal care
2. Demography cycle
3. Define family planning. Classify contraceptive methods
4. Principles of health education
5. Geriatric health problems
6. ASHA
7. Infant mortality rate and its causes
8. Uses of growth chart
9. Child abuse
10. Types of communication

**II. SHORT ANSWERS**

**20 X 3 = 60**

11. Three causes of maternal mortality
12. Permanent family planning methods
13. Health education v/s counseling
14. Antenatal advice
15. Vaccines for pregnant women
16. Growth rate
17. Eligible couple
18. Three advantages of breast feeding
19. Weaning
20. Exclusive breast feeding
21. Health problems in adolescents
22. Causes for under 5 mortality
23. Role of health inspectors in PHC
24. Street child
25. Essential drugs
26. Barriers of communication
27. Danger signals in intranatal period
28. Post natal complications
29. Audio- visual aid
30. Counseling

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3122, RADIOGRAPHY INCLUDING MEDICAL RECORDS**

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

**2 X10 = 20**

- 1) Explain barium swallow procedure with positioning and views
- 2) Briefly discuss about maintenance and record keeping of medico-legal films and general X-ray films
- 3) Intravenous pyelography (IVP) write about patient preparation and procedure

**II. SHORT NOTES - ANSWER ANY TEN**

**10 X 5 = 50**

- 4) PACS(Picture Archiving And Communication System)
- 5) Write about general instruction given to patient for Chest X-ray imaging
- 6) Loopogram
- 7) Mention different views of chest X-ray ?
- 8) Contrast reaction and First aid to patient
- 9) Medical Records
- 10) Write about exposure factors of X-ray imaging with example.
- 11) Micturating Cystourethrogram
- 12) Preparation given to patient for barium enema.
- 13) Write about bucky and its uses
- 14) Collimation
- 15) Dark room and uses

**III. SHORT ANSWERS**

**10 x 2 = 20**

- 16) Intravenous Contrast and mention types
- 17) Milliampere
- 18) Patient positioning for X-ray of Lumbo-Sacral Spine (L.S.Spine)
- 19) What is Centring?. Give two examples
- 20) Film Numbering
- 21) Fistulogram
- 22) Barium Sulphate Powder
- 23) View Box
- 24) High Speed Films
- 25) C-Arm

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**III YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY (DMIT)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 100**

**QP CODE: 6123**

**SPECIAL PROCEDURES, RADIOGRAPHIC PHOTOGRAPHY  
AND MEDICAL RECORDS**

**I. SHORT NOTE- ANSWER ANY EIGHT**

**8 X 5 = 40**

1. What is barium? Write a note on barium studies and their uses.
2. Types of cholangiography
3. Radiographic contrasts
4. Role of MRI in CNS investigations
5. Role of CT as special investigation of respiratory tract
6. Intravenous urography
7. Hysterosalpingography
8. Arteriography- Technique and its uses.
9. Explain barium swallow
10. Side effects and toxicity of contrast agents and their treatment

**II. SHORT ANSWERS**

**20 x 3 = 60**

11. Small bowel enema
12. Micturating cystourethrography- Technique
13. Postoperative T tube cholangiography
14. Percutaneous nephrostomy
15. Tomography
16. Myelography
17. Side effects of contrast agents
18. Arthrography
19. Sonography
20. Peripheral venography of upper limb
21. Bronchography
22. Sialography
23. Barium enema
24. Types of contrast media
25. Write a note on forensic radiography
26. Role of ultrasound for the special investigation of urinary tract
27. Foreign body localization
28. Mobile radiography
29. Name any three instruments used in hysterosalpingography
30. Mammography

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY (DOTT)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3132, OPERATIVE PROCEDURE**

**I. LONG ESSAY - ANSWER ANY TWO** **2X10=20**

1. Explain the procedure of appendicectomy with diagram. Write about complication of appendix surgery.
2. Explain causes for chest trauma. Explain ICD procedure with diagram.
3. Define hemorrhagic shock. Explain management of hemorrhagic shock.

**10X5=50**

**II. SHORT NOTES - ANSWER ANY TEN**

4. Wound healing
5. Types of hernia with diagram
6. Organ transplantation
7. Common operations in the urinary tract
8. Abdominal incisions
9. Amputation
10. Upper gastrointestinal Endoscopy
11. Skin grafting
12. Cast application
13. Repair of tendon
14. Gangrene toe
15. Angioplasty

**III. SHORT ANSWERS**

**10X2=20**

16. Advantage of Laparoscopy
17. Craniotomy
18. Circumcision
19. Lipoma
20. Bladder stone
21. Suction drain
22. Tissue holding forceps
23. Bronchoscopy
24. Chemotherapy
25. Wound disruption

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN OPERATION THEATRE & ANAESTHESIA**  
**TECHNOLOGY (DOT &AT)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 100**

**QP CODE: 6133**

**OPERATIVE PROCEDURES**

**I. SHORT NOTE- ANSWER ANY EIGHT**

**8 X 5 = 40**

1. Cystoscopy.
2. Closed reduction.
3. Biopsy.
4. Tendon Repair.
5. Cataract Surgery.
6. Colonoscopy.
7. Types of Drain.
8. Fibroadenoma.
9. Lateral anal Sphincterctomy.
10. Deviated Nasal Septum.

**II. SHORT ANSWERS**

**20X3=60**

11. Laparoscopy.
12. Flash Sterilization.
13. Wound Excision.
14. Foley's Catheter.
15. Colostomy Care.
16. Babcock's forceps.
17. Sym's amputation.
18. Skin Graft.
19. OT cleaning types.
20. Position.
21. Fistulectomy.
22. Enema.
23. Scrubbing.
24. CSSD.
25. Splints.
26. Fasciotomy.
27. Suture materials.
28. Sterile Team members.
29. Dressing.
30. Types of Cautery.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORDS TECHNOLOGY (DMRT)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3142, HOSPITAL ADMINISTRATION**

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

**2X10=20**

1. What are Nosocomial infections? Role of Central Sterile Services Department (CSSD) in prevention of Nosocomial infections. (3+7)
2. Define Hospital. Classify and enumerate functions of the hospital. (2+8)
3. What is Job satisfaction? What are the indicators of Job satisfaction in employees? How to improve the working environment in hospital? ( 2+6+2)

**II. SHORT NOTES- ANSWER ANY TEN**

**10×5=50**

4. Soft skills
5. Supportive Supervision
6. Hospital Disaster Action Plan
7. Explain Plan Do Check Act (PDCA) with examples
8. National Quality Assurance standards (NQAS)
9. Inventory management
10. Hospital grievance Redressal Procedures
11. Hospital Policies
12. Medical Negligence
13. Colour Coding of Bio Medical Waste
14. Electronic Medical records
15. Fire safety measures

**III. SHORT ANSWERS**

**10×2=20**

16. 108 ambulance services
17. Marketing of hospital services
18. How to calculate Bed occupancy rate and average length of stay
19. Death certificate
20. How to reduce Waiting time at Outpatient departments (OPDs)
21. Zoning of Operation theatres
22. Non value adding services
23. Security of New-born babies
24. Mistake proofing
25. Outsourcing of hospital services

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**III YEAR DIPLOMA IN  
MEDICAL RECORDS TECHNOLOGY (DMRT)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 100**

**QP CODE: 6143, HOSPITAL ADMINISTRATION**

**I. SHORT NOTES - ANSWER ANY EIGHT**

**8X5=40**

1. Hospital acquired infection control committee.
2. What is the process of drug indenting in a district hospital?
3. Bed occupancy rate and Bed turnover ratio
4. Briefly describe the organization of casualty and emergency services.
5. Planning of NICU in a district hospital.
6. Fire safety in hospitals.
7. Plan for dietary services in a district hospital
8. Describe briefly about outcome indicators in a district hospital.
9. Quality control aspects in an hospital.
10. Functions of Nursing Superintendent.

**II. SHORT ANSWERS**

**20x3=60**

11. Enumerate three committees in an hospital.
12. Functions of housekeeping supervisors.
13. Health Insurance.
14. Administrative organization in a district hospital
15. Functions of Medical Superintendent.
16. Bio-Medical waste management
17. Importance of medical record section in an hospital.
18. History of hospitals in India.
19. Outcome indicators in a district hospital
20. High alert drugs in pharmacy.
21. Dress code in an hospital.
22. Functions of resident medical officer.
23. Patient feedback surveys.
24. Standard operating procedure.
25. Length of Stay
26. Average Daily Census
27. Enumerate three committees in an hospital.
28. Functions of an electrician in hospital.
29. Electric generators in hospitals.
30. Importance of police out [post in hospitals.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3152,**

**RENAL REPLACEMENT THERAPY OTHER THAN  
HAEMODIALYSIS & PATIENT TEACHING**

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

**2X10=20**

1. Define sustained low efficiency dialysis (SLED). Write in detail about the clinical indications, dialysis settings, anti coagulation protocol, advantages and disadvantages and complications of SLED (2+2+2+2+2)
2. Classify dialyzer types and membranes. Define and detail the following dialyzer specifications with examples: KUF, Urea Clearance, KOA and Priming Volume. (5+5)
3. Define continuous renal replacement therapy (CRRT). List the different types and the differences between them. Draw and explain the typical CRRT circuit. (2+6+2)

**II. SHORT NOTES - ANSWER ANY TEN**

**10X5 = 50**

4. What is hemoperfusion? Indications and contraindications of hemoperfusion?
5. Regular lab investigations done in maintenance hemodialysis patients
6. Anatomy and blood supply of peritoneal membrane
7. Define plasmapheresis. Indications and contraindications of plasmapheresis.
8. Diet in ESRD
9. Composition of Peritoneal dialysis fluid
10. Indications for initiation of dialysis
11. Write on note on dialyser reprocessing
12. Define PET? How is it done?(2+3)
13. Write briefly about dialyser reactions.
14. Diagnosis and management of PD peritonitis
15. Permacath

**III. SHORT ANSWERS**

**10X2 = 20**

16. Name 2 diuretics used in hemodialysis patients
17. Name two viral infections that can be transmitted by blood
18. Name 2 types of replacement fluids used in plasmapheresis
19. Name 2 vital signs monitored during hemodialysis
20. Normal values of serum sodium and creatinine.
21. Mention 2 complications of hemodialysis
22. Name 2 alarms in hemodialysis machine
23. Universal precautions
24. What is SCUF?
25. 2 complications of blood transfusion

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**

**III YEAR DIPLOMA IN DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS:100**

**QP CODE: 6153, PAPER-II**

**I. SHORT NOTES ANY EIGHT**

**8X5=40**

1. Indications and complications of peritoneal dialysis
2. Define plasmapheresis. Draw plasmapheresis circuit. What are the indications for plasmapheresis? (1+1+3)
3. Define pet. How do you perform it? (1+4)
4. Standard dialysate composition
5. Anticoagulation protocols
6. Define hemodiafiltration? Indications and advantage of hemodiafiltration? (2+2)
7. Acute peritoneal dialysis – indications and complications
8. Draw water treatment part and label parts
9. COMPLICATIONS of central venous catheterisation.

**II. SHORT ANSWERS**

**20X3=60**

10. Diagnosis of CAPD peritonitis.
11. Types of CRRT
12. Physiology of peritoneal dialysis
13. Advantages and disadvantages of dialyser reuse
14. Name 3 antihypertensives?
15. Name 3 diuretics?
16. Rule of 6 in AVF
17. Name 3 complications of plasmapheresis
18. Name 3 complications of chronic dialysis
19. Name 3 Indications for HD catheter removal
20. Priming of hemodialysis machine
21. Name 3 Vaccines in dialysis patients
22. Write the advantages and disadvantages of Arterio venous fistula.
23. Mention 3 clinical manifestations of inadequate dialysis?
24. Name 2 drugs that decrease potassium levels
25. List out 3 alarms and their causes in hemodialysis.
26. What are bio-compatible dialyzers? Give three examples.
27. How will you calculate urea reduction ratio and KT/V?
28. Explain Slow Continuous Ultra Filtration.
29. Write about pre dialysis patient assessment.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN  
OPHTHALMIC TECHNOLOGY (DOT)**

**TIME: 3 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 90**

**QP CODE: 3162, PAPER-II**

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

**2X10=20**

- 1) Mention in detail the major and minor surgical records.
- 2) Write in detail about Eyebank- collection, preservation , transportation and publicity.
- 3) How do you plan for cataract camp under National programme for control of blindness?

**II. SHORT NOTES- ANSWER ANY TEN**

**5x10=50**

- 4) Survey methodology.
- 5) Childhood blindness- causes and prevention
- 6) Role of teacher in school screening.
- 7) ICD-10.
- 8) Numerical index.
- 9) Neutralization of lenses
- 10) Prisms of ophthalmology.
- 11) What are the camp activities done in your hospital?
- 12) Rehabilitation of blind
- 13) Differences between spherical and cylindrical lenses.
- 14) Write a note on nursing care.
- 15) How is an optometrist useful in the field of ophthalmology?

**III. SHORT ANSWERS**

**2X10=20**

- 16) Name 2 charts to test near vision
- 17) Name 2 common eye diseases.
- 18) Why statistics is important in hospital setup?
- 19) Mention 2 major surgical records.
- 20) Classification of vitamin A deficiency.
- 21) Corneal FB management in a PHC
- 22) Mention 2 functions of an eye bank
- 23) Disease index.
- 24) Alphabetical index.
- 25) Name 2 antibiotics.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN**  
**OPHTHALMIC TECHNOLOGY (DOT)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS:100**

**QP CODE: 6163, PAPER-II**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8x5=40**

1. Eye Bank
2. Define anisometropia. Mention the importance of treating anisometropia in school children
3. Describe Various Methods of ophthalmic drug application
4. Describe 5 Uses of topical steroid eye drops in ophthalmology
5. Classify Anti-Glaucoma drugs
6. Emergency resuscitation -CPR( Cardia pulmonary resuscitation )
7. Methods of identifying shallow anterior chamber depth
8. NPCB
9. Role of the ophthalmic technician in Eye camp
10. School eye screening

**II. SHORT ANSWERS**

**20x3=60**

11. Dangers of indiscriminate use of steroid eye drops
12. Causes of Loss of Corneal window Reflex
13. Define blindness, and Types of blindness
14. Drugs used for Subconjunctival injection
15. DBCS (District blindness control society )
16. Consent Form for cataract surgery
17. Rehabilitation of blind
18. Role of protective eye gear at work place
19. Maintaining medico legal register
20. Importance of Fundus examination in patients with good vision
21. Uses of fluorescein in ophthalmology
22. Uses & side effect of miotics
23. Treatment of Lagophthalmos
24. Methods of storing donor cornea
25. Describe 3 Causes for Proptosis
26. Describe evaluation of watering eye
27. Describe 3 Causes for Sudden Painful Vision Loss
28. Describe 3 Conditions producing Acute Red Eye
29. Relative afferent Pupillary defect ( RAPD)
30. Describe 3 Causes for Shallow anterior Chamber

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN  
DENTAL MECHANICS (DDM)**

**TIME: 1.30 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 45**

**QP CODE: 3172, PARTIAL DENTURES, ORTHODONTIA,  
MAXIOFACIALMPROSTHESIS**

**I. LONG ESSAY**

**1X10=10**

1. Define Prosthodontics and write in brief about fabrication of cast partial denture .

**II. SHORT NOTES**

**5X5=25**

2. Principles of wire bending
3. Duplicating cast.
4. Waxing principles of crown and FPD.
5. Materials used in maxillofacial prosthesis.
6. Define die and die materials.

**III. WRITE SHORT ANSWERS**

**5X2=10**

7. Components of FPD.
8. Shaped blockout
9. Mention 4 different types of casting machine
10. Surveying tools.
11. Classify retainers.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
III YEAR DIPLOMA IN  
DENTAL MECHANICS (DDM)**

**TIME: 1.30 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 50**

**QP CODE: 6172**

**PARTIAL DENTURES, ORTHODONTIA, MAXIOFACIALMPROSTHESIS**

**I. SHORT NOTES -ANSWER ANY FOUR**

**4X5=20**

1. Different Die systems.
2. Describe Kennedy's Classification.
3. Components of FPD.
4. Mechanical principles of orthodontia.
5. Principles of RPD design.

**II. WRITE SHORT ANSWERS**

**10X3=30**

6. Minor connectors.
7. Duplicating material.
8. Define soldering and welding.
9. Mandibular major connectors.
10. Parts of surveyor
11. Different types of Pontic design
12. Appliance's rule any three.
13. Colour coding in RPD
14. Connector in FPD
15. Mention 4 different types of casting machine

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE (DDH)**

**TIME: 1.30 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 45**

**QP CODE: 3182**

**DENTAL HEALTH EDUCATION, SOCIAL & PUBLIC HEALTH & PREVENTIVE  
DENTISTRY**

**I. LONG ESSAY**

**1X10=10**

1. Describe The Dental Plaque Control Measures.

**II. WRITE SHORT NOTES**

**5X5=25**

2. Child And Parent Counseling
3. Prevalence And Prevention Of Periodontal Disease.
4. Community Water Supply And Its Implication On Dental Health
5. Dental Health Education
6. Habits And Effect On Dental Structures

**III. WRITE SHORT ANSWERS**

**5X2=10**

7. Chlorexidine Mouth Wash
8. Topical Fluoride Application
9. Oral Health In Handicapped
10. Environmental Health
11. Habit Breaking Appliance.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
III YEAR DIPLOMA IN DENTAL HYGIENE (DDM)**

**TIME: 3 HRS**

**(RS-2 SCHEME)**

**MAX.MARKS: 100**

**QP CODE: 6183**

**DIAGNOSIS & TREATMENT OF PERIODONTAL DISEASE**

**I. SHORT NOTES-ANSWER ANY EIGHT QUESTIONS**

**8X5=40**

1. Describe different chemical plaque control agents.
2. Write parafunctional habits and explain any one.
3. Write basic principles of instrumentation.
4. Write indications and contra indications of ultrasonic scalers.
5. Mention Different brushing techniques and explain modified Boss method..
6. Periodontal probes.
7. Rules and regulations of dental hygiene.
8. Management of diabetes mellitus patients.
9. Classify periodontal instruments.
10. OHIS index.

**II. SHORT ANSWERS**

**20X3=60**

11. Oral irrigation devices.
12. Inter dental aids.
13. Define dental hygiene.
14. Name Sutures materials.
15. Name periodontal dressing.
16. Define dental plaque.
17. Signs of Syncope.
18. Drugs used in Asthma.
19. Periodontal findings of diabetes mellitus.
20. Precautions to be taken in pregnant women.
21. Special diet for patients with jaw fracture.
22. Care of handicapped patient.
23. Management of hypertensive patient.
24. Treatment of Shock.
25. Name types of Haemophilia.
26. Blood glucose levels.
27. Precautions to be taken in HIV patient..
28. Precautions to be taken in HBV infection.
29. Methods to check for sharpness of instruments.
30. Eruption cyst.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
II YEAR DIPLOMA IN PHYSIOTHERAPY (DTP)**

**TIME: 3 HRS**

**(RS-2 SCHEME)  
QP CODE: 5193  
THERAPEUTIC EXERCISE**

**MAX.MARKS: 100**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8 X 5 = 40**

1. Aims and techniques of Exercise therapy.
2. Principles of Goniometry.
3. Passive exercises.
4. Group Exercise.
5. Bed transfer activities.
6. Pathological gaits
7. Indications and goals of breathing exercises
8. Hydrotherapy and its uses.
9. Walking Aids
10. PNF.

**II. SHORT ANSWERS**

**20 x 3 = 60**

11. Reflexes
12. Parts of Goniometer
13. Parts of wheel chair
14. Frankel's exercises
15. Isometric exercise
16. Muscle responsible for running
17. Suspension therapy
18. Eccentric exercises
19. Irradiation
20. Resisted exercises
21. Postural defect
22. Ballistic movement
23. Muscles acting on hip movements
24. Merits of hydrotherapy
25. Properties of water
26. Aerobic training
27. Active movements
28. Advantages of group exercise
29. Different types of crutches
30. Massage

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
I YEAR CERTIFICATE COURSES**

**TIME: 1.30 HRS**

**(RS-1 SCHEME)**

**MAX.MARKS: 45**

**QP CODE: 1102  
CHEMISTRY**

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

**1 X 10 =10**

- 1) Explain the preparation, properties and uses of Ethyl alcohol.
- 2) Explain the preparation of Nitric acid by Ostwald's process. Mention any two properties and uses of nitric acid.

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

**5 X 5 =25**

- 3) Tyndal effect and Brownian movement
- 4) Types of Buffer solutions
- 5) Half life period
- 6) Oxidizing and reducing agents
- 7) Difference between colloids and crystalloids
- 8) Properties of Alpha, Beta and Gamma rays
- 9) Classify hydrocarbons with examples and use for each

**III. WRITE SHORT ANSWERS**

**5 X 2 =10**

- 10) Mention two uses of Sodium hydroxide
- 11) Define A) Acid B) Base
- 12) Structure of Glycine and Alanine
- 13) Types of RNA
- 14) Why methane is called marsh gas?

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**FIRST YEAR DIPLOMA COURSES, (RS-2 SCHEME)**

**Time: 3.00HRS    QP CODE: 4103, CHEMISTRY**

**Max Marks:100**

**I.SHORT NOTES -ANSWER ANY EIGHT**

**8 X 5=40**

1. Explain preparation of Nitric acid by Ostwald's process
2. Define pH. Mention the pH values of any five biological fluids
3. Describe the preparation of ethyl alcohol from molasses
4. Write the structure of A) Glycine B) Alanine C) Serine D) Aspartic acid E) Tyrosine
5. Atomic weight and Molecular weight
6. Define pollution. Mention the causes of water pollution
7. Define half life period. Mention the applications of cobalt-60 and iodine-131 isotopes
8. Define A) Oxidation and B) Reduction. Give one example for each

**9. Match the following**

A	B
a) Starch	i) Honey
b) Glycogen	ii) Milk
c) Cellulose	iii) Seeds
d) Lactose	iv) Liver
e) Fructose	v) Plant cell wall

**10. Choose the correct answers**

- A) Drinking soda is i) Alkaline ii) Acidic iii) Neutral iv)Oxidant  
B) UV radiation is striking the earth is due the depletion of i)oxygen ii) ozone iii)CO iv) CO<sub>2</sub>  
C) The gas chiefly present in LPG (liquefied petroleum gas) is i) Butane ii)Propane iii)Ethane iv)Methane  
D) Silk fiber chemically is i) Fat ii) protein iii) carbohydrate iv) cellulose  
E) PVC is obtained by the polymerization of i)propane ii) butane iii) vinyl chloride iv)Acetylene

**II. SHORT ANSWER**

**20 X 3 = 60**

11. Name the SI Units for A) Length B) Mass C) Time.
12. Define an atom. Name the sub-atomic particles of an atom.
13. Define (i) Acid (ii) Base (iii) Salt. Mention one example for each
14. Define (i) Molarity (ii) Normality.
15. What is Aquaregia? Mention its uses
16. Name three indicators
17. Global warming
18. Mention three uses of phenol
19. Define a buffer solution. Mention different types of buffer solutions.
20. Give the calculation for preparing 100ml of 0.1N NaOH
21. Mention three uses of salicylic acid
22. Mention three applications of colloids
23. Milk sugar
24. Define a) Enzyme b) Co-enzyme and c) Apoenzyme
25. Calculate the percentage of Carbon and Oxygen in glucose(C<sub>6</sub>H<sub>12</sub>O<sub>6</sub>)
26. Mention different types of RNA and their functions
27. Mention the causes of soil pollution
28. Define matter and mention the states of matter
29. Calculate the molar mass of a) H<sub>2</sub>O b) CO<sub>2</sub> and C) CH<sub>4</sub>

**30. Fill in the blanks**

- i) CuSO<sub>4</sub> is the chemical formula of.....
- ii) H<sub>2</sub>O<sub>2</sub> is the chemical formula of .....
- iii) Na<sub>2</sub>CO<sub>3</sub> is the chemical formula of .....

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY(DMLT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2103, BIOCHEMISTRY**

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

**2x10=20**

1. What are carbohydrates? Name two monosaccharides and mention their biomedical importance. Write the principle of Benedict test. (2+5+3)
2. Define enzyme activity. Explain the factors affecting enzyme activity. (3+7)
3. What are autoanalyzers? Mention the types of autoanalyzers. Discuss the operation and management of fully automated analyzer. (2+2+6)

**II.SHORT ESSAY- ANSWER ANY TEN**

**10x5=50**

4. Precautions and maintenance of pH meter
5. Types of salts
6. Flame photometer
7. Biomedical importance of carbohydrates
8. Diagnostic enzymes
9. Dry chemistry analyzers
10. Components of spectrophotometer
11. Precautions taken while handling acid and alkalies in laboratory
12. Polysaccharides
13. Rancidity
14. Isoelectric precipitation of proteins
15. Structure of an atom

**III. SHORT ANSWERS- (ANSWER ALL)**

**10x2=20**

16. What are aromatic compounds? Give examples
17. Name the fundamental particles in an atom and mention their charge
18. What is titration? Name any two acid-base indicators.
19. What are the uses of autoclave in laboratory?
20. Name any two isoenzymes used in diagnosis of disease
21. Normal levels of serum calcium and sodium
22. Define molecular weight
23. What are fatty acids? List two examples
24. Give one example for metalloprotein and hemoprotein
25. Define aldoses. Give an example for aldohexose.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**II YEAR DIPLOMA IN  
MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 5103, BIOCHEMISTRY**

**I. SHORT NOTES -ANSWER ANY EIGHT QUESTIONS**

**8 x 5 = 40**

- 1) Classify carbohydrates. Add a note on reducing and non reducing sugars.
- 2) Factors affecting enzyme activity.
- 3) Describe about the use, care and maintenance of water distillation plant and water Deioniser.
- 4) Name fat soluble vitamins. Mention the functions & deficiency diseases of vitamin D.
- 5) Different types of deliquescent and hygroscopic salts.
- 6) Spectrophotometer labeled the parts. Write their maintenance and uses.
- 7) Preparation of standards using conventional and SI units.
- 8) Write about phlebotomy and specimen collection, storage, transport and Disposal.
- 9) Laboratory laws and regulations & quality control.
- 10) Different types of Balances.

**II. SHORT ANSWERS (ANSWER ALL)**

**20 x 3=60**

- 11) Write about cleaning of plastic ware in laboratory.
- 12) Night blindness.
- 13) Lowry – Bronsted theory of Acids and Bases.
- 14) Patient data registration.
- 15) Incubators.
- 16) 10% NaCl solution preparation.
- 17) Amino acid definition & classifications.
- 18) Functions of Phospholipids.
- 19) Structure of DNA.
- 20) PH meter and electrodes use, care and maintenance.
- 21) Centrifuge.
- 22) Water bath.
- 23) Reflex condenser
- 24) Hot air Oven.
- 25) Calibration of glass pipettes.
- 26) Internal Quality Control.
- 27) Transamination.
- 28) Normal values of sodium, potassium and chloride.
- 29) Lipid profile.
- 30) Isoenzymes.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 2111, COMMUNITY MEDICINE, PAPER-I**

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

**2x10=20**

1. What is Social Security? Explain social security measures for elderly and industrial workers in India
2. Explain in detail synthesis, secretion and function of Thyroid hormone. Add a note on Hypothyroidism
3. Define family. Types of family and describe role of family in health and disease.

**II. SHORT ESSAY- ANSWER ANY TEN**

**10x5=50**

4. Kuppuswamy classification of socio economic status
5. Discuss role of life style behaviours in causing diseases
6. Social problems affecting health of community
7. Role of customs and culture in child rearing
8. Emotional health
9. Advantage and disadvantage of Nuclear family
10. Medico Social worker
11. Function of Saliva
12. Describe Uterus in detail with the help of labelled Diagram.
13. Explain layers chambers and valves of human heart
14. Rural development
15. Vitamin D

**III. SHORT ANSWERS (ANSWER ALL)**

**10x2=20**

16. Three generation family
17. Problem family
18. Below Poverty line
19. Acculturation
20. Difference between family and household
21. Functions of large intestine
22. Condition affecting learning
23. Dowry Prohibition act
24. Social Mobility
25. Formula for Intelligence quotient

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 5111, COMMUNITY MEDICINE, PAPER-I**

**I. SHORT NOTES-ANSWER ANY EIGHT QUESTIONS**

**8 x 5 = 40**

1. Name organs of digestive system & write functions of liver
2. Write functions of nervous system
3. Describe structure with labelled diagram and list function of heart
4. The Femur bone
5. Define Health & write about determinants of health
6. Explain Epidemiological triad with labelled diagram
7. Define Family. Role of family in health and disease
8. Write briefly about "natural history of disease"
9. Define rehabilitation and classify with examples
10. Motivation and its stages

**II. SHORT ANSWER (ANSWER ALL)**

**20 X 3 = 60**

11. Write three functions of white blood cells
12. Uses of sweating
13. Name three hormone secreted by adrenal gland
14. Write the name of plasma proteins
15. Name three components of physical quality of life index
16. Positive health
17. Acculturation
18. Define surveillance and give example
19. Below poverty line
20. Primordial prevention
21. Three types of Learning
22. High risk strategy
23. Nuclear Family
24. Consumer Protection Act
25. Disease Elimination
26. Write "Spectrum of health" diagram
27. Social defence
28. What do you mean by "Web of Causation"?
29. Write three host relate biological properties of biological agent
30. Define risk factor and give an example

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**  
**TIME: 1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**

**QP CODE: 2122, ANATOMY**

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

1. Classify the Epithelium with examples.
2. Name the parts of the Urinary System with a labelled diagram. Describe Kidney in brief. (5+5)
3. Name the parts of Male reproductive system with a labelled diagram. Describe testis in brief. (5+5)

**II. SHORT NOTES- ANSWER ANY THREE** **3 x 5 = 15**

4. Knee Joint
5. Left Lung
6. Para Nasal Air Sinuses
7. Stomach

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

8. Name the types of cartilages
9. Write two differences between Large Intestine and Small Intestine
10. Bones forming Hip Joint
11. Name the bones of the Hand
12. Name parts of the Brain

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
II YEAR DIPLOMA IN**

**MEDICAL IMAGING TECHNOLOGY (DMIT)**

**TIME: 1.30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 50**

**QP CODE: 5123, ANATOMY**

**I.SHORT NOTES- ANSWER ANY FOUR**

**04 x 05 = 20**

1. Describe the hip joint.
2. Describe the nose with the paranasal air sinuses
3. Describe the contents of intercostal space
4. Describe the parts of young long bone with diagram
5. Describe synovial joints with examples

**II. SHORT ANSWERS(ANSWER ALL)**

**10 x 03 = 30**

6. Mention the parts of hip bone
7. Mention the parts of large intestine
8. Mention the different anatomical planes
9. Mention the terms used to describe the movements of joints
10. Mention the nerves of upper limb
11. Name the veins of lower limb
12. Mention the parts of typical vertebra
13. Mention the parts and contents of mediastinum
14. Name the branches of abdominal aorta.
15. Name the tarsal bones

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY (DOTT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**  
**QP CODE: 2132, SECTION-A, BIOCHEMISTRY**  
**(ANSWER IN-BLUE BOOKLET ONLY)**

**I. LONG ESSAY - ANSWER ANY ONE** **1x10=10**

1. Describe digestion and absorption of Carbohydrates. (5+5)
2. What are Physical Characteristics and chemical constituents of Normal Urine

**II. WRITE SHORT NOTES ON ANY TWO** **2X5=10**

3. Metabolic acidosis.
4. Urea cycle
5. Formation of Uric acid.

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

6. Test to detect Blood sugar in urine.
7. What are acids. Give examples
8. Name the serum electrolytes
9. Anion gap
10. Normal values of Urea and Creatinine

**QP CODE: 2133, SECTION-B, PHARMACOLOGY**  
**(ANSWER IN-RED BOOKLET ONLY)**

**I LONG ESSAY- ANSWER ANY ONE** **1X10=10**

1. Name six Parenteral route of drug administration. Mention two advantages & two disadvantages of **Intravenous** route of drug administration. [6+2+2]
2. Name four commonly used **PENICILLINS**. Mention two uses, two adverse effects & mechanism of action of **PENICILLINS**. [4+2+2+2]

**II. WRITE SHORT NOTES ON ANY TWO** **2X5=10**

3. Lignocaine
4. Morphine
5. Calculate the dose of a drug for the patient weighing 40 kg., if a adult dose is 10 mg/kg body weight.

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

9. Mention two Inhalational Anaesthetics.
10. Name two drugs for Leprosy.
11. Mention two uses of Cotrimoxazole
12. Name Two uses of Diazepam
13. Name two Adverse effects of Aspirin

**QP CODE: 2134, SECTION-C, MICROBIOLOGY**  
**(ANSWER IN-PURPLE BOOKLET ONLY)**

**I LONG ESSAY- ANSWER ANY ONE** **1X10=10**

1. Define and classify sterilisation. Describe in detail chemical disinfection. (2+3+5)
2. Define and classify hypersensitivity. Discuss in detail type 1 hypersensitivity. (2+2+6)

**II. WRITE SHORT NOTES ON ANY TWO** **2X5=10**

3. Standards of air quality in the operation theatre
4. Biomedical waste management
5. Active immunity

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

6. Louis Pasteur
7. Name four articles sterilised in hot air oven
8. Draw a neat labelled diagram of Human Immunodeficiency Virus.
9. Name four Gram positive bacteria
10. Name two anaerobic bacteria.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN OPERATION THEATRE & ANAESTHESIA**  
**TECHNOLOGY (DOT &AT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 5133, SECTION-A, BIOCHEMISTRY**  
**(ANSWER IN-BLUE BOOKLET ONLY)**

**I.SHORT ESSAY - ANSWER ANY FIVE.**

**5x5=25**

- 1) Define and classify carbohydrates with examples.
- 2) Acid base balance in the body.
- 3) Principles and application of estimation of electrolytes.
- 4) Define purines and pyrimidines. Explain the structure of DNA in detail.
- 5) Discuss in detail about ionization of water.
- 6) Renal function tests.

**II.SHORT ANSWERS**

**5x3=15**

- 7) Benedicts test.
- 8) Respiratory alkalosis.
- 9) Essential amino acids.
- 10) Universal indicators.
- 11) Abnormal constituents of urine.

**QP CODE: 5134, SECTION-B, APPLIED PHARMACOLOGY**  
**(ANSWER IN-RED BOOKLET ONLY)**

**I.SHORT ESSAY - ANSWER ANY THREE**

**3x5=15**

1. Mention the advantages and disadvantages of Intra-Venous route of Drug administration
2. Mention three Local Anaesthetics. Mention the techniques of administration of Local Anaesthetics and mention three contraindications for Spinal Anaesthesia
3. Intravenous inducing agents
4. Diazepam

**II.SHORT ANSWERS**

**5x3=15**

5. Mention three skeletal muscle relaxants
6. Name three Penicillins and mention three uses of them
7. Mention three drugs used in Anaphylactic shock
8. Mention three drugs used for pre Anaesthetic medication
9. Define Anti-septics and mention two Antiseptics

**QP CODE: 5135, SECTION-C, MICROBIOLOGY**  
**(ANSWER IN-PURPLE BOOKLET ONLY)**

**I. SHORT ESSAY - ANSWER ANY THREE**

**3x5=15**

1. Koch's Postulates
2. Define and Classify Sterilization
3. Classify Immunity and describe active immunity with examples
4. Classify Bacteria and draw a neat labeled diagram of Bacterial cell

**II.SHORT ANSWERS**

**5x3=15**

5. Name three disease caused by Staphylococcus aureus
6. List the Mode of transmission of HIV
7. Fumigation
8. Bacterial filters
9. Define Nosocomial Infection and Mention three bacterial causing it.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA /II YEAR CERTIFICATE COURSE IN MEDICAL**  
**RECORDS TECHNOLOGY (DMRT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 2142, SECTION-A, ANATOMY**

**(ANSWER IN-BLUE BOOKLET ONLY)**

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

**1 x 10 = 10**

1. Name the parts of Respiratory System with a labelled diagram. Describe Pleura in brief. (6+4)
2. Name the parts of Male Reproductive System with a labelled diagram. Describe Testis in brief. (5+5)

**II. SHORT NOTES**

**2 x 5 = 10**

3. Pancreas
4. Classification of Bones

**III. SHORT ANSWERS**

**5 x 2 = 10**

5. Name four Cranial Nerves
6. Name the Carpal Bones
7. Name two Veins of Upper Limb
8. Name two joints of Lower Limb
9. Name the parts of Fallopian Tube

**QP CODE: 2143, SECTION-B, PHYSIOLOGY**

**(ANSWER IN-RED BOOKLET ONLY)**

**I. SHORT NOTES ON ANY FOUR**

**4 x 5 = 20**

- 1) Composition and functions of Bile
- 2) Actions of Thyroid hormone
- 3) Pulmonary function tests
- 4) Conducting system of heart
- 5) Anticoagulants
- 6) Abnormal constituents of Urine

**II. SHORT ANSWERS**

**5 x 2 = 10**

- 7) Neat labelled diagram of ECG
- 8) Functions of CSF
- 9) Apnoea
- 10) Name refractive errors
- 11) Any two family planning methods.

**QP CODE: 2144, SECTION-C, PATHOLOGY & MICROBIOLOGY**

**(ANSWER IN-PURPLE BOOKLET ONLY)**

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

**1X 10=10**

1. Explain record keeping in pathology
2. What are the various investigations done in microbiology

**II. SHORT ESSAY -ON ANY TWO**

**2X5=10**

3. Tests done on urine
4. Tuberculosis
5. Gram stain

**III. SHORT ANSWERS**

**5X2=10**

6. Name TWO Gram negative organisms
7. Name TWO disease caused by virus
8. Name TWO fungal diseases
9. Mention TWO infections caused by streptococcal organism
10. Name TWO intestinal parasites

**\*\*\*\*\***

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY (DMRT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE:5143, SECTION-A, ANATOMY**  
**(ANSWER IN-BLUE BOOKLET ONLY)**

**I. SHORT NOTES (Answer any 2 ) 2 X 5 = 10**

1. Classify Joints with examples
2. Draw neat labelled diagram of Eye ball
3. Describe Palatine tonsil

**II. SHORT ANSWERS 10 X 3 = 30**

4. Name the Sutures of skull
5. Name the Anatomical movements
6. Name the parts of Pancreas
7. Name the Ear Ossicles
8. Name the Ventricles of Brain
9. Name the Salivary glands
10. Name the branches of Femoral artery
11. Name the parts of Male Reproductive organs
12. Name the Lymphoid organs
13. Describe Oesophagus

**QP CODE:5144, SECTION-B, PHYSIOLOGY**  
**(ANSWER IN-RED BOOKLET ONLY)**

**I. SHORT NOTES (Answer any THREE questions) 3X5=15**

1. Types and Functions of WBC'S
2. Electrocardiogram
3. Renal function tests
4. Defecation

**II.SHORT ANSWERS**

5. Define Apnea, Dyspnea,& Tachypnea
6. Cryptorchidism
7. Functions of Middle Ear
8. Bleeding time & Clotting time
9. Functions of Growth hormone.

**QP CODE:5145, SECTION-C, PATHOLOGY & MICROBIOLOGY**  
**I. (ANSWER IN-PURPLE BOOKLET ONLY)**

**II. SHORT NOTES: Answer any THREE questions. 3X5=15**

1. Define inflammation. Add a note on types with examples.
2. Rheumatic Heart Disease.
3. Carcinoma stomach.
4. Tuberculosis of lung.

**II. SHORT ANSWERS 5X3=15**

5. Osteomyelitis.
6. Myocardial Infarction.
7. Name common infectious diseases – any 6.
8. Mention Three fungi.
9. Mention any 6 Bacterias.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 2153, SECTION-A, BIOCHEMISTRY**

**I. (ANSWER IN-BLUE BOOKLET ONLY)**

**II. LONG ESSAY - ANSWER ANY ONE** **1x10=10**

1. What are the factors regulating normal blood glucose level. Give the normal range of blood glucose levels (7+3)
2. What are the factors affecting blood pH? Add a note on renal regulation of Blood pH.(4+6)

**III. WRITE SHORT NOTES ON ANY FIVE** **5x5=25**

3. Differences between colorimeter and Spectrophotometer
4. Physical Characteristics of normal urine.
5. Urea Cycle
6. Principle and applications of pH meter in dialysis
7. Clearance tests
8. Disorders of Acid base balance

**IV. WRITE SHORT ANSWERS** **5x2=10**

9. Applications of chromatography in dialysis
10. Define Acid with Examples
11. Organic constituents of Normal urine
12. Benzidine Test.
13. Normal values of Urea and Creatinine

**QP CODE: 2154, SECTION-B, MICROBIOLOGY**

**(ANSWER IN-RED BOOKLET ONLY)**

**I. LONG ESSAY - ANSWER ANY ONE** **1x10=10**

1. Define sterilisation and list the methods of sterilisation. Discuss sterilisation by moist heat.(2+3+5)
2. Describe the structure, pathogenicity and laboratory diagnosis of Human Immunodeficiency Virus.(3+2+5)

**II. SHORT NOTES - ANSWER ANY FIVE** **5x5=25**

3. Active Immunity
4. Anaphylaxis
5. Louis Pasteur
6. Universal precautions
7. Fumigation of operation theatre
8. Bacterial growth curve

**III. SHORT ANSWERS** **5x2=10**

9. BCG vaccine
10. Draw a neat labelled diagram of Hepatitis B virus
11. Name two chemical disinfectants
12. Name two anaerobic bacteria
13. Name two opportunistic fungal infections

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN DIALYSIS TECHNOLOGY (DDT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 5153, SECTION-A, BIOCHEMISTRY**  
**(ANSWER IN-BLUE BOOKLET ONLY)**

**I. SHORT NOTES – ANSWER ANY FOUR.**

**4×5=20**

1. Define carbohydrate? Write their classification.
2. Discuss the concept of acid base reaction.
3. Write in brief about renal function tests.
4. Define salt and write the classification.
5. Renal regulation of blood pH.

**II. SHORT ANSWERS**

**10×3=30**

6. Metabolic acidosis.
7. Different methods of glucose estimation.
8. Pattern of cardiac enzymes in heart disease.
9. Write different types of RNA and their functions.
10. Universal indicators.
11. Define hypertension? Write different types of hypertension.
12. Deionised water.
13. Define carbohydrate? Write their functions.
14. Lipoproteins.
15. Deficiencies of vitamin D.

**QP CODE: 5154, SECTION-B, MICROBIOLOGY**  
**(ANSWER IN-RED BOOKLET ONLY)**

**I. SHORT NOTES – ANSWER ANY FOUR.**

**4×5=20**

1. Differences between active and passive immunity.
2. Tetanus
3. Define sterilisation. Write in brief about moist heat sterilisation.
4. Segregation of biomedical waste.
5. Serological markers of Hepatitis B virus infection.

**II. SHORT ANSWERS**

**10×3=30**

6. Draw a neat labelled diagram of Human immunodeficiency virus.
7. Name three causative agents of meningitis.
8. Infections caused by Candida.
9. Name three live attenuated vaccines.
10. Name three causative agents for surgical site infection.
11. Enumerate three fungal opportunistic infections associated with HIV.
12. DPT vaccine
13. Pasteurisation
14. Mantoux test.
15. Significant bacteriuria.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPHTHALMIC TECHNOLOGY (DOT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 2162, PAPER-II**

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

**2X10=20**

- 1) Define Conjunctivitis. Mention types of Conjunctivitis, write about clinical features and treatment.(1+3+3+3)
- 2) Define Cataract. Types of cataract. Diagnosis and treatment of Cataract.(1+3+3+3)
- 3) Define Amblyopia. Types of Amblyopia. Write a note on patching therapy.(2+4+4)

**II. SHORT NOTES - ANSWER ANY TEN**

**10 X5=50**

- 4) Vitamin A deficiency.
- 5) Types of Tonometry. Explain applications of Tonometry.
- 6) Clinical features of ocular trauma.
- 7) Chronic Dacrocystitis.
- 8) Cycloplegics in refraction testing.
- 9) Post operative medications after cataract surgery.
- 10) First Aid in chemical injury of the eye.
- 11) Spring cataract.
- 12) Oral glycerol.
- 13) Classification of diabetic retinopathy.
- 14) Causes of watering of eye.
- 15) Clinical features of acute Iridocyclitis.

**III.SHORT ANSWERS**

**10X2=20**

- 16) Name two antiglaucoma drugs.
- 17) Dry eye symptoms.
- 18) Signs of Acute Conjunctivitis.
- 19) Name two antiglucoma surgery.
- 20) Name two antibiotics used in ophthalmology.
- 21) Name two steroids used in ophthalmology.
- 22) Name two antihistaminic drugs used in allergic Conjunctivitis.
- 23) Treatment of Blepharitis.
- 24) Two signs of Keratoconus.
- 25) Two causes of red eye.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY (DOT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 5163, PAPER-II**

**I. SHORT NOTES- Answer Any EIGHT Questions**

**8x5=40**

1. Define Cataract. Describe stages of maturation of Cortical Cataract
2. Classify Corneal Ulcer
3. Lacrimal sac syringing method & interpretation
4. Describe five differences between acute Conjunctivitis & Acute iridocyclitis
5. Describe first Aid Management of Acute alkali injury
6. Optic Disc Changes in Glaucoma
7. WHO Classification of Vitamin A Deficiency
8. Stages of Diabetic retinopathy
9. Binocular Single Vision
10. Visual field Defects in Glaucoma

**II. SHORT ANSWERS**

**20x3=60**

11. Treatment of VIT A deficiency
12. Ophthalmia Neonatorum
13. Complication of corneal ulcer
14. Conservative management of cataract
15. Describe risk factors for Diabetic Retinopathy
16. Describe types of cataract surgery
17. Write morphological classification of cataract
18. Macular Function test
19. Describe three causes for sudden loss of vision
20. Describe procedure for removal of corneal foreign body
21. Principle of applanation Tonometry
22. Define & classify Squint
23. Non-Contact tonometer
24. Drugs Used to reduce intraocular pressure
25. Screening for Glaucoma
26. A scan Biometry
27. Treatment of Squint
28. Methods to visualize optic disc
29. Hypertensive Retinopathy
30. Treatment of Diabetic Retinopathy

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA /II YEAR CERTIFICATE COURSE IN DENTAL**  
**MECHANICS (DDM)**

**TIME:1. 30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 45**

**QP CODE: 2172, APPLIED ORAL ANATOMY**

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

**1X10=10**

- 1) Describe the anatomy of mandibular permanent first molar with diagrams
- 2) Maxillary denture bearing areas

**II. SHORT NOTES - ANSWER ANY FIVE**

**5X5=25**

- 3) Muscles of mastication
- 4) Carving
- 5) Different tooth numbering systems
- 6) Significance of posterior palatal seal area
- 7) Temporomandibular joint
- 8) Retromolar pad
- 9) Muscles of soft palate

**III. SHORT ANSWERS**

**5X2=10**

- 10) Denture relieving areas
- 11) Define occlusion
- 12) Bilabial sounds
- 13) Significance of incisive papilla
- 14) Mesial aspect of maxillary canine

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN DENTAL MECHANICS (DDM)**

**TIME: 1. 30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 50**

**QP CODE: 5172, APPLIED ORAL ANATOMY**

**I. WRITE SHORT NOTES ON ANY FOUR**

**4 X 5 = 20**

- 1) Anatomy of Permanent Maxillary 1<sup>st</sup> Molar
- 2) Overjet and overbite
- 3) Posterior Palatal Seal Area
- 4) Teeth Numbering Systems
- 5) Movements of Temporomandibular Joints(TMJ)

**II. WRITE SHORT ANSWERS**

**10 X 3 = 30**

- 6) Rugae
- 7) Buccal Shelf Area
- 8) Frenum and its significance
- 9) Denture Relief Areas
- 10) Dento-Labial Sounds
- 11) Hamular Notch
- 12) Parotid Duct
- 13) Buccinator
- 14) Keys of Occlusion
- 15) Curve of Spee

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA /II YEAR CERTIFICATE COURSE IN DENTAL**  
**HYGIENE (DDH)**

**TIME:1. 30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 45**

**QP CODE: 2183**

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

(ANSWER IN-BLUE BOOKLET ONLY)

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

**1 x 9= 9**

1. Describe the stages of development of tooth with neat labelled diagram.

Mention the causes of dental caries.

2. What is Leucoplakia. Write an essay on oral manifestations of systemic infections

**II. SHORT NOTES- ANSWER ANY FOUR**

**4x 5 = 20**

3. Differences between benign and malignant tumours.

4. Write a note on wound healing

5. Importance of sterilisation in microbiology

6. Write briefly about dental anomalies

7. Vitamin C Deficiency

8. Mention the types of cellular degeneration with examples.

**III. SHORT ANSWERS**

**3x 2 = 6**

9. Name two gram positive bacteria

10. Name two causes of oral ulcers.

11. What is dental attrition.

**QP CODE: 2184, SECTION-B, PHARMACOLOGY**

(ANSWER IN-RED BOOKLET ONLY)

**I. SHORT ANSWERS**

**5 x 2 = 10**

1. Name TWO Semisynthetic Penicillins

2. Name TWO deficiency diseases of Vitamin D

3. Write TWO differences between NSAIDs and Opioids

4. Write TWO differences between Heparin and Warfarin

5. Write the rationale of combining Adrenaline with Local Anaesthetics

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
II YEAR DIPLOMA IN DENTAL HYGIENE (DDH)**

**TIME: 1.30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 50**

**QP CODE: 5183**

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

**(ANSWER IN-BLUE BOOKLET ONLY)**

**I. SHORT NOTES: Answer any FOUR questions. 4X5=20**

1. Describe the development of teeth and histology of enamel.
2. Dental Anomalies.
3. Neoplasm.
4. Define inflammation. Describe the cellular events of acute inflammation.
5. Sterilisation procedures.

**II. SHORT ANSWERS: 5X3=15**

6. Vitamin C deficiency.
7. Attrition.
8. Periodontal infections.
9. Dentine.
10. Oral candidiasis.

**QP CODE: 5184, SECTION-B, APPLIED PHARMACOLOGY**

**(ANSWER IN-RED BOOKLET ONLY)**

**I. SHORT ESSAY (ANSWER ANY ONE) 1 X 5 = 5**

1. Define essential drugs mention 5 essential drugs.
2. Define Antiseptics mention 2 Mouth Wash agents and 2 Gargle agents.

**II. SHORT ANSWERS 5 X 2 = 10**

3. Define Drug. Mention one drug from Plant source.
4. Mention 2 commonly used NSAID's and 2 adverse effects of it.
5. Write briefly on Lignocaine.
6. Name 2 Anti Microbial agents and 2 uses.
7. Write 2 uses of Metronidazole.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**

**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 4193, SECTION-A, PHYSIOLOGY**  
**(ANSWER IN-BLUE BOOKLET ONLY)**

- I. SHORT NOTES -ANSWER ANY FOUR QUESTIONS** **4 X 5 = 20**
1. List the different Neuroglial cells and write ONE function of each
  2. Define Blood Pressure. Give its normal value. List the mechanisms of Short term regulation of Blood pressure
  3. Draw neat labelled diagram of Visual pathway
  4. List the differences between Upper motor neuron lesion and Lower motor neuron lesion
  5. Define Haemostasis. What is the role of platelets in haemostasis?
- II. SHORT ANSWERS** **10 X 3 = 30**
6. Define Endocytosis and Exocytosis
  7. Functions of Haemoglobin
  8. Write a brief note on Rigor mortis
  9. Importance of pulmonary surfactant
  10. Methods of artificial respiration
  11. List the different types of movements seen in small intestine
  12. List the functions of growth hormone
  13. List the methods of temporary contraception
  14. Write THREE functions of Hypothalamus
  15. Write the steps of Urine formation

**QP CODE: 4194, SECTION-B, BIOCHEMISTRY**

**(ANSWER IN-RED BOOKLET ONLY)**

- I. SHORT NOTES- ANSWER ANY FOUR QUESTIONS** **4 X 5 = 20**
1. Define carbohydrate? Write their classification.
  2. Write the functions and deficiencies of vitamin A.
  3. Write in brief about liver function tests.
  4. Define cell. Write functions of any four subcellular organelles.
  5. Write the effect of hormones on various metabolisms.
- II. SHORT ANSWERS** **10 X 3 = 30**
6. Phospholipids.
  7. Denaturation of protein.
  8. Balanced Diet.
  9. Define enzyme? Write two clinical importance of enzyme.
  10. Essential amino acids.
  11. Kwashiorkor.
  12. Write functions of proteins.
  13. Detoxification.
  14. Poly Unsaturated Fatty Acids (PUFA).
  15. Creatinine clearance test.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**

**TIME:2 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 65**

**QP CODE: 3202, YOGA & MENTAL HEALTH**

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

**4X10=40**

1. Explain the principles of yoga therapy
2. Describe the psycho-physiological concept of yoga
3. Describe the techniques of Suryanamaskara
4. Effects of Bandha's Kriya's
5. What is normal mental health? Describe the factors contributing towards it.

**II. SHORT NOTES - ANSWER ANY FIVE**

**5X5=25**

6. Vakrasana
7. Yama and Niyamas
8. Jala neti
9. Padmasana
10. Samadhi
11. Yogic diet

**\*\*\*\*\***

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3103, MICROBIOLOGY**

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

**2x10 =20**

1. Name Antigen-antibody reactions. Describe ELISA (5+5)
2. Classify Mycobacteria. Describe laboratory diagnosis of Pulmonary tuberculosis (4+6)
3. Name bacteria causing Meningitis. Describe laboratory diagnosis of Meningitis (5+5)

**II. SHORT NOTES - ANSWER ANY TEN**

**10 x 5=50**

4. Classify Immunity
5. Robert Koch
6. Universal safety precautions
7. Biomedical waste disposal
8. Diseases transmitted by blood transfusion.
9. Laboratory diagnosis of Malaria
10. Laboratory diagnosis of HIV.
11. Candidiasis
12. Autoclave
13. Blood culture
14. Handling and care of Microscopes
15. Antibacterial sensitivity testing

**III. SHORT ANSWERS**

**10x 2=20**

16. Name two motile bacteria
17. Name two sexually transmitted diseases
18. Name two transport media
19. Name two spore forming bacteria
20. Name two malarial parasites
21. Draw a neat labelled diagram of a bacterial spore
22. Name two urease positive bacteria
23. Draw a neat labelled diagram of IgG
24. Name two staining techniques
25. Name two biochemical media

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**III YEAR DIPLOMA IN  
MEDICAL LABORATORY TECHNOLOGY (DMLT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 6105, MICROBIOLOGY**

**I. WRITE SHORT NOTES- ANSWER ANY EIGHT**

**8X5=40**

1. Laboratory diagnosis of pulmonary tuberculosis
2. Laboratory diagnosis of Enteric fever
3. Laboratory diagnosis of Candida infection.
4. Life cycle of *Ascaris lumbricoides*
5. Biomedical waste segregation and disposal
6. Laboratory diagnosis of Cryptococcosis
7. VDRL test
8. Laboratory diagnosis of HIV infection
9. Coagulase test
10. Write in brief about collection and processing of urine sample for culture

**II. SHORT ANSWERS**

**20X3=60**

11. Tyndallisation.
12. Immunisation of Tetanus
13. Infections caused by Staphylococcus Aureus.
14. Z-N Staining.
15. Kirby-Bauer Disc Diffusion Test.
16. Universal precautions
17. India Ink Preparation.
18. Lepromin Test
19. Name any three species of Aspergillus.
20. Draw a neat labelled diagram of Hepatitis B Virus.
21. Modes of Transmission of HIV Infection.
22. Hydatid Cyst.
23. Classification of Vibrio Cholerae
24. Sterilisation Controls for Autoclave.
25. ELISA Test.
26. ASLO Test.
27. Universal Precautions.
28. Species of Plasmodium.
29. Elek's Gel Precipitation.
30. Draw a neat labelled diagram of Egg of Enterobius Vermicularis.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3113, COMMUNITY MEDICINE, PAPER-III**

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

**2X10=20**

1. Define Primary health care. Describe the functions of medical officer. (3+7)
2. Enumerate voluntary health agencies in India. Discuss the functions of Red Cross Society (5+5)
3. Enlist international health agencies. Describe the services of UNICEF. (5+5)

**II. SHORT NOTES- ANSWER ANY TEN**

**10 x 5 = 50**

4. Indian factories act.
5. Domiciliary treatment.
6. Health hazards of agricultural workers.
7. Works of W.H.O.
8. Disinfection of well.
9. Social security.
10. Note on essential drugs.
11. First aid services in case of traffic accident.
12. Food and agriculture organization.
13. Occupational cancers
14. Genetic counselling.
15. Role of indigenous system of Health care

**III. SHORT ANSWERS**

**10 x 2 =20**

16. World Bank.
17. Levels of Health care .
18. What are the Notifiable diseases
19. Farmer's Lung.
20. Define Ergonomics
21. Panchayat raj
22. Health problems in our country - Any 2
23. Health Insurance Schemes
24. Name 2 hazards of radiation exposure
25. Occupational Dermatitis

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 6115, COMMUNITY MEDICINE, PAPER-III**

**I.SHORT NOTES- ANSWER ANY EIGHT**

**8X5=40**

1. Define Primary health care. Write functions of Primary Health Centre
2. Expand UNICEF. Describe the services rendered by UNICEF in detail
3. What is Pneumoconiosis? Write briefly on silicosis
4. Occupational hazards of agricultural workers
5. Write briefly about Millennium development goals
6. World Health Day
7. Health care delivery system in India
8. Indian Red Cross
9. Functions of Anganwadi worker
10. Lead poisoning

**II.SHORT ANSWERS**

**20 X 3 = 60**

11. Causes of Sickness Absenteeism.
12. Panchayat Raj
13. Worm composting
14. Bio-medical waste management at outreach immunization session
15. International Labour Organization.
16. Types of disaster
17. Ergonomics
18. Infections transmitted through bio-medical waste
19. Pre-placement examination
20. Prevention of floods
21. Universal precautions to prevent HBV/HIV infections
22. Control of dust generated in wood industry
23. Elements of Primary health care
24. Explain "appropriate technology" with examples
25. List six roles of Medical officer
26. Write about social insurance
27. List benefits to employees under "Employees State Insurance Act"
28. Prevention accidents in Agriculture industry
29. Write population norms for Sub centre, Primary Health Centre and Community Health Centre
30. AYUSH

**\*\*\*\*\***

**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 3123, RADIOGRAPHY INCLUDING NEWER**  
**IMAGING TECHNOLOGY**

**I. LONG ESSAY – ANSWER ANY TWO**

**2 x 10 = 20**

- 1) What is computerized radiography; discuss how it is different from conventional radiography
- 2) What is HSG? Enumerate in detail the technique involved and its medical application
- 3) Write a note on a magnetic resonance imaging physics. Describe any two sequences in MRI.

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

**10 x 5 = 50**

- 4) PACS System
- 5) Step-Down Transformer
- 6) Fixer
- 7) Intensifying Screens
- 8) CT KUB
- 9) Double Contrast Barium Swallow
- 10) Artifacts In Radiography
- 11) Hounsfield Units (CT Number)
- 12) Urograffin
- 13) TLD Badge
- 14) Rotating Anode Tube
- 15) Planning of Dark Room

**III. WRITE SHORT ANSWERS**

**10 x 2 = 20**

- 16) Cathode
- 17) Collimator
- 18) Pressure-Injector
- 19) Gadolinium
- 20) Anatomy Of Long Bone
- 21) Doppler Effect
- 22) Towne's View
- 23) Piezo Electric Effect
- 24) Hangers
- 25) Half Value Layer

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY**  
**(DMIT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 6125, RADIOGRAPHIC PHOTOGRAPHY AND**  
**IMAGING PROCESSING**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8 x 5 = 40**

1. Discuss structure, speed and uses of intensifying screens.
2. Working principle, merits and demerits of digital radiography
3. Discuss the different types of film faults and procedures to prevent the same
4. Different methods of film processing
5. Points to be considered while planning a dark room
6. Structure of X-ray films
7. Factors affecting washing and drying
8. What are radiographic films. Draw the cross section of a double emulsion film
9. Safelight
10. Dark room Technique

**II. SHORT ANSWERS**

**20 x 3 =60**

11. Film graininess
12. Fluorescence
13. Screen and non-screen films
14. Loading and unloading of a cassette
15. Define magnification, distortion and penumbra
16. Labelling and presentation of a radiograph
17. Replenishment
18. Film artefacts
19. Ventilation of a dark room
20. Factors affecting safelight performance
21. Types of X-ray films
22. Single coated films
23. Types of cassettes
24. Principle and features of automatic processor
25. How to avoid scatter radiation?
26. Methods of rinsing
27. Wetting agents
28. Causes and prevention of fogs
29. Stains- Types, causes and prevention
30. List the different methods of film processing

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORDS TECHNOLOGY (DMRT)**  
**TIME: 1.30 HRS (RS -1 SCHEME) MAX. MARKS:40**

**QP CODE: 3143, COMPUTER SCIENCE**

**I. LONG ESSAY - ANSWER ANY ONE 1x10=20**

- 1) Briefly explain the components of Computers
- 2) Uses of HIMMS Software in Medical Records Department?

**II. SHORT NOTES- ANSWER ANY FOUR 4X5=20**

- 3) Central Processing unit
- 4) What are the data collected in OP/IP registration counter through software? Explain
- 5) MS Power Point
- 6) LAN
- 7) What is the Integrated Software? Explain.

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

- 8) Compact Disk
- 9) Electronic Mail
- 10) Input and Output Device
- 11) Networking
- 12) Desktop and Laptop

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY**  
**(DMRT)**

**TIME: 1.30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS:50**

**QP CODE: 6145, COMPUTER SCIENCE**

**I SHORT NOTES -ANSWER ANY FOUR**

**4 X 5 = 20**

1. Write the list of different reports generated through computers
2. Uses of computerization in Medical Records Department
3. Which are all the data we can store in the computers
4. Define Internet and explain about E-mail.
5. Define Electronic Medical Records and its uses.

**II SHORT ANSWERS**

**10 X 3= 30**

6. Define computer.
7. Brief about the types of Memory.
8. Define Computer Applications.
9. Name the three storage devices.
10. Brief about the Hard Ware.
11. Define Network and list the types of Networks.
12. Define Printer and mention the types of Printers.
13. Brief about the Scanner.
14. Define RAM and mention its uses.
15. Define CPU and mention its uses.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE (DDH)**

**TIME: 1.30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS:45**

**QP CODE: 3183**

**OPERATING ROOM TECHNIQUE, CHAIR SIDE ASSISTANTS &**  
**DENTAL MATERIALS, ETHICS & JURISPRUDENCE**

**I. LONG ESSAY**

**1X10=10**

1. Describe in detail dentist act 1948 and its relation to registration of dental hygienist.

**II. SHORT NOTES**

**5x5=25**

2. Medico legal issues in dental practice.
3. Sterilization and care of dental instruments.
4. Appointment and recall.
5. Dental specialties.
6. Charting and recording.

**III. SHORT ANSWERS**

**5X2=10**

7. Billing.
8. Materials used for making impression.
9. Types of periodontal dressing.
10. Dental auxiliary.
11. Four handed dentistry.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN DENTAL HYGIENE (DDH)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS:100**

**QP CODE: 6185**

**PUBLIC HEALTH DENTISTRY, ETHICS & JURISPRUDENCE,  
DENTAL MATERIALS**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8x5=40**

1. Community Dentistry.
2. Psychological Aspects of Child and Parents.
3. Environmental Health.
4. Write in brief on oral Cancer.
5. Define Ethics Professional Ethics and Ethical Matters related to Health Care.
6. Instrument Sterilization.
7. Impression Materials.
8. General Epidemiology.
9. Water Supply to Community and their implications on Dental Health.
10. Oral Manifestations of HIV

**II. SHORT ANSWERS**

**20x3=60**

11. Drawing in dental health.
12. Audiovisual Aids.
13. Glass Ionomer Cement.
14. Dental Stone.
15. Cavity Varnish.
16. Plaster Of Paris.
17. Water Fluoridation.
18. Disclosing Agents.
19. Patient Recall.
20. Silver Amalgam.
21. Write Dental Specialities.
22. Defluoridation of Water.
23. Die Stone.
24. Use of Plaster Models.
25. Zinc Oxide Eugenol.
26. Manipulation Of Periodontal Dressing
27. Charting And Recording
28. Chair Side Assistance.
29. Supportive Periodontal Therapy
30. Computers in Dentistry.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS:100**

**QP CODE: 5195**

**I. SHORT NOTES- ANSWER ANY EIGHT**

**8 X 5 = 40**

1. Pain gate control theory
2. Describe the physiological effects and uses of MWD.
3. Composition & Application methods of Wax bath therapy.
4. Therapeutic benefits of ultrasound.
5. Indications and contraindications of SWD.
6. Physiological & Therapeutic effects of Wax bath therapy
7. Kromayer lamp
8. Principle and types of LASER.
9. Therapeutic effects & indications of galvanic current
10. Contrast bath.

**II. SHORT ANSWERS**

**20 x 3 = 60**

11. EMG
12. Motor unit
13. Latent Heat of fusion
14. Whirl pool bath
15. Micro Current
16. Contraindications of TENS
17. Indication for wax bath
18. LEWIS therapy
19. Dangers of MWD
20. Faradic current
21. Cryotherapy
22. Safety precautions of LASER
23. Coupling media
24. Types of UVR
25. Therapeutic effects of SWD
26. Dangers of UVR
27. Different frequencies in US
28. Stimulation of motor points
29. Electrode placement in TENS
30. Dangers of IRR

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR CERTIFICATE COURSES**

**TIME: 1.30 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS:45**

**QP CODE: 1103, BIOLOGY**

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

**1 X 10 =10**

- 1) Explain the mechanism of working of human heart
- 2) Draw a neat labelled diagram of the respiratory system and explain the mechanism of breathing.

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

**5 X 5 =25**

- 3) Structure of tRNA and its functions
- 4) Structure of a eukaryotic animal cell
- 5) Human blood group system and Rh typing
- 6) Fertilization
- 7) Define tumor and mention the types of tumor
- 8) Classification of enzymes
- 9) Urine formation

**III. WRITE SHORT ANSWERS**

**5 X 2 =10**

- 10) Mention two applications of DNA fingerprinting
- 11) Structure of Sperm
- 12) Ribosomes
- 13) Chemical composition of DNA
- 14) Name the parts of brain

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA COURSES**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 4105, BIOLOGY**

**I. SHORT NOTES-ANSWER ANY EIGHT**

**8 X 5=40**

1. Describe the structure and functions of placenta
2. Define cell division. Mention 4 differences between mitosis and meiosis.
3. Draw a neat and labelled diagram of human eye
4. Draw a neat and labelled diagram of section of human heart
5. Describe the structure of neuron with a labelled diagram
6. Explain the steps involved in recombinant DNA technology
7. What are hormones? Describe the hormones of anterior pituitary with functions.
8. Explain the respiration process in human beings
9. **Match the following**

A	B
a) Mitochondria	i) Kidney
b) Blood Pressure	ii) Pancreas
c) Insulin	iii) Salivary gland
d) Nephron	iv) Power house of the cell
e) Amylase	v) Sphygomanometer

**10. Multiple choice questions**

- a) Alveoli is the functional unit of i) Heart ii) Liver iii) Lungs iv) Kidney
- b) White blood cells act as i) a defence against infection ii) source of energy iii) for clotting of blood iv) a medium for oxygen transport from lung to tissue
- c) Which of the following is an example of a tissue  
i) Brain ii) Blood iii) Liver iv) Stomach
- d) Blood group which has no antibodies is i) A ii) B iii) AB iv) O
- e) Taste buds are present in i) Liver ii) Kidney iii) Tongue iv) Ear

**II. SHORT ANSWERS**

**20x3=60**

- 11) Tidal volume
- 12) Structure of human sperm
- 13) Blood Pressure
- 14) Structure of Graafian follicle
- 15) Mention three functions of saliva
- 16) Mention three functions of skin
- 17) Name three diseases caused by bacteria
- 18) Define Fertilization and mention the types of fertilization
- 19) Mention three functions of blood
- 20) What is gene therapy? Mention the types
- 21) Applications of monoclonal antibodies.
- 22) Mention three functions of Liver
- 23) Mention the key features of Metaphase chromosomes
- 24) Blood vessels
- 25) Applications of DNA finger printing
- 26) Areolar tissue
- 27) Mention three parts of brain
- 28) Mention three functions of Kidney
- 29) Types of chromosomes based on the position of centromere.

**30. Fill in the blanks**

- (i) Structural and functional unit of kidney is-----
- (ii) AIDS is caused by -----
- (iii) ----- type of sex determination is seen in human being

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2104, PATHOLOGY**

**I. LONG ESSAY: ANSWER ANY TWO** **2X10=20**

1. Describe the method of urine sample collection. Write in detail the on chemical examination of urine. (5+5)
2. Mention the different methods of haemoglobin estimation. Describe the procedure of haemoglobin estimation with neat labelled diagram. (2+4+4)
3. Write in detail the steps of tissue processing. Mention the names of instruments with neat labelled diagram used in histopathology. (4+4+2)

**II. SHORT ESSAY: ANSWER ANY TEN** **10X5=50**

4. Packed cell volume (PCV).
5. Write a note on dehydration in tissue processing.
6. Write the parts of blood smear. Name the stains used in staining the peripheral blood smear.
7. Name the components of blood and its uses.
8. Mention the different methods of collection of blood samples.
9. Write the principle and procedure of Benedicts test.
10. Mention the names of different anticoagulants and its uses.
11. Mention the names of fixatives used in tissue processing.
12. Describe the procedure of WBC counting
13. Write a note on decalcification.
14. Write a note on physical examination of urine.
15. Draw a neat labelled diagram of reticulocyte. Describe the procedure of reticulocyte count.

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

16. Write the merits and demerits of sahil' s haemoglobin estimation.
17. Draw a neat labelled diagram of RBC pipette.
18. Write the principle and procedure of Benzidine test.
19. Draw a neat labelled diagram of Urinometer .
20. What is ESR. Mention factors affecting ESR.
21. Draw a neat labelled diagram normal RBC and abnormal RBCs.
22. Mention preservatives used for collecting urine sample
23. Mention two names of clearing agents.
24. Mention two names of stains used in cytology.
25. Draw a neat labelled diagram of Wintrob's tube.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 5105, PATHOLOGY**

**I. SHORT NOTES- ANSWER ANY EIGHT QUESTIONS** **8X5=40**

1. Fixatives used in Histopathology.
2. Tissue processing.
3. Different types of anticoagulants.
4. Methods of Blood collection.
5. Physical examination of urine.
6. Methods of haemoglobin estimation.
7. Reticulocyte count.
8. Preparation and staining of peripheral smear.
9. Sputum examination.
10. CSF examination.

**II. SHORT ANSWERS** **20X3=60**

11. Microscopic examination of urine.
12. Stool for occult blood.
13. Equipments used in Histopathology lab.
14. Different types of vacutainers.
15. Preparation of WBC diluting fluid.
16. Name Romanowsky stains.
17. Platelet count.
18. Morphology of abnormal RBC's.
19. MCV- calculation and importance.
20. Blood grouping.
21. Sperm morphology.
22. Fixation of cytology smears.
23. Name body fluids.
24. Barr bodies.
25. Decalcification.
26. AEC.
27. Preservation and Transport of CSF.
28. Pap smear- uses.
29. PCV.
30. Microscopy of ova cyst

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**  
**QP CODE: 2112, COMMUNITY MEDICINE, PAPER-II**

**I. LONG ESSAY: ANSWER ANY TWO** **2X10=20**

1. What are the functions of proteins? Discuss the factors involved in protein energy malnutrition (PEM)(5+5)
2. What are the causes of air pollution? What are the hazards? How do you prevent them?(3+3+4)
3. What do you mean by refuse? What are the sources & hazards? Describe methods of disposal of refuse.(2+3+5)

**II. SHORT NOTES- ANSWER ANY TEN** **10x5=50**

4. Measures of dispersion.
5. Conservation of water.
6. Mid day meal.
7. Integrated vector control.
8. Types of ventilation.
9. Essential fatty acids.
10. Iron deficiency anemia
11. Manifestation of Iodine deficiency disorder.
12. Pasteurization of milk.
13. Food adulteration.
14. Incineration.
15. Sanitation barrier.

**III. SHORT ANSWERS** **2x10=20**

16. Green house effect.
17. Name two diseases transmitted by housefly
18. Super Chlorination.
19. Pellagra.
20. Name two milk born diseases.
21. Name two insecticides.
22. Scurvy
23. Bitot spots.
24. Comfort zone.
25. Types of Family.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 5113, COMMUNITY MEDICINE, PAPER-II**

**I. SHORT NOTES- ANYSWER ANY EIGHT**

**8 X 5 = 40**

1. Global Warming and its preventive and control measures.
2. Prevention and control of Air Pollution
3. Life cycle of Itch Mite
4. Anti-Adult measures
5. Discuss the General characteristics, diseases transmitted and control measures of Sand Fly
6. Housing and Health – discuss
7. Explain sanitation barrier with diagram
8. Water – related diseases
9. Enumerate the methods of Solid Waste Disposal. Discuss any one in detail
10. Slow sand (Biological) filters

**II. SHORT ANSWERS**

**20 X 3 = 60**

11. Safe and Wholesome water
12. Composting
13. Sling Psychrometer
14. Use of Horrock`s Apparatus
15. Uses of Water Seal in a Water Seal latrine
16. Health hazards associated with swimming pool
17. Deworming
18. Human habits in Ascariasis
19. Steps of chlorination of well
20. Control of Noise Exposure
21. Rain water harvesting
22. Overcrowding
23. Sewage farming
24. Paris green
25. Biological transmission
26. Biological effects of radiation
27. Oxidation pond
28. Zoonoses
29. Stool examination
30. Septic tank

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**  
**TIME: 1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**  
**QP CODE: 2123, PHYSIOLOGY**

**I. LONG ESSAY - ANSWER ANY ONE** **1x10=10**

1. Describe different lung volumes and capacities with neat diagram. (5+5)
2. Name hormones of anterior pituitary gland. Describe the functions of growth hormone. Add a note on Acromegaly. (4+4+2)

**II. SHORT NOTES - ANSWER ANY FIVE** **5x5=25**

3. What is anemia? Describe different types of anemia.
4. Anticoagulants.
5. Cardiac output.
6. Composition & functions of saliva.
7. Menstrual Cycle.
8. Mechanism of formation of urine.
9. Hypoxia

**III. SHORT ANSWERS** **5x2=10**

10. Name two gastrointestinal hormones.
11. Write two functions of liver.
12. Hypermetropia & its correction.
13. Name two functions of cerebrospinal fluid.
14. Normal values of a) Bleeding time b) Clotting time.

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**II YEAR DIPLOMA IN  
MEDICAL IMAGING TECHNOLOGY (DMIT)**

**TIME: 1.30 HRS (RS -2 SCHEME) MAX. MARKS: 50**

**QP CODE: 5124, PHYSIOLOGY**

**I. SHORT NOTES - ANSWER ANY FOUR**

**4x5=20**

1. Explain the composition & functions of Blood.
2. Define Cardiac output. Explain the factors affecting cardiac output.
3. Explain Transport of Oxygen in Cardiorespiratory System.
4. Explain Steps involved in formation of Urine.
5. Contraceptive methods in Males & Females.

**II. SHORT ANSWERS**

**10x3=30**

6. Stages of Erythropoiesis.
7. Types of Neuralgia Cells.
8. Types of Muscles.
9. Composition of Salivary Juice.
10. Types of Hypoxia.
11. Conductin tissues of heart.
12. Define GFR. Mention its Normal Value.
13. Functions of Posterior Pituitary hormones.
14. Spermatogenesis.
15. Functions of estrogen

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY (DOTT)**

**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2135, SECTION-A, ANATOMY**

**(ANSWER IN BLUE BOOKLET ONLY)**

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

**1 x 10 = 10**

1. Name the parts of Respiratory System with a labelled diagram. Describe Right Lung in brief. (5+5)
2. Describe the Heart under the following heading:  
(a) Chambers, (b) Covering, (c) Blood Supply. (4+2+4)

**II. SHORT NOTES - ANSWER ANY FIVE**

**5 x 5 = 25**

3. Pancreas
4. Trachea
5. Liver
6. Thyroid Gland
7. Spinal Cord
8. Ureter

**III. SHORT ANSWERS**

**5 x 2 = 10**

9. Name the parts of Stomach
10. Name four Cranial Nerves
11. Name two Muscles where Intra Muscular Injection is given
12. Name the Carpal Bones
13. Name two Veins of Upper Limb

**QP CODE: 2136, SECTION-B, PHYSIOLOGY**  
**(ANSWER IN RED BOOKLET ONLY)**

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

**1x10 =10**

1. Define Cardiac cycle. Describe different events of cardiac cycle. (2+8)
2. Describe the functions of Anti Diuretic Hormone (ADH). Add a note on diabetes insipidus. (8+2)

**II. SHORT NOTES - ANSWER ANY FIVE**

**5X5=25**

3. Micturition Reflex
4. Regulation of body temperature
5. Composition of blood
6. Draw a neat labeled diagram of Nephron
7. Composition and functions of Bile juice
8. Contraceptive methods in females

**III. SHORT ANSWERS**

**5x2=10**

9. What is peristalsis?
10. Mention two functions of tongue
11. Mention any two functions of muscles
12. Name different blood group systems
13. Give normal values of A) Pulse B) Blood Pressure

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN**  
**OPERATION THEATRE & ANAESTHESIA TECHNOLOGY**  
**(DOT&AT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 5136, SECTION-A, ANATOMY**

**(ANSWER IN BLUE BOOKLET ONLY)**

**I. SHORT NOTES - ANSWER ANY FOUR.**

**4 X 5 = 20**

1. Describe the Urinary bladder
2. Describe the Humerus bone
3. Describe the Cerebrum
4. Describe the Thyroid gland
5. Describe the Mammary gland

**II. SHORT ANSWERS**

**10 X 3 = 30**

6. Name the nerves of Upper Limb
7. Name the contents of Femoral sheath
8. Name the contents of Popliteal fossa
9. Name the bones and Cartilages of the nose
10. Name the six Cranial nerves
11. Name the coverings of the Brain
12. Name the parts of Pancreas
13. Name the parts of Respiratory system
14. Name the arteries of Lower Limb
15. Name the muscles of Larynx

**QP CODE: 5137, SECTION-B, PHYSIOLOGY**

**(ANSWER IN RED BOOKLET ONLY)**

**I. SHORT NOTES - ANSWER ANY FOUR**

**4X5=20**

1. Define GFR. What are the factors maintaining GFR
2. Heart Sounds
3. Anemia
4. Transport of Carbon dioxide in blood
5. Pregnancy tests

**II.SHORT ANSWERS**

**10X3=30**

6. List differences between Skeletal & Cardiac Muscle
7. CSF formation
8. Functions of testosterone
9. List 3 Indications for Blood transfusion
10. Functions of Skin
11. Functions of Bile Juice
12. Define Receptor. List types of Receptors
13. Normal values of BP in Different age groups
14. List types of Artificial Respiration
15. Functions of Cell Membrane

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN**  
**MEDICAL RECORDS TECHNOLOGY (DMRT)**

**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2145, HOSPITAL STATISTICS & BIOSTATISTICS**

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

**3X10=30**

- 1) Define Data, Variable, Population and Sample with Example
- 2) Define Classification of Data and Explain Different Types of classification.
- 3) Explain Different Measures of Dispersion
- 4) Explain Different Measures of Mortality

**II. WRITE IN BRIEF ON ANY TEN**

**10X5 =50**

- 5) Characteristics of a Good Table
- 6) Mean(AM) With its merits and demerits
- 7) Median with its merits and demerits
- 8) Crude birth rate and Age Specific Fertility Rate
- 9) Advantages of graphical presentation of data
- 10) Sample Registration System
- 11) Histogram and frequency polygon
- 12) Normal Distribution Curve
- 13) Simple Random Sampling
- 14) Stratified Random Sampling
- 15) Biostatistics and its uses

**III. WRITE IN BRIEF ON ANY FIVE**

**5X2=10**

- 16) Mode
- 17) Probability
- 18) Pie Diagram
- 19) Population
- 20) Bed turn over
- 21) Prevalence

**\*\*\*\*\***

**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019**

**II YEAR DIPLOMA IN  
MEDICAL RECORDS TECHNOLOGY (DMRT)**

**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 5146, HOSPITAL STATISTICS & BIOSTATISTICS**

**I. SHORT NOTES -ANSWER ANY EIGHT**

**8 X 5 = 40**

1. Define Biostatistics? Write down its uses of Medical Sciences
2. Infant mortality rate and maternal mortality rate
3. Explain about Bar diagram and Pie Chart
4. Explain Range, Mean Deviation and Standard deviation
5. What are the outpatient statistical data collect in hospital
6. What is sampling? describe various types of sampling in brief
7. Calculate Mean, Median for the following observations 18, 30, 15, 14, 17, 25, 24, 27, 29 and 28.
8. Define Bed occupancy rate. In a month of June 4000 inpatients days were served in a hospital with 450 beds. Calculate bed occupancy rate.
9. Notification of diseases
10. Characteristics of standard normal curve

**II. SHORT ANSWERS**

**0 X 3 = 60**

11. Characteristics of good table
12. Average length of stay
13. Case fatality rate
14. Bed turnover ratio
15. Probability
16. Anaesthesia death rate
17. Define Admission and Discharge.
18. Caesarean section rate
19. Histogram
20. Variable and its types
21. Autopsy rate
22. Define Sex ratio and write its formula
23. Define quantitative data with example
24. Frequency distribution
25. Net reproduction rate
26. Chi square test
27. Prevalence
28. Bed Complement and Daily ward census
29. Scatter diagram
30. Inpatient service day

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2155, SECTION-A, ANATOMY**

**(ANSWER IN BLUE BOOKLET ONLY)**

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

1. Describe the Heart under the following heading:  
(a) Chambers, (b) Covering, (c) Blood Supply. (4+2+4)
2. Name the parts of the Brain. Describe Cerebrum in brief. (5+5)

**II. SHORT NOTES -ANSWER ANY FIVE** **5 x 5 = 25**

3. Urinary Bladder
4. Stomach
5. Spleen
6. Thyroid Gland
7. Histology of Hyaline Cartilage
8. Femoral Artery

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

9. Name any two Muscles of Abdomen
10. Name the Bones of Fore Arm
11. Name two Veins of Upper Limb
12. Name the parts of Urinary System
13. Name any two Lymphoid Organs

**QP CODE: 2156, SECTION-B, PHYSIOLOGY**

**(ANSWER IN RED BOOKLET ONLY)**

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

1. Define Glomerular Filtration Rate (GFR). Factors affecting GFR.  
Measurement of GFR (2+5+3)
2. Composition and Function of Blood. (3+7)

**II. SHORT NOTES -ANSWER ANY FOUR** **5 x 5 =25**

3. Blood Pressure
4. Heart sounds
5. ECG waves with the Diagram
6. Blood Groups
7. Define Erythrocyte Sedimentation Rate (ESR). Factors affecting ESR
8. Non- Excretory functions of Kidney

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

9. Normal Value of 1) Heart rate 2) Respiratory rate
10. List hormones of Anterior pituitary
11. Anemia
12. Types of Transport across cell membrane.
13. Insulin

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN**  
**DIALYSIS TECHNOLOGY (DDT)**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 5155, SECTION-A, ANATOMY**

**(ANSWER IN BLUE BOOKLET ONLY)**

**I. SHORT NOTES -ANSWER ANY FOUR**

**4 x 5 = 20**

1. Name the parts of urinary system, describe kidney in detail
2. Classify the nervous system, describe nerve supply and blood supply to the urinary bladder briefly
3. Describe heart in detail
4. Name the parts of respiratory system, describe trachea briefly
5. Name the endocrine glands, describe suprarenal gland

**II. SHORT ANSWERS**

**10 x 3 = 30**

6. Mention the joints of the lower limb
7. Mention any six bones of the skull
8. Name the parts of brain stem
9. Mention the parts of uterus
10. Mention the different types of cartilage
11. Name the muscles of anterior abdominal wall
12. Mention the parts of peritoneum
13. Mention the lymphoid organs
14. Mention the arteries of upper limb
15. Mention the different types of muscle

**QP CODE: 5156, SECTION-B, PHYSIOLOGY**

**(ANSWER IN RED BOOKLET ONLY)**

**I. SHORT NOTES -ANSWER ANY FOUR**

**4 X 5 = 20**

1. Define Secondary active transport. Explain with an example
2. Explain the stages of erythropoiesis
3. Explain counter-current mechanism in the kidneys
4. Draw neat labelled diagram of conducting system of the heart.
5. Write the functions of cortisol hormone

**II. SHORT ANSWERS**

**10 X 3 = 30**

6. Write the source and function of Erythropoietin
7. Name the types of cell junctions
8. What are the functions of Platelets?
9. Write the steps of urine formation
10. Write the normal values of Heart rate and Blood pressure
11. Functions of Parathormone
12. Functions of Haemoglobin
13. Name the types of Dialysis
14. State Landsteiner's law of blood groups
15. Name THREE anticoagulants

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN**  
**DENTAL HYGIENE (DDH)**

**TIME: 1.30HRS (RS -1 SCHEME) MAX. MARKS: 45**

**QP CODE: 2185, SECTION-A, BIOCHEMISTRY**

**I. (ANSWER IN BLUE BOOKLET ONLY)**

**II. LONG ESSAY - ANSWER ANY ONE 1x10=10**

1. What are Carbohydrates? Classify them with examples. Add a note on importance of Carbohydrates in oral hygiene.
2. Classify vitamins. Explain in detail about the Functions and deficiency manifestations of vitamin C.

**III. WRITE SHORTNOTES ON ANY THREE 3x5=15**

3. Fluorosis
4. Effect of Sucrose on oral health.
5. Importance of Mastication.
6. Malnutrition on oral health.

**QP CODE: 2186, SECTION-B, RADIOLOGY**  
**(ANSWER IN RED BOOKLET ONLY)**

**I. WRITE SHORT NOTES 4X5=20**

1. Parallel technique
2. Bitewing radiograph.
3. Ortho pantamography
4. Processing solutions.
5. Occlusal radiographs.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN DENTAL HYGIENE (DDH)**  
**TIME: 1.30HRS (RS -2 SCHEME) MAX. MARKS: 50**  
**QP CODE: 5185, SECTION-A, BIOCHEMISTRY**  
**(ANSWER IN BLUE BOOKLET ONLY)**

**A) SHORT NOTES**

**2x5= 10**

- 1) Discuss the synthesis of urea.
- 2) Definition, classification and properties of lipids.

**B) SHORT ANSWERS;**

**5x3= 15**

- 1) Deficiency of Vitamin D
- 2) Polysaccharides.
- 3) Factors effecting enzyme activity.
- 4) Creatinine.
- 5) LDL cholesterol.

**QP CODE: 5186, SECTION-B, RADIOLOGY**  
**(ANSWER IN RED BOOKLET ONLY)**

**I. LONG ESSAY**

**2X5=10**

- 1) Write in detail processing and mounting of dental radiographs
- 2) Explain radiation hazards. Add a note on protection against radiation.

**II.WRITE SHORT NOTES**

**5X3=15**

- 3) Paralleling Technique
- 4) Intraoral periapical X-ray
- 5) Structure of an atom.
- 6) Orthopantomogram.
- 7) Bite wing radiograph.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**

**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 4195, BIOMECHANICS**

**I.SHORT NOTES - ANSWER ANY EIGHT**

**8X5= 40**

1. Explain composition and resolution of forces.
2. Explain concurrent forces, coplanar forces, and parallel forces.
3. Define gravity. Explain LOG & COG with diagram.
4. Define force. Give a diagrammatic representation of forces.
5. Define levers. Explain its types and its mechanical advantages.
6. Describe biomechanics of vertebral column
7. Describe biomechanics of Hip joint
8. Define Scapulo-humeral rhythm
9. Define gait and analysis of gait
10. Define Lordosis and Kyphosis

**II. SHORT ANSWERS**

**20X3 =60**

11. Assistive and resistive movement.
12. Range of movement.
13. Use of spring in series and parallel in physiotherapy.
14. Mechanical advantages of lever.
15. Rotation about a pivot.
16. Action and reaction.
17. Work and power.
18. Hook's law.
19. Friction.
20. Apply first and second law in elbow flexion.
21. Q angle of knee joint
22. Name pelvic floor muscles
23. Name the ligaments of knee joint
24. Ataxic gait
25. Goniometer
26. Define Energy, work and power
27. Pulleys and its types
28. Momentum.
29. Advantages and disadvantages of friction
30. Properties of springs

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 65**  
**QP CODE: 3203**  
**DISABILITY EVALUATION & COMMUNITY PHYSIOTHERAPY**

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

**4 X10 =40**

1. Explain about the prevention and management of congenital contractures and deformities
2. Evaluation tools to identify disabilities
3. Describe the term Prosthesis and Orthosis. Discuss the different types of upper and lower limb prosthesis.
4. Explain in detail the characteristics and types of muscular dystrophies, assessment and physiotherapy management of Duchene Muscular Dystrophy (DMD)
5. Define cerebral vascular accident (CVA). Discuss the role of physiotherapist in rehabilitation of cerebral vascular accident (CVA) patient.

**II. SHORT NOTES- ANSWER ANY FIVE**

**5 X5 =25**

6. Amputation
7. Neonatal reflexes
8. Speech therapy
9. Physical problems of old age
10. Sach foot
11. Community based rehabilitation (CBR) organisation

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN MEDICAL RECORD TECHNOLOGY (DMRT)**  
**TIME: 1 HR (RS -1 SCHEME) MAX. MARKS: 20**

**QP CODE: 3144,MEDICAL & SURGICAL CODING**

**I. ANSWER ANY THREE QUESTIONS**

**3 X 5 = 15**

1. Explain the types of coding books, and names of ICD coding books
2. How many different types of category codes we can observe in ICD coding book?
3. Define the purposes of coding? What are the uses of coding afterwards?
4. What is Medical, Surgical coding according to ICD 10

**II. Expand the following Abbreviations.**

**1 x 5 = 5**

5. TSS
6. TMJ
7. TID
8. TIA
9. TCAG

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN MEDICAL RECORD TECHNOLOGY (DMRT)**  
**TIME: 1 HR (RS -2 SCHEME) MAX. MARKS: 30**

**QP CODE: 6146,MEDICAL & SURGICAL CODING**

**I. SHORT ANSWER ANY TEN**

**10 X 3 = 30**

1. Brief the any five sources of morbidity data.
2. Brief the uses of mortality data.
3. Expand the abbreviation of ICD, ISCD AND RHP.
4. Define Cause of Death.
5. Why do we need to code?
6. What do you mean by coding?
7. Brief principles of classification of ICD.
8. Define parentheses.
9. Define Eponyms.
10. What are the uses of coding?
11. Define Synopsis.
12. Define Homonyms.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 5197, SECTION-A, ALLIED THERAPEUTICS**

**I. SHORT NOTES - ANSWER ANY FOUR 4 x 5=20**

1. Enumerate the factors which help in assessment of Cardio-respiratory functions.
2. Write about common sports injuries and briefly explain any of them.
3. What are the adverse effects of an unhealthy diet-explain with examples.
4. Define healthy diet. Discuss the factors contributing in making a healthy diet plan
5. Define Yogasanas. Mention the types and advantages of asanas.

**II. SHORT ANSWERS 10 x3=30**

6. Homeopathy.
7. Effects of Yoga in human body.
8. Acupuncture.
9. Adverse effects of junk foods.
10. Effects of inactivity in human health.
11. Brief note on any two injuries those are common in sports.
12. Dos and Dont's while doing physical exercises.
13. Naturopathy.
14. Cardio-respiratory parameters in physical exercise.
15. Obesity.

**QP CODE: 5198, SECTION-B, PHARMACOLOGY**

**I. SHORT ESSAY - ANSWER ANY FOUR 4 X 5 = 20**

1. Mention 3 advantages and 3 disadvantages of IV route of Drug Administration.
2. Mention 4 uses and 4 adverse effects of Corticosteroids.
3. Write 5 drugs derived from Plant Sources.
4. Name the Hormones secreted by Pituitary Gland.
5. Classify Sedatives and Hypnotics.

**II. SHORT ANSWERS 10 X 3 = 30**

6. Name 3 Local Anesthetic agent's and its uses.
7. Name 3 Fat Soluble Vitamins.
8. Mention the 3 uses of Aspirin.
9. Name the agents used for Fumigation.
10. Name the antidote for.
  - a) Organo Phosphorus Poisoning.
  - b) Paracetamol Poisoning.
  - c) Iron Poisoning.
11. Name the Hormones of Thyroid.
12. Name 3 Oral Hypoglycemic agents.
13. Name 3 Drugs used in Migraine.
14. Name 2 Immuno Suppressants.
15. BCG Vaccine.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**COMMON FOR ALL FIRST YEAR CERTIFICATE COURSES**  
**TIME: 1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**

**QP CODE: 1104, ENGLISH**

- I Write an essay on any ONE of the following 15X1=15**  
1. Population explosion  
2. Air Pollution
- II Answer any ONE 1X10=10**  
3. Write a letter to your Principal requesting for one weeks leave  
4. Write a letter to your Father asking for the college fees
- III Write the opposite gender of 5x1=5**  
5. Women 6. Horse 7. Duke 8. Servant 9. Monk
- IV Write the opposite of the following 5x1=5**  
10. Beautiful 11. Construction 12. Bold 13. Deep 14. Humble
- V Make sentences using the following 5x1=5**  
15. As well as  
16. Across  
17. Beautiful  
18. On Time  
19. Between
- VI Fill in the Blanks 5x1=5**  
20. This lid is.....that box  
21. Monkey is .....the tree  
22. She is .....cute Girl  
23. It is .....aeroplane  
24. Varun is taller ..... Devan

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**PARAMEDICAL BOARD, BENGALURU  
ANNUAL EXAMINATION, AUGUST 2019  
FIRST YEAR DIPLOMA COURSES**

**TIME: 3 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 100**

**QP CODE: 4107, ENGLISH**

**I. Write an essay on any ONE of the following in about 300 words** **15X1=15**

1. Hospital Waste Management
2. Blood donation

**II Answer any one (Letter Writing)** **1X10=10**

3. Write a letter to your Principal requesting him/her to grant two days leave as you are going to attend a function at your native place.

4. Write a letter to your friend telling him/her about your paramedical course.

5. **Use the following idioms/phrases in sentence of your own.** **5x1=5**

- a) Keep an eye on    b) Look into    c) Back up    d) Go through
- e) Put up with

6. **Change the following into indirect speech** **5x1=5**

- a) Nisha said 'I am returning to Nagpur next Friday'.
- b) "Get Tapan to class V" the head master said to them
- c) The birds are flying away, 'Anitha says'
- d) Anju said to Anu 'Which dress did you send to the Laundry?'
- e) I said to the man, 'you can keep your books in the room'

7. **Change the voice of the following** **5x1=5**

- a) Rakesh is practicing Yoga
- b) Sushma was learning typing
- c) I have warned you this time
- d) Bring a chair
- e) Send him in

8. **Write the opposite of the following** **5x1=5**

- a) Common    b) Formal    c) New    d) Top    e) Boy

9. **Fill in the blanks with suitable preposition** **5x1=5**

- a) She lives..... her workplace
- b) He goes to work..... train
- c) She drew the picture ..... a crayon
- d) He swam ..... the river
- e) He walked ..... the street

10. **Fill in the blanks with articles** **5x1=5**

- a) Did you bring .....umbrella?
- b) Are you looking for .....shampoo?
- c) I checked ..... mail box again
- d) Can I have ..... spoon please?
- e) I was born in..... poor family

11. **Give the synonyms of the following** **5x1=5**

- a) Earn    b) Dread    c) Smell    d) Riot    e) Decide

12. **Read the following passage carefully and answer the questions that follow:10**

- (1) There was once a king of Scotland whose name was Robert Bruce. He needed to be both brave and wise, for the times in which he lived were wild and rude. The King of England was at war with him, and led a great army into Scotland to drive him out of the land. Battle after battle had been fought. Six times had Bruce led his brave little army against foes and six times had his men beaten and driven into fight. At last his army was scattered and he was forced to hide himself in the woods and in lonely places among the mountains.

Contd..... 2

- (2) One rainy day, Bruce lay on the ground under a rude shed, listening to the patter of the droops on the roof above him. He was tired and sick at heart and ready to give up all hope. It seemed to him that there was no use for him to try to do anything more.
- (3) As he laid thinking, he saw a spider over his head, making ready to weave her web. He watched her as she toiled slowly and with great care. Six times she tried to throw her frail thread from one beam to another and six times it fell short "poor thing" said Bruce. 'You too, know what it is to fail'.
- (4) But the spider did not lose hope with the sixth failure. With still more care, she made ready to try for the seventh time. Bruce almost forgot his own troubles as he watched her swing herself out upon the slender line. Would she fail again? No! the thread was carried safely to the beam and fastened there.
- (5) I too will try a seventh time! cried Bruce.
- (6) He arose and called his men together. He told them of his plans and sent out with messages of cheer to his disheartened people. Soon there was an army of brave Scotchmen around him. Another battle was fought and king of England was glad to go back into his own country.

A) On the basis of our reading of the above passage, answer the following questions;

- Who was the king of Scotland? (1)
  - How was the time in which the king lived? (1)
  - Who was Robert Bruce fighting against? (1)
  - How many times did Bruce fight against his foes? (1)
  - What did Bruce see while he was lying? (2)
  - What made Bruce try a seventh time? (2)
- B) Find the words from the passage which mean the same as the following:  
(1x2=2)
- Battle (para 1)
  - Little (para 1)

**13. Write the correct medical term. 10x1=10**

- A) Uro B) Cyto C) Histo D) Epidemo E) Physio F) Pedia G) Cardio  
H) Embryo I) Haemo J) Radi

**14. E mail Writing 1x5=5**

Write an email to your friend about your joining into a new college

**15. Fill in the blanks with appropriate articles and prepositions given in the bracket (a, the, by, for, an) 1x5=5**

In organizing ..... small scale industry is that of ownership, represented..... the right of.....individual or a group of individuals to acquire legal title to assests .....the purpose of controlling an industrial operation and enjoying ..... gain or profits flowing from such activities.

**16. Re-arrange the jumbled segments to form a sentence. 1x6=6**

- many/difficulties/The authorities/the criminal/faced/in dealing with
- of all/are the /centuries/books/great memory
- the merchant/Gonzalo/in the duel/injured/severely
- food chain/themselves/the pests/are part of
- work hard to pass/the examination /shall / we
- earth /grow/trees /protect/to/ our

**17. Complete the following dialogue (situation based conversation) 4x1=4**

- Guide.....(greet and offers to help)
- Mr Vasu .....Siddaganga Mutt (enquires)
- Guide: Sure.....Rs 50 (replies)
- Mr Vasu..... (agrees)
- Okay Sir, this way please

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**  
**TIME: 3 HRS (RS -1 SCHEME) MAX. MARKS: 90**

**QP CODE: 2105,MICROBIOLOGY**

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

1. Define sterilization. Describe in detail about autoclave.
2. Mention the different types of microscopes. Write in detail about handling and care of light microscope.
3. Describe the morphology of bacterial cell with neat diagram.

**II. SHORT NOTES- ANSWER ANY TEN 10x 5 = 50**

4. Catalase test.
5. Bacterial flagella
6. Louis Pasteur.
7. Antigen.
8. Steps of hand wash
9. Immunity.
10. Pasteurization.
11. Preparation of blood agar media.
12. IgA.
13. Describe the structure of immunoglobulin.
14. Hot air oven.
15. Describe anaerobic culture methods.

**III. SHORT ANSWERS 10x2 = 20**

16. Name two urease positive bacteria.
17. Name two transport media.
18. Name two DNA viruses.
19. Name two stains.
20. Name two gram positive bacilli.
21. Name two oxidase positive bacteria
22. Name two spore forming bacteria.
23. Name two capsulated bacteria.
24. Name two selective media.
25. Bacterial growth curve.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**  
**QP CODE: 5107, MICROBIOLOGY**

**I. SHORT NOTES- ANSWER ANY EIGHT 8 X 5 = 40**

1. Write the contributions of Louis Pasteur
2. Bacterial growth curve
3. Define and classify sterilization
4. Selective Media
5. Citrate utilization test - Principles and uses
6. Innate Immunity
7. IgA Antibody
8. Type I hypersensitivity reactions
9. ZN Stain - Procedure & Uses
10. Define Agglutination with examples

**II. SHORT ANSWERS 20 X 3 = 60**

11. Bacterial Spore [ Draw & Label]
12. Types of radiation & their uses
13. Tests for disinfectants
14. Name three gram negative bacilli
15. Name three Motile organisms
16. Name three Transport Media
17. Name three Anaerobic Culture Media
18. Name three Gram positive bacteria
19. Composition of Albert Stain
20. Gaseous Sterilization
21. Give three differences between gram negative and gram positive bacterial cell wall
22. Name three hospital acquired infections
23. Name three antibodies
24. Name three Zoonotic Infections
25. Negative Staining
26. How do you fix the smear and what are the advantages of Fixation?
27. List two differential Stains and Organisms for which are used.
28. Define immunity and classify Immunity
29. Name any three antigen antibody reactions
30. Draw a neat and labelled diagram of IgM

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DHI)**

**TIME: 3 HRS**

**(RS -1 SCHEME)**

**MAX. MARKS: 90**

**QP CODE: 2113, COMMUNITY MEDICINE, PAPER-III**

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

- 1) Write with a neat diagram- life cycle of housefly. Add a note on transmission of diseases caused by it.
- 2) Define Epidemic. Write in detail about an investigation of an epidemic.
- 3) Mention the different levels of prevention. Discuss in detail Primary Prevention.

**II. SHORT ANSWERS -ANSWER ANY TEN 10x5=50**

- 4) Types of disinfection
- 5) Epidemiological triad
- 6) Define Prevalence. Write its uses.
- 7) Health advice to travellers.
- 8) Swimming pool sanitation.
- 9) Name five vector borne diseases with names of vector
- 10) National immunization schedule.
- 11) Iceberg of Disease.
- 12) Rehabilitation.
- 13) Health Promotion.
- 14) Discuss the statistical averages
- 15) Contagious diseases

**III. SHORT ANSWERS 10x2=20**

- 16) Bar chart.
- 17) Vaccine vial monitor (VVM).
- 18) Diseases caused by mosquito.
- 19) MMR vaccine.
- 20) Mention 3 diseases caused by rodents.
- 21) Median.
- 22) Census
- 23) Mention ill effects of noise pollution
- 24) Epidemiological triad
- 25) Name any two insecticides

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)**  
**TIME: 3 HRS (RS -2 SCHEME) MAX. MARKS: 100**

**QP CODE: 5115, COMMUNITY MEDICINE, PAPER-III**

**I. SHORT NOTES- ANSWER ANY EIGHT 8 X 5 = 40**

1. Criteria for screening test
2. Name 5 nutritional programs in India
3. Demography cycle
4. Note on food adulteration
5. What is anaemia? Write about its prevention
6. Methods of pasteurization
7. VVM
8. Infant mortality rate and its causes
9. Census
10. Write a note on cold chain system

**II. SHORT ANSWERS 20 X 3 = 60**

11. Define health
12. Incubation period
13. Prevalence
14. What is active immunization
15. Uses of screening
16. Define sensitivity
17. Name three diseases which are commonly screened
18. Food fortification
19. Vitamin A rich food
20. Cause of Maternal mortality rate in India
21. Name three sources of health information
22. Pentavalent vaccine
23. Weaning
24. Exclusive breast feeding
25. Three nutrition problems
26. Parboiling of rice
27. Classify vitamins
28. Mean
29. Three diseases prevented by vaccines
30. BCG vaccine - Dosage and Route of administration

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**  
**TIME: 1.30 HRS (RS -1 SCHEME) MAX. MARKS: 45**  
**QP:2124, PATHOLOGY**

**I. LONG ESSAY- ANSWER ANY ONE** **1X10=10**

1. What is neoplasia. Mention its types. Write the characters of benign and malignant with labelled diagram. (2+2+4+2)
2. Define Pneumonia. Mention the different stages. Add a note on morphology with labelled diagram. (2+2+4+2)

**II. SHORT ESSAY- ANSWER ANY FIVE** **5X5=25**

3. Marasmus.
4. Define healing. Write the stages of fracture healing.
5. Mention the difference between necrosis and gangrene .
6. Define osteomyelitis. Mention its types with examples
7. Rheumatic heart disease.
8. Define goitre. Mention its causes and types.
9. Write a note on carcinoma breast.

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

10. Vitamin D deficiency.
11. Mention the signs of inflammation.
12. Define hypertrophy. Give two examples.
13. Name any two congenital anomalies of gastrointestinal tract.
14. Morphology of osteosarcoma.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**II YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY**  
**(DMIT)**

**TIME: 1.30 HRS**

**(RS -2 SCHEME)**

**MAX. MARKS: 50**

**QP: 5125, PATHOLOGY**

**I. SHORT NOTES - ANSWER ANY FOUR 4X5=20**

1. Define neoplasia. Write differences between benign and malignant tumors.
2. Write about causes, signs and symptoms of vitamin D deficiency.
3. Define osteomyelitis. Mention different types of osteomyelitis with a note on tuberculosis of spine.
4. Define pneumonia. Describe different types of pneumonia.
5. Define acute inflammation. Write briefly about fracture healing.

**II. SHORT ANSWERS 10X3=30**

1. Hydronephrosis of kidney.
2. Gall stones.
3. Brief note on primary complex of tuberculosis of lung.
4. Vitamin C deficiency.
5. Chronic cholecystitis.
6. Goitre -causes and types.
7. Rheumatoid arthritis.
8. Fibroid uterus.
9. Mention 4 tumors of bone.
10. Pyloric stenosis.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**I YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**TIME: 3 HRS (RS 2 SCHEME) MAX. MARKS: 100**  
**QP: 4197, SECTION-A, PSYCHOLOGY**  
**(ANSWER IN BLUE BOOKLET)**

**I.SHORT NOTES-ANSWER ANY FOUR** **4X5= 20**

1. Define psychology. How psychology gained the status of science.
2. What is learning? Mention the types of learning.
3. What are motives? How motives are classified?
4. What is emotion? Mention psychological changes during emotions
5. What is perception? Diagrammatically represent perceptual Organization?

**II.SHORT ANSWERS** **10X3 =30**

6. Sources of frustration.
7. Forgetting.
8. Growth and development.
9. Methods to improve memory.
10. Hallucination.
11. Study habits.
12. Management of stress in modern life style.
13. Attitude.
14. Memory process.
15. Branches of psychology.

**QP: 4198, SECTION-B, SOCIOLOGY**  
**(ANSWER IN RED BOOKLET)**

**I.SHORT NOTES-ANSWER ANY FOUR** **4X5= 20**

1. Describe the causes of population explosion Difference between health problems of urban and rural community.
2. Define sociology? Describe the social factors related to health and diseases?
3. What are social change and its necessity?
4. Define culture. Illustrate it with examples.
5. Population explosion and its effects in the society

**II.SHORT ANSWERS** **10X3 =30**

6. Medical social worker.
7. Problems of underprivileged
8. Drug abuse.
9. Beggary
10. Poverty and unemployment
11. Geriatric problems.
12. Family
13. General features of social institution.
14. Juvenile delinquency.
15. Importance of family in the present day condition.

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**PARAMEDICAL BOARD, BENGALURU**  
**ANNUAL EXAMINATION, AUGUST 2019**  
**III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**TIME: 3 HRS (RS 1 SCHEME) MAX. MARKS: 90**  
**QP: 3204, P.T. IN MEDICAL CONDITIONS**

**I. LONG ESSAY- ANSWER ANY FIVE 5X12=60**

1. How do you treat a child in acute and convalescent stage of poliomyelitis?
2. What is planar Fascitis? Write the Physiotherapy management for the same.
3. Discuss the physiotherapy assessment and management of 65 yrs old man with cerebral ataxia
4. Physiotherapy management for Rheumatoid arthritis
5. Describe the role of physiotherapist in Intensive Care Unit (ICU)
6. Define Parkinsonism, its features and physiotherapy management of Parkinson disorder.

**II. SHORT NOTES- ANSWER ANY FIVE 5X6=30**

7. Spirometry
8. Erb's palsy
9. Diabetic foot
10. Upper Motor Neuron (UMN) lesion
11. Ulcers
12. Mitral stenosis

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