

KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN  
MEDICAL LABORATORY TECHNOLOGY (DMLT)  
QP CODE: 3103, MICROBIOLOGY (RS -1 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

I. LONG ESSAY - ANSWER ANY TWO

2x10 = 20

1. Enumerate organisms causing meningitis. Add a note on lab diagnosis of bacterial meningitis.
2. Describe the pathogenesis and lab diagnosis of enteric fever.
3. Define and classify hypersensitivity reactions and add a note on type I hypersensitivity.

II. SHORT NOTES (ANY TEN)

10X 5 = 50

4. Immunity.
5. Candida.
6. Hepatitis B virus.
7. Hospital acquired infections.
8. ASLO test.
9. Lifecycle of *Ascaris lumbricoides*.
10. VDRL test.
11. Botulinism.
12. Coagulase test.
13. RA test.
14. BCG vaccine.
15. Urinary tract infections.

III. SHORT ANSWERS.

10x2 = 20

16. Innate immunity.
17. Antibiotic susceptibility test.
18. Aldehydes.
19. Indicator media.
20. Uses of chocolate agar.
21. Name two capsulated bacteria.
22. Name two anaerobic bacteria.
23. Montoux intradermal test.
24. Name two plasmodium species
25. Universal precautions.

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY (DMLT)  
QP CODE: 6105, MICROBIOLOGY (RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I. SHORT NOTES- ANSWER ANY EIGHT

8X5=40

1. Laboratory diagnosis of Entamoeba histolytica.
2. Pathogenesis of Vibrio cholera.
3. Life cycle of Ascaris lumbricoides.
4. Bacterial cell wall.
5. Widal test.
6. Serological markers of Hepatitis B virus infection.
7. Laboratory diagnosis of Candida infection.
8. Classification of streptococci.
9. Laboratory diagnosis of tuberculosis.
10. Antibiotic susceptibility testing.

II.SHORT ANSWERS

20×3=60

11. Tyndallisation.
12. Immunisation of tetanus
13. Infections caused by Staphylococcus aureus.
14. Z-N staining.
15. Kirby-bauer disc diffusion test.
16. Coagulase test.
17. India ink preparation.
18. Lepromin test
19. Name any three species of Aspergillus.
20. Hepatitis B vaccine.
21. Modes of transmission of HIV infection.
22. Hydatid cyst.
23. BCG vaccine
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  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN  
HEALTH INSPECTOR (DHI)  
QP CODE: 3113, COMMUNITY MEDICINE, PAPER-III (RS -1 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**2X10=20**

1. Enumerate the occupational diseases. Write briefly about the prevention and control measures for it.
2. Enumerate various levels of Health care system in India. Describe community health center (CHC) in detail.
3. Enumerate sources of health information systems. Discuss census.

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

**10 x 5 = 50**

4. Hospital waste management
5. Principles of health education
6. Permanent family planning methods
7. Planning cycle
8. Food poisoning
9. Human reservoir
10. Uses of epidemiology
11. Family physician. .
12. Color coding of Biomedical waste
13. First Aid in animal bite
14. Importance of screening.
15. Role of ASHA

**III. WRITE SHORT ANSWERS**

**10 x 2 =20**

16. Two features of sanitary well
17. Two methods of purification of water at household level.
18. Chlorine demand
19. Two measures to reduce air pollution
20. Balanced diet
21. Two example of food adulteration
22. Incubation period
23. Two roles of health inspector in PHC
24. Write two public health acts
25. Give two example of audio visual aid.

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

III YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)

QP CODE: 6115, COMMUNITY MEDICINE, PAPER-III

(RS -2 SCHEME)

(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I.SHORT NOTES- ANSWER ANY EIGHT

8x5=40

1. Classify occupational diseases with examples
2. ESI Act
3. What are the advantages of periodic medical examinations in occupational health?
4. Concept of triage in disaster management
5. Elements of primary health care.
6. Job description of multipurpose health worker (female)
7. UNICEF
8. What are the health hazards of health care waste
9. Stages of planning cycle.
10. Functions of World Health Organization.

II. SHORT ANSWERS.

20x3=60

11. Primary health center
12. FAO
13. ASHA
14. Sickness absenteeism
15. Asbestosis
16. Disaster mitigation
17. Ergonomics
18. Panchayati Raj
19. CARE
20. Write briefly about segregation of bio-medical waste in hospitals..
21. Role of NGO's in health care
22. World Health Day
23. Appropriate technology
24. Central health council
25. Man-made disasters
26. Millennium development goals
27. Voluntary health agencies
28. Occupational dermatitis
29. Cost benefit analysis
30. AYUSH

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN MEDICAL X-RAY**  
**TECHNOLOGY (DMXT)**  
**QP CODE: 3123, RADIOGRAPHY INCLUDING NEWER IMAGING**  
**TECHNOLOGY (RS -1 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**2 x 10 = 20**

- 1) Describe about physics of mammography. Draw a diagram of an X-ray tube.
- 2) Explain the generations of CT Scanners? Add a note on non ionic CT contrast media.
- 3) Describe principles of MRI. Explain about different coils used in MRI?

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

**10 X 5 = 50**

- 4) Macro radiography
- 5) Foreign body localization in radiography
- 6) Barium enema
- 7) High voltage radiography
- 8) Zeroradiography
- 9) Full wave rectifier
- 10) Use of phosphorus in intensifying screen
- 11) High resolution Computed tomography (HRCT) temporal bone
- 12) Hounsfield unit
- 13) Thimble ionization chamber
- 14) Testing an X -ray tube for correct exposure
- 15) Radiation survey meter

**III. SHORT ANSWERS**

**10 x 2 = 20**

- 16) As Low As Reasonably Achievable (ALARA)
- 17) Aluminium stopped wedge
- 18) Bronchography
- 19) Barium swallow
- 20) Soft tissue radiography
- 21) Potentiometer
- 22) T1 weighted MRI
- 23) Radiofrequency coils
- 24) Precession frequency
- 25) Characteristics of a semiconductor

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY (DMIT)**  
**QP CODE: 6125, RADIOGRAPHIC PHOTOGRAPHY AND IMAGING**  
**PROCESSING (RS -2 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**8 x 5 = 40**

1. Points to be considered while planning a dark room
2. List out the different methods of film processing .
3. Write notes on different types of film faults and how to prevent them
4. Digital mammography
5. Discuss various factors affecting the resolution of an image.
6. Working principle, technique and merits of digital radiography
7. Discuss the structure ,speed and uses of an intensifying screen
8. Discuss hangers, types of hangers and how to store hangers
9. Discuss photochemistry
10. Discuss factors affecting resolution ,choice of short focus.

**II .SHORT ANSWERS**

**20X3=60**

11. Notes on film artifacts
12. Replenishment
13. Note on safe light
14. Exhausted processing solution
15. Types of X-ray films
16. Film graniness
17. Storage of radiographic film
18. Loading and unloading of cassette
19. Storage of film materials and radiographs
20. Define magnification ,distortion and pneumbra
21. Use of phosphorus in intensifying screen
22. Note on primary radiological image ,latent image and visible image
23. What is MLC ?list the legal evidences provided by a MLC
24. Labelling and presentation of a radiography
25. Exhausted processing solution
26. Screen and nonscreen film
27. Note on dark room technique
28. Describe typical film characteristic
29. Fluroscence
- 30 .Factors affecting washing and drying

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN MEDICAL  
RECORDS TECHNOLOGY (DMRT)  
QP CODE: 3143, COMPUTER SCIENCE (RS -1 SCHEME)

TIME: 1.30 HRS

MAX. MARKS:40

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

1. How many types of networking is there? Explain the minimum 3 networking in detail
2. What are the Uses of computers in Hospitals and in MRD?

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

3. What's E-hospital software?
4. Explain all types of storage devices?
5. What is viruses and malwares? How to get rid of them?
6. Is it Computers helpful in Hospitals? How?
7. What's EMR? HIMS?

III. SHORT ANSWERS 5x2=10

8. Laptop
9. HDD
10. SERVER
11. E-MAIL
12. INTERNET

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN MEDICAL  
Q P Code 6145 RECORDS TECHNOLOGY (DMRT) (RS -2 SCHEME)  
TIME: 1.30 HRS MAX. MARKS:50

**I SHORT NOTES, ANSWER ANY FOUR QUESTION 4 X 5 = 20**

1. Which are all statistics prepared through computers in the Medical Record Department.
2. Brief the advantages of doing computerization in Medical Record Department.
3. Explain about the Software Applications.
4. Computers how it will useful in the Registration Counters.
5. Role of computers in the Medical Record Department.

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

6. Define Printers and its uses.
7. Define Hard Disk and its uses.
8. What do you mean by RAM and its uses.
9. Write types of printers.
10. Define Scanner and mention its uses.
11. Define Hardware.
12. Define LAN and mention its uses.
13. Brief the difference between Printer and Scanner, \.
14. Name the three storage devices.
15. Define Internet.

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**FIRST YEAR CERTIFICATE COURSES**  
**(RS-1 SCHEME)**

**Time: 1.30 HRS**

**Max Marks:45**

**QP CODE: 1103**  
**BIOLOGY**

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

- 1) Explain Watson and Crick model of DNA with labelled structure
- 2) Draw a neat labelled diagram of Nephron and describe the formation of urine

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

- 3) Placenta and its functions
- 4) Difference between bone and cartilage
- 5) Functions of Blood
- 6) Structure of Neuron
- 7) Structure of Graffian follicle
- 8) Applications of Genetic engineering
- 9) Krebs's Cycle

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

- 10) Mention four causes of cancer
- 11) Mitochondria
- 12) Name Four Viral diseases
- 13) Heart chambers
- 14) Mention two types of cell division

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**FIRST YEAR DIPLOMA COURSES**  
**(RS-2 SCHEME)**

**Time: 3.00HRS**

**Max Marks:100**

**QP CODE: 4105, BIOLOGY**

**I. SHORT NOTES – Answer any EIGHT questions 8 X 5=40**

1. Explain the respiration process in Human beings
2. Draw a labelled diagram of Nephron
3. Describe the process of digestion of carbohydrates in the mouth, stomach and intestine
4. Explain the mechanism of working of human heart
5. Mention the steps of recombinant DNA technology
6. Eukaryotic animal cell structure
7. Explain Watson and Crick model of DNA
8. Structure of human eye
9. **Match the following**

a) Mitochondria	i) DNA
b) Ribosomes	ii) Digestive enzymes
c) Plasma membrane	iii) Protein synthesis
d) Nucleus	iv) Lipid bilayer
e) Lysosomes	v) ATP

**10. Multiple choice questions**

- A) Nephron is the functional unit of i) Heart ii) Liver iii) Lungs iv) Kidney
- B) Salivary amylase hydrolyses i) Proteins into amino acids ii) Fats into fatty acids and glycerol iii) Starch into sugars iv) Nucleotides into bases
- C) In which part of alimentary canal food is finally digested  
i) Stomach ii) Mouth cavity iii) Large intestine iv) Small intestine
- D) Blood group which has no antigens 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) Explain the last process of human digestive system
- 12) List the functions of HCl in digestion
- 13) Structure of Graafian follicle
- 14) Functions of Placenta
- 15) Mention the antigens and antibodies present in each human blood group.
- 16) Name three diseases caused by bacteria
- 17) Tidal volume
- 18) Fertilization
- 19) Mention three functions of blood
- 20) Significance of Mitosis
- 21) Expand AIDS. Mention the preventive measures of AIDS
- 22) 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) Functions of Kidney
- 29) Mention the functions of Arteries and Veins
- 30) Functions of large intestine

**PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN DENTAL HYGIENE**

**TIME: 1.1/2 HRS.**

**MAX. MARKS: 45.**

**QP CODE – 3183 (RS1)**

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

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

1. Describe various specialties in dentistry.

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

2. Medico legal issues in dental practice.
3. Sterilization and care of dental instruments.
4. Billing and accounting.
5. Dental ethics 1948.
6. Charting and recording.

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

7. Computers in dentistry.
8. Materials used for making impression.
9. Photography in dentistry.
10. Maintenance of records.
11. Material maintenance.

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**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY (DMLT)**  
**QP CODE: 2104, PATHOLOGY (RS -1 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**2X10=20**

1. Mention different steps in tissue processing. Describe in detail about different fixatives used in histopathology with their advantages and disadvantages.
2. Describe the procedure and complications of plebotomy. Mention the various anticoagulants with their uses.
3. What is the composition of Leishman stain? Write a note on preparation and staining of a peripheral smear.

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

**10x5=50**

4. Dehydration in histopathology.
5. Quality control in haematology.
6. Grossing Technique in histopathology
7. Describe chemical tests for protein in urine.
8. Describe advantages and disadvantages of Sahli's haemoglobin estimation methods. Mention the normal range of haemoglobin levels in adults. (3+2)
9. Absolute eosinophilic count.
10. Describe the principle and procedure of Benedict's test.
11. Describe importance of differential leucocyte count.
12. Packed cell volume.
13. Manual tissue processing.
14. Reticulocyte count.
15. Microscopy of urine sample.

**III. SHORT ANSWER**

**10x2=20**

16. Mention two clearing agents used in histopathology.
17. Mention two causes of increased Erythrocyte sedimentation rate (ESR).
18. Mention red cell indices.
19. Mention stains used in cytology.
20. Mention four uses of EDTA anticoagulant.
21. Mention components of blood.
22. Mention the instruments used in haematology.
23. Mention different methods for haemoglobin estimation.
24. Mention uses of improved neubauer's chamber.
25. Mention preservatives used for urine samples

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**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY**  
**(DMLT)**

**QP CODE: 5105, PATHOLOGY (RS -2 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

1. Describe in detail Semen analysis.
2. Write in detail about physical and microscopic examination of urine.
3. Use of Anticoagulants in different tests.
4. Pap stain procedure.
5. Preparation and staining procedure- Leishman stain.
6. Methods of Haemoglobin estimation.
7. Quality control in Haematology.
8. Sputum examination.
9. Tissue processing.
10. Automation in Haematology.

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

11. Dipstick method.
12. Preservation of urine sample.
13. Name six chemical tests for urine.
14. EDTA.
15. Different types of vacutainers.
16. WBC diluting fluid.
17. Reticulocyte.
18. MCV.
19. Blood grouping.
20. CSF examination.
21. Fixatives used in cytology.
22. Barr body.
23. Six equipments used in Histopathology.
24. Shorr stain.
25. Mounting agents.
26. Stains used in cytology
27. AEC count.
28. Decalcification.
29. ESR estimation.
30. Ideal smear.

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DMLT)**  
**QP CODE: 2112(RS -1 SCHEME) COMMUNITY MEDICINE, PAPER-II**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**2X10=20**

1. Write causes of noise pollution. What are the effects of noise pollution?
2. Causes of under nutrition. How do you prevent under nutrition?
3. Write host and environmental factors of Hookworm infection. Add a note on its prevention

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

**10X5=50**

4. Write about prevention of air pollution
5. Swimming pool sanitation
6. Write two chemicals causing hardness of water. What are the disadvantages of hardness of water?
7. Health hazards of solid waste.
8. Manure pits.
9. SulabhShauchalya.
10. What is Sewage? What are the health effects of improper disposal of sewage waste.
11. Bangalore method of composting.
12. What is Anemia? Write about prevention and treatment of anemia.
13. Methods of Pasteurization of milk.
14. Effects of Radiation.
15. Hygiene of Slaughter house.

**III. SHORT ANSWERS.**

**10X2=20**

16. Two examples for protective food.
17. Vitamin C rich foods.
18. Effects of Poor housing.
19. Two effects of Global warming.
20. Mention four water-borne diseases.
21. Enumerate calcium-rich food.
22. Nutritive value of Egg.
23. Two household methods of purification of drinking water
24. Mention four protein-rich foods.
25. Mention any four risk factors for cardio-vascular diseases.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR CERTIFICATE COURSE IN HEALTH INSPECTOR (DHI)  
QP CODE: 5113(RS -2 SCHEME) COMMUNITY MEDICINE, PAPER-II  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I.SHORT NOTES- ANSWER ANY EIGHT QUESTIONS

8x5=40

1. Mention the disease transmitted by Anopheles. Discuss the Anopheles control measures
2. Mention the disease transmitted by Hard Tick. Discuss its control measures.
3. Aedes Mosquito
4. Housing Standards
5. Sewage treatment
6. Composting
7. Horrocks Apparatus
8. Soakage Pit
9. Septic tank
10. Large scale Purification of Water

II. SHORT ANSWERS

20x3=60

11. Sanitary Barrier
12. Residual chlorine
13. Hazards of Indoor air pollution
14. Portable Water
15. Sand Fly
16. Rat Flea
17. Louse
18. Hard Tick
19. Space Spray
20. Solid Waste
21. Insecticide treated Bed nets
22. Gambusia
23. Paris Green
24. Disinfection of Well
25. Global Warming
26. Indicators of Air Pollution
27. Hazards of Noise Pollution
28. Housefly
29. DDT
30. Types of Ventilation

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**  
**QP CODE: 2123, PHYSIOLOGY (RS -1 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 1.30 HRS**

**MAX. MARKS: 45**

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

**1x10=10**

- 1) Explain the composition and functions of blood.
- 2) Describe Spermatogenesis and its Hormonal regulation.

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

**5x5=25**

- 3) Composition and functions of Saliva.
- 4) Temporary family planning methods in males.
- 5) Explain the structure of a Nephron, with a neat diagram .
- 6) Draw a labelled diagram of normal ECG and Name the different intervals.
- 7) Classify Hypoxia and Explain Hypoxic hypoxia.
- 8) Functions of large intestine.
- 9) Explain the conducting system of heart.

**III. SHORT ANSWERS**

**5x2=10**

- 10) Write any two actions of Growth hormone.
- 11) Name any two body fluid compartments.
- 12) Write the normal values of 1) RBC count 2) Hemoglobin % .
- 13) Name any two hormones of Pancreas
- 14) Give the normal values for 1) Bleeding time and 2) Clotting time

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY (DMIT)**  
**QP CODE: 5124, PHYSIOLOGY (RS -2 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 1.30 HRS**

**MAX. MARKS: 50**

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

**4x5=20**

1. Define Active and Passive transport. Give one example of each
2. List the functions of Plasma Proteins
3. Give the composition and name THREE functions of Small Intestine juice
4. Write a brief note on Pulmonary Surfactant and its importance
5. Write FIVE actions of Cortisol hormone

**III. WRITE SHORT ANSWERS**

**10 X 3 = 30**

6. Name THREE types of muscle tissue. Where are they found?
7. Draw a neat labelled diagram of a NEURON
8. Define Blood Pressure. Give its normal value
9. Name the contraceptive methods that can be used by male
10. Name the errors of refraction of the eye
11. What is an Anti-coagulant? Give one example
12. Name THREE hormones secreted by Anterior Pituitary gland
13. Which are the two heart sounds? How are they produced?
14. Write the parts of a NEPHRON
15. Define Tidal volume. Give its normal value

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY (DOTT)**  
**QP CODE: 2135, SECTION-A, ANATOMY (RS -1 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

1. Name the bones of upper limb. Write briefly about humerus bone.
2. Name the parts of gastrointestinal system. Write briefly about stomach.

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

3. Skin
4. Thyroid Gland
5. Pituitary Gland
6. Trachea
7. Small Intestine
8. Cerebellum

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

9. Name the paranasal air sinuses
10. Name the types of muscles
11. Name types of cartilage
12. Name any two muscles of lower limb
13. Name any two veins of upper limb.

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**QP CODE: 2136, SECTION-B, PHYSIOLOGY (RS 1 SCHEME)**  
**(WRITE IN RED ANSWER BOOK)**

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

1. Describe different modes of transport of oxygen in blood. What is Hypoxia?.
2. Describe the steps of clotting of blood. Add a note on Hemophilia.

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

3. Functions of Insulin
4. Functions of Neuron
5. Draw a neat labeled diagram of Skin and list out Functions of skin
6. Role of Parathyroid hormone in Calcium metabolism
7. Differences between systemic and pulmonary circulation
8. Composition and functions of pancreatic juice
9. Functions of ovaries

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

10. Types of muscles
11. Functions of Kidney
12. What is Landsteiner's law of blood grouping
13. Two functions of spleen
14. Position of Heart

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN  
OPERATION THEATRE & ANAESTHESIA TECHNOLOGY  
(DOT&AT)**

**QP CODE: 5136, SECTION-A, ANATOMY (RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**4 X 5 = 20**

1. Describe shoulder joint in detail
2. Name the parts of gastrointestinal system. Write briefly about stomach.
3. Describe the heart in detail
4. Mention the parts of respiratory system and describe larynx in detail
5. Mention the female reproductive organs and describe the uterus in detail

**II SHORT ANSWERS**

**10X3=30**

6. Mention the types of cartilage with example
7. Mention the parts of hip bone
8. Movements at the knee joint
9. Mention any 3 endocrine organs
10. Classify epithelia with examples
11. Mention any 3 contents of the mediastinum
12. Mention 3 layers of meninges
13. Name the intercostal muscles
14. Mention the parts of small intestine
15. Types of vertebrae

**QP CODE: 5137, SECTION-B, PHYSIOLOGY (RS -2 SCHEME)  
(WRITE IN RED ANSWER BOOK)**

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

**4X5=20**

1. Plasma proteins
2. Movements of small intestine
3. Errors of refraction with correction
4. Cardiac output
5. Neuromuscular transmission across neuromuscular junction

**II. SHORT ANSWERS**

**10x3=30**

6. Functions of Mitochondria
7. Rh typing
8. Aqueous humour
9. Hypoxia
10. Functions of Cerebrospinal fluid
11. Structure of Nephron
12. List 3 functions of RBC
13. Mention 3 conditions causing increased Eosinophil count
14. Complications of mismatched blood transfusion
15. Receptors of vision

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN  
MEDICAL RECORDS TECHNOLOGY (DMRT)  
QP CODE: 2145, HOSPITAL STATISTICS & BIOSTATISTICS  
(RS -1 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**3x10=30**

- 1) Define Biostatistics and its uses.
- 2) What are the uses of registration of births and deaths? What's the procedure for registration of births and deaths in our state?
- 3) Describe measures of central tendency.
- 4) Define data. What are different sources of data? Describe presentation of data.

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

**10 x 5 = 50**

- 5) Simple Random Sampling.
- 6) Pie Chart
- 7) Uses of health information system
- 8) ICD classification of diseases.
- 9) Census.
- 10) Infant mortality rate.
- 11) Uses of computers in medical records department..
- 12) Life table.
- 13) How to calculate bed turnover ratio.
- 14) Incidence and its uses.
- 15) Histogram.

**III. WRITE BRIEFLY ON ANY FIVE.**

**5x2=10**

- 16) Medical audit.
- 17) Sex ratio.
- 18) Record linkage..
- 19) Standard error.
- 20) Average length of stay
- 21) Queue system in OPD

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY (DMRT)**  
**QP CODE: 5146, HOSPITAL STATISTICS & BIOSTATISTICS**  
**(RS -2 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**8 X 5 = 40**

1. Define statistics. Enumerate different branches of statistics.
2. Rules of tables.
3. Standard deviation
4. Types of data and methods of its collection
5. Tabulation of data
6. Prevalence and Incidence
7. Uses of computers in medical records department
8. Registration of vital events
9. Census
10. Characteristics of standard normal curve

**II. SHORT ANSWERS**

**20 X 3 = 60**

11. Uses of Biostatistics
12. Bar charts
13. Birth registration
14. Types of variables
15. MMR
16. Death rate
17. Define sampling
18. Name three notifiable diseases
19. Define data
20. Sex ratio
21. IMR
22. Mean
23. Mode
24. Name three vital statistics
25. Survey
26. Histogram
27. Frequency polygon
28. Random sampling
29. Range
30. Birth rate

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
DIALYSIS TECHNOLOGY (DDT)  
QP CODE: 2155, SECTION-A, ANATOMY (RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

**TIME: 3 HRS**

**MAX. MARKS: 90**

**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.
2. Name different parts of the Brain. Describe Cerebrum in brief.

**II. SHORT NOTES (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 (RS-1 SCHEME)**

(WRITE IN RED ANSWER BOOK)

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

**1 x 10 =10**

1. List the various types of Transport across cell membrane. Explain Active transport with example.
2. Classify different types of WBC's with the diagram. Explain the functions of all types of WBC .

**II. SHORT NOTES (ANY FIVE)**

**5 x 5 =25**

3. Cardiac cycle
4. Structure of Cell
5. Haemoglobin
6. Micturition
7. Actions of Anti Diuretic Hormone (ADH).
8. Renal regulation of Acid Base balance.

**III. WRITE SHORT ANSWERS**

**5 x 2 =10**

9. Normal Value of 1) Pulse 2) Respiratory Rate
10. Name the Plasma Proteins
11. Artificial respiration
12. Hormones involved in mineral metabolism
13. Write a neat labelled diagram of normal ECG graph

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN DIALYSIS TECHNOLOGY (DDT)  
QP CODE: 5155, SECTION-A, ANATOMY (RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I. SHORT NOTES -ANSWER ANY FOUR

4 x 5 = 20

1. Mention the parts of the respiratory system and describe the lungs in detail
2. Classify bone with examples
3. Mention the lymphoid organs in the body and describe the spleen
4. Describe the heart in detail
5. Mention the endocrine organs and describe the thyroid gland

II SHORT ANSWERS

10X3=30

6. Median cubital vein
7. Peritoneum
8. Mention the parts of the nervous system
9. Mention any 3 long bones of upper limb
10. Mention any 3 arteries of lower limb
11. Classify muscle with examples
12. Mention the quadrants of the abdomen
13. Mention the movements at the shoulder joint
14. Paranasal sinuses
15. List any 3 nerves in the upper limb

QP CODE: 5156, SECTION-A, PHYSIOLOGY (RS -2 SCHEME)  
(WRITE IN RED ANSWER BOOK)

I. SHORT NOTES -ANSWER ANY FOUR

4 X 5 = 20

1. Structure and functions of cell membrane
2. Explain extrinsic mechanism of coagulation
3. Functions of small intestine
4. Functions of Growth hormone
5. Mechanism of urine formation

II. SHORT ANSWERS

10x3=30

6. Write a neat labelled diagram of Synapse
7. Mention the Functions of haemoglobin
8. What is the normal Heart rate? Write 2 conditions in which it increases
9. Define GFR. Give its normal value
10. Name the refractory errors of vision
11. Electrocardiogram(ECG)
12. Role of Acid base regulation by kidneys
13. Anticoagulants
14. Name hormones of hypothalamus
15. Three functions of skin

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
DENTAL HYGIENE (DDH)

QP CODE: 2185, SECTION-A, BIOCHEMISTRY (RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30HRS

MAX. MARKS: 45

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

1. Describe the source, requirement (RDA), biochemical functions and deficiency manifestations of Vitamin D.
2. Describe the role of Carbohydrates, Fats & Proteins in relation to dental & oral health.

II. SHORT NOTES- ANSWER ANY THREE 3x5=15

3. Effect of malnutrition on oral health
4. Test to detect proteinuria
5. Special diet in maxillofacial injury cases
6. Vitamin C

QP CODE: 2186, SECTION-B, RADIOLOGY (RS -1 SCHEME)  
(WRITE IN RED ANSWER BOOK)

I. WRITE SHORT NOTES 4X5=20

1. Processing and mounting of dental radiographs
2. Intraoral peri apical X- ray
3. Hazards of radiation and protection against it
4. Orthopantomogram.

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN DENTAL HYGIENE (DDH)**  
**QP CODE: 5185, SECTION-A, BIOCHEMISTRY (RS -2 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 1.30HRS**

**MAX. MARKS: 50**

- I. SHORT NOTES** **2x5= 10**
- 1) Define enzyme and discuss the factors effecting enzyme activity.
  - 2) Nutrition in relation to oral health.
- II. SHORT ANSWERS** **5x3=15**
- 3) Difference between DNA and RNA.
  - 4) Functions of plasma proteins.
  - 5) Deficiency of Vitamin A.
  - 6) Abnormal constituents of urine.
  - 7) Essential amino acids.

**QP CODE: 5186, SECTION-B, RADIOLOGY (RS -2 SCHEME)**  
**(WRITE IN RED ANSWER BOOK)**

- I. LONG ESSAY** **2x5=10**
1. Write in detail about bisecting angle technique
  2. Write in detail about developing and fixing solution
- II. SHORT NOTES** **5x3=15**
3. Structure of an atom
  4. Occlusal radiograph
  5. Paralleling technique
  6. Bite wing radiograph.
  7. Orthopantomogram.

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)  
QP CODE: 4195, BIOMECHANICS (RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

**TIME: 3 HRS**

**MAX. MARKS: 100**

**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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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)  
QP CODE: 3203 (RS -1 SCHEME)  
DISABILITY EVALUATION & COMMUNITY PHYSIOTHERAPY  
(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3HRS**

**MAX. MARKS: 65**

**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**

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN MEDICAL RECORD TECHNOLOGY (DMRT)

**QP CODE: 3144, MEDICAL & SURGICAL CODING (RS -1 SCHEME)**

(WRITE IN BLUE ANSWER BOOK)

**TIME: 1 HR**

**MAX. MARKS: 20**

**I. ANSWER ANY THREE QUESTIONS**

**3x 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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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN MEDICAL RECORD TECHNOLOGY (DMRT)  
QP CODE: 6146, MEDICAL & SURGICAL CODING  
(RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1 HR

MAX. MARKS: 30

I. SHORT ANSWER ANY TEN

10 X 3 = 30

1. What do you mean by coding?
2. Define Parentheses.
3. Define Dagger and Asterisk coding system.
4. Brief the uses of ICD coding.
5. How many volumes are there in ICD - 10? Explain.
6. How many sections are there in Volume III? Mention them.
7. How many chapters are there in Volume I? What are the uses of Volume II?
8. Define homonyms.
9. What is a Statistical Classification of Diseases?
10. Why use a classification.
11. Define synopsis.
12. Define Eponyms.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
COMMON FOR ALL FIRST YEAR CERTIFICATE COURSES  
**QP CODE: 1104, ENGLISH(RS -1 SCHEME)**  
(WRITE IN BLUE ANSWER BOOK)

**TIME: 1.30 HRS**

**MAX. MARKS: 45**

- I WRITE AN ESSAY ON ANY ONE OF THE FOLLOWING 15x1=15**
1. Role of Technician in the diagnostic laboratory
  2. Air Pollution
- II ANSWER ANY ONE 10x1=10**
3. Write a letter to the Administrative Officer requesting for your Transfer Certificate
  4. Write a letter to your friend inviting him/her to your Birthday party
- III WRITE THE OPPOSITE GENDER OF 5x1=5**
5. Goose
  6. Manager
  7. Prince
  8. Uncle
  9. Dog
- IV WRITE THE OPPOSITE OF THE FOLLOWING 5x1=5**
10. Tall
  11. Agree
  12. Clever
  13. Transparent
  14. Bright
- V MAKE SENTENCES USING THE FOLLOWING 5x1=5**
15. More than
  16. Because of
  17. In spite of
  18. In order to
  19. Whenever
- VI FILL IN THE BLANKS 5x1=5**
20. Mala is beautiful .....Laxmi
  21. My house is.....the way to Church
  22. This book is .....Mayana
  23. It is .....apple
  24. He is ..... boy

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
FIRST YEAR DIPLOMA COURSES, QP CODE: 4107, ENGLISH (RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

**Note: This Question Paper contains 2 Pages**

**TIME: 3 HRS**

**MAX. MARKS: 100**

**I. WRITE AN ESSAY ON ANY ONE OF THE FOLLOWING**

**1x15=15**

1. Mobile Phones
2. Importance of Sports

**II ANSWER ANY ONE (LETTER WRITING)**

**1x10=10**

3. Write a letter to your Principal requesting to grant permission to celebrate Teachers Day by the students.

4. Write a letter to your parents telling them about your paramedical course.

**5. USE THE FOLLOWING IDIOMS/PHRASES IN SENTENCE OF YOUR OWN 5x1=5**

- a) Piece of cake    b) A Black sheep    c) Call One's name    d) Childs play  
e) Appreciate

**6. CHANGE THE FOLLOWING INTO INDIRECT SPEECH 5x1=5**

- a) Anju said to Anu "I am returning to my home town tomorrow"
- b) 'Helen writes very well' said her friend
- c) If I see Jai, I shall certainly bring him here said Dr Rajesh
- d) He said to you, "What is the price of this tray"?
- e) "Will you follow me to the village"? Raghu asked me.

**7. CHANGE THE VOICE OF THE FOLLOWING 5x1=5**

- a) Reema made a garland in one day
- b) The Manager will give you directions
- c) All the arrangements are being made by our college management.
- d) A new name was invented by Mr. Bumble
- e) Our girls won many prizes

**8. WRITE THE OPPOSITE OF THE FOLLOWING 5x1=5**

- a) Active    b) Bright    c) Occupy    d) Happy    e) Empty

**9. FILL IN THE BLANK WITH THE SUITABLE PREPOSITION 5x1=5**

- a) His house is .....the river
- b) Ravi went .....his father
- c) Little water is .....the tank
- d) He comes once in .....week
- e) Salman met Amir.....5 o'clock in the eve

**10. FILL IN THE BLANKS WITH ARTICLES 5x1= 5**

- a) Bombay is.....big city
- b) Get me.....apple
- c) Anu is ..... only girl who won the match
- d) Sun rises in.....East
- e) She is.....beautiful girl

**11. GIVE THE SYNONYMS OF THE FOLLOWING 5x1=5**

- a) Hide    b) Run    c) Move    d) Use    e) Do

**12. Read the following passage carefully and answer the questions that follow**

- (1) India is a secular, democratic nation. This implies that every religion is treated equally and at par with every other religion. No religion is accorded any preferential treatment of any kind. All citizens are also free to practice, preach or profess any religion of their choosing. The state does not have a unified or homogeneous religious following
- (2) This unique characteristic of India ensures its unity in diversity. India has been the Christianity, Buddhism, Sikhism, Zoroastrianism, Jainism and so on exist simultaneously, peacefully and harmoniously.

.....2

- (3) But, some anti-social elements have interpreted the sanctity of religions in a twisted way. No religion preaches violence or rioting. All the religions are but various ways to reach the Supreme Being, they are paths which lead to the ultimate truth and salvation, though we refer to the destination by various names such as Jesus, Krishna, Buddha, and Allah and so on. It is important to realize that in order to ensure a peaceful mosaic of cultural distinctness, the path of non-violence or ahimsa, has given by the Father of the nation, must be followed unwaveringly.
- (4) God created man in his own image. Hence, it follows naturally that there is some divinity within all human beings. Thus, to kill and murder in the name of religion is blasphemy. Only once the religious fanatics understand this, will there be perpetual peace in the land.

**A. ANSWER THE FOLLOWING QUESTIONS:**

- (a) What is meant by the term 'secular'? (1)  
 (b) What is special about India's association with religion? (1)  
 (c) Which is a secular, democratic nation? (1)  
 (d) Why are human beings divine? (1)  
 (e) What are the religions mentioned in the passage? (2)  
 (f) How can all religions co-exist peacefully? (2)

**B. Find the words from the passage which mean the same as the following:**

- i) All (para1) (1)  
 ii) Several (Para 2) (1)

**13. WRITE THE CORRECT MEDICAL TERM 10x1=10**

- a) Gynaeb) Neu c) Hepad) Endo e) Immuf) Ortho g) Micr h) Phyi) Onco j) ICU

**14. E MAIL WRITING 1x5=5**

Write an Email to a company ordering some medicines.

**15. FILL IN THE BLANKS WITH APPROPRIATE ARTICLES AND PREPOSITIONS GIVEN IN THE BRACKET (at, the, by, for, at) 5x1=5**

.....little girls, who had been told that Lincoln was not very good looking, was taken..... her father to see the President ..... the white house. Lincoln chatted with her.....a while in his gentle, humerousway. Suddenly the little girl called out, "Daddy! He is not ugly..... all. He is just beautiful.

**16. RE-ARRANGE THE JUMBLED SEGMENTS TO FORM A SENTENCE. 6x1=6**

- a) Licked / calmly / the cat / the saucer  
 b) She / letters / tomorrow / will write  
 c) A bag of gold / the king / the post / gave  
 d) good Morning / the students / their teacher / wished  
 e) A good husband / chose / her parents / her  
 f) Carefully / drives / Kannan / the Car

**17. COMPLETE THE FOLLOWING DIALOGUE (SITUATION BASE CONVERSATION) 4x1=4**

Shop Keeper: What do you want?  
 Boy: .....  
 Shop Keeper:.....  
 Boy: No I want only a cheap pen  
 Shop Keeper: What .....?  
 Boy: I would like to have a green one  
 What.....  
 Shop Keeper: It will cost a rupee

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN

MEDICAL LABORATORY TECHNOLOGY (DMLT)

QP CODE: 2105, MICROBIOLOGY (RS -1 SCHEME)

(ANSWER IN GREEN BOOK)

TIME: 3 HRS

MAX. MARKS: 90

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

**2x10 = 20**

1. Explain washing and packing of materials used in microbiology for hot air oven.
2. Mention different types of microscopes and explain in detail dark field microscope.
3. Draw neat diagram of bacterial cell and explain gram negative cell wall of bacteria.

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

**10x 5 = 50**

4. TSI test.
5. Bacterial flagella.
6. Koch postulates.
7. Antibody.
8. Negative stain.
9. Active immunity.
10. Anaerobic jar.
11. Structure of IgG.
12. Enrichment media.
13. Cold sterilization.
14. Fumigation.
15. Ionizing radiation.

**III. SHORT ANSWERS.**

**10x2 = 20**

16. Name two gram negative cocci.
17. Name two indol positive bacteria.
18. Name two anaerobic bacteria.
19. Name two bacterial filters.
20. Name two RNA viruses.
21. Name two selective media.
22. Name two reagents in acid fast stain.
23. Name two bacterial vaccines.
24. Name two disinfectants.
25. Name two name two articles sterilized by hot air oven.

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY (DMLT)  
**QP CODE: 5107, MICROBIOLOGY (RS -2 SCHEME)**  
(ANSWER IN GREEN BOOK)

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**8 X 5 = 40**

1. Contributions of Louis Pasteur
2. Use and care of compound microscope
3. Write in brief about structure of a bacterial cell
4. Hot air oven
5. Indole test
6. IgM
7. Innate immunity
8. ELISA
9. Biomedical waste segregation and disposal
10. Type 4 hypersensitivity reaction

**II. SHORT ANSWERS**

**20X3=60**

11. Name different types of microscopes
12. Write neat labelled diagram of a bacterial spore
13. Enriched media
14. Phases of bacterial growth curve
15. Uses of dark ground microscope
16. Patterns of arrangement of bacterial flagella
17. Name three viral vaccines
18. Cold sterilization
19. Sterilization controls
20. Name three Gram positive cocci
21. Name three ingredients of Nutrient agar
22. Robertson cooked meat medium
23. Define Precipitation and Agglutination reactions
24. Name personal protective equipment used in the microbiology laboratory
25. Koch's postulates
26. Functions of bacterial capsule
27. Define Sterilization and Disinfection
28. Name three common chemical disinfectants used in the hospital
29. Cleaning of Blood/ Body fluid spill in the laboratory
30. Name common staining techniques used in microbiology

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY

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SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN

HEALTH INSPECTOR (DHI) (RS -1 SCHEME)

QP CODE: 2113, COMMUNITY MEDICINE, PAPER-III

(ANSWER IN GREEN BOOK)

TIME: 3 HRS

MAX. MARKS: 90

I. LONG ESSAY- ANSWER ANY TWO

2x10=20

1. What is screening? Mention the uses and criteria for screening test.
2. Define Epidemic. Write in detail about an investigation of an epidemic.
3. Discuss various modes of disease transmission, with suitable examples.

II. WRITE SHORT NOTES ON ANY TEN

10 x 5 = 50

4. What are migration studies?
5. Census
6. Cold chain.
7. Quarantine.
8. Health of travelers.
9. Statistics and its uses
10. Cyclops.
11. What are the uses of epidemiology?
12. Types of disinfection
13. Mean, median and mode
14. Reservoir of infection
15. Spot map.

III. WRITE SHORT ANSWERS

10 x 2 =20

16. Bar chart.
17. Case fatality rate
18. Pentavalent vaccine.
19. Isolation.
20. Death registration
21. Two diseases transmitted by Ticks
22. Secondary attack rate.
23. Two diseases transmitted by direct contact
24. Define endemic
25. Name two advantages of live vaccines.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)  
QP CODE: 5115, (RS -2 SCHEME) COMMUNITY MEDICINE, PAPER-III  
(ANSWER IN GREEN BOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

8x 5 = 40

1. Criteria for screening test
2. Vitamin A deficiency. Prevention and control of Vitamin A
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. Milk borne diseases
16. Define sensitivity
17. Name three diseases which are commonly screened
18. Food fortification
19. Dietary fibre
20. Cause of Maternal mortality rate in India
21. Name three sources of health information
22. Pentavalent vaccine
23. Weaning
24. Isolation
25. Three nutrition problems
26. Parboiling of rice
27. Classify vitamins
28. Measures of central tendencies
29. Three diseases prevented by vaccines
30. Three examples of pluses

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN  
MEDICAL X-RAY TECHNOLOGY (DMXT)  
**QP:2124, PATHOLOGY (RS -1 SCHEME)**  
(ANSWER IN BLUE BOOK)

**TIME: 1.30 HRS**

**MAX. MARKS: 45**

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

- 1) Define and classify edema. Discuss the etiopathogenesis of Renal Edema
- 2) Define and classify Pneumonia. Discuss the etiopathogenesis of Lobar Pneumonia

**II. SHORT ESSAY: ANSWER ANY FIVE** **5x5=25**

- 3) Define Necrosis. Discuss different types of necrosis with examples.
- 4) Mention differences between benign and malignant tumours.
- 5) Chronic cholecystitis
- 6) Myocardial infarction
- 7) Hydronephrosis
- 8) Achalsia cardia
- 9) Osteoclastoma

**III. SHORT NOTES:** **5x2=10**

- 10) Vitamin A Deficiency
- 11) Mention 2 types of carcinoma thyroid
- 12) Fibroid uterus
- 13) Causes of Epistaxis
- 14) Mention 4 factors affecting fracture healing

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY (DMIT)  
**QP: 5125, PATHOLOGY(RS -2 SCHEME)**  
(ANSWER IN BLUE BOOK)

**TIME: 1.30 HRS**

**MAX. MARKS: 50**

**I. SHORT NOTES - ANSWER ANYFOUR**

**4x5=20**

1. Define embolism. Discuss different types of embolism.
2. Etiology and pathogenesis of osteomyelitis.
3. Myocardial Infarction.
4. Define inflammation. Types with examples.
5. Write in detail about TB lung. Add a note on primary complex.

**II. SHORT ANSWERS.**

**10x3=30**

6. Pleural effusion.
7. Marasmus .
8. Cold abscess.
9. Gastric ulcer.
- 10.Arthritis.
- 11.Gall stones.
- 12.Fibroadenoma.
- 13.Hydronephrosis.
- 14.Features of Benign Tumour.
- 15.Hyperplasia.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)

**QP: 4197, SECTION-A, PSYCHOLOGY (RS 2 SCHEME)**

(ANSWER IN BLUE BOOK)

**TIME: 3 HRS**

**MAX. MARKS: 100**

**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 (RS 2 SCHEME)**

(ANSWER IN RED BOOK)

**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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SUPPLEMENTARY EXAMINATION, JANUARY 2020

III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)

QP: 3204, P.T. IN MEDICAL CONDITIONS(RS 1 SCHEME)

(ANSWER IN GREEN BOOK)

TIME: 3 HRS

MAX. MARKS: 90

**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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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA / III YEAR CERTIFICATE COURSE IN  
MEDICAL LABORATORY TECHNOLOGY  
QP CODE: 3101, BIOCHEMISTRY(RS -1 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

TIME: 3 HRS

MAX. MARKS: 90

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

2x10 = 20

1. Describe the various kidney function test.
2. Explain the digestion and absorption of proteins.
3. What is quality control (QC) in laboratory? Name the QC charts. Briefly explain the Westgard rules to establish the QC.

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

10x5=50

4. Blood glucose homeostasis
5. Direct and indirect Vandenberg test
6. Cardiac profile test
7. Abnormal constituents of urine
8. Outline the steps of creatinine formation
9. Significance of gluconeogenesis
10. Applications of chromatography
11. Total laboratory automation
12. Glucose Tolerance Test (GTT)
13. Principle of Electrophoresis
14. Standard deviation (SD)

**III. SHORT ANSWERS**

10x2=20

15. List the substrate level phosphorylation steps in glycolysis.
16. Name any two enzymes of citric acid cycle.
17. Write the reaction catalysed by enzyme arginase in urea cycle.
18. Name the ketone bodies.
19. What are micelles?
20. How is the specific gravity of urine measured?
21. Mention two applications of ion selective electrodes (ISE)
22. What is uric acid? Mention the normal levels of serum uric acid.
23. Name the monosaccharides of lactose.
24. Write two applications of radioimmunoassay (RIA)

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY  
QP CODE: 6101, BIOCHEMISTRY(RS -2 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

8x5= 40

- 1) Colorimetry, Principle, absorbance, transmittance and applications.
- 2) Random access auto analyzer.
- 3) Formation of Bilirubin.
- 4) Cardiac enzymes in Heart disease.
- 5) Jaundice and its classification.
- 6) Mention different methods of Glucose estimation.
- 7) Electrophoresis and its applications.
- 8) Enzyme Linked Immunosorbant Assay (ELISA).
- 9) Radio Immuno Assay (RIA).
- 10) Name the types of analyzers and benefit of automation.

**II. SHORT ANSWERS**

20 x 3=60

- 11) Metabolic acidosis & alkalosis.
- 12) Principles of Quality assurance.
- 13) Pre analytical factors importance in clinical chemistry.
- 14) Accuracy, Specificity & Sensitivity.
- 15) Reference values and its interpretations.
- 16) Spectrophotometry and its importance.
- 17) Laws of Photometry.
- 18) Benedict's test.
- 19) Renal function test.
- 20) Van den berg test.
- 21) Myocardial infarction.
- 22) Chloride shift.
- 23) Biuret test.
- 24) Percentage error in laboratory.
- 25) Different methods of cholesterol estimation.
- 26) Biochemical findings in Hepatic Jaundice.
- 27) Specific gravity of Normal Urine.
- 28) Application of flame Photometer.
- 29) Creatinine clearance test.
- 30) Lipid profile.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR CERTIFICATE COURSES  
QP CODE: 1101, PHYSICS(RS -1 SCHEME)  
(WRITE IN BLUE ANSWERBOOK)

TIME: 1.30 HRS

MAX. MARKS: 45

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. SHORT NOTES- answer 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. 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  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR CERTIFICATE COURSE/III YEAR DIPLOMA IN HEALTH INSPECTOR  
QP CODE: 3111, (RS -1 SCHEME)  
COMMUNITY MEDICINE, PAPER-I  
(WRITE IN GREEN ANSWERBOOK)

**TIME:3 HRS**

**MAX. MARKS: 90**

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

**2 x 10 = 20**

- 1 Describe epidemiology, clinical features and management of measles. Write a note on its prevention.
2. Define primary health care. Briefly describe the elements and principles of primary health care
3. What are the Causes for road traffic accidents (RTA)? Name five measures to prevention RTAs.

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

**10 X 5=50**

- 4) Pulse polio Immunization
- 5) Health problems in urban area.
- 6) Risk factors for Diabetes Mellitus.
- 7) Epidemiology of Typhoid.
- 8) Modes of HIV transmission.
- 9) Danger signals of Cancer
- 10) Anganwadi centre
- 11) Scabies
- 12) DOTS treatment in tuberculosis.
- 13) Vision 2020
- 14) First Aid in dog bite
- 15) Vit A Prophylaxis programme.

**III. SHORT ANSWERS**

**10X2=20**

- 16) Rule of halves in hypertension
- 17) Name two sexually transmitted diseases
- 18) ORS
- 19) BCG vaccine
- 20) Vaccine carrier
- 21) Iron Folic Acid Tablets
- 22) Mention any four zoonotic diseases
- 23) Mention any four organisms causing diarrhea
- 24) Hazards of smoking.
- 25) Name four domestic accidents

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**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN HEALTH INSPECTOR**  
**QP CODE: 6111, COMMUNITY MEDICINE, PAPER-I(RS -2 SCHEME)**  
**(WRITE IN GREEN ANSWERBOOK)**

**TIME:3 HRS**

**MAX. MARKS: 100**

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

**8 x 5 = 40**

1. Epidemiology of diarrhoeal disease and its prevention
2. Epidemiology of dengue
3. Steps of investigation of an epidemic
4. Prevention of rabies
5. Hazards of obesity
6. Rule of halves
7. Modifiable and non-modifiable risk factors of stroke
8. Pulse polio immunization
9. Modes of HIV transmission
10. Epidemiology of typhoid

**II. SHORT ANSWERS**

**20 x 3 = 60**

11. Organisms causing ARI
12. Three water borne diseases
13. Three diseases caused by mosquito
14. Three non-communicable diseases
15. Modifiable risk of diabetes
16. Prevention of road traffic accidents
17. Diabetic foot
18. Measles vaccine
19. ORS
20. Three diseases due to obesity
21. Epidemiology of tuberculosis
22. Three diseases transmitted by faeco oral route
23. VVM
24. Effects of smoking
25. Accidents prevention
26. Passive smoking
27. Danger signs of cancer
28. Man made malaria.
29. Pentavalent vaccine
30. Three life style diseases

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN X-RAY TECHNOLOGY**  
**QP CODE: 3121, (RS -1 SCHEME)**  
**RADIOGRAPHY INCLUDING RADIOLOGY PHYSICS**  
**(WRITE IN GREEN ANSWERBOOK)**

**TIME:3 HRS**

**MAX. MARKS: 90**

**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. SHORT NOTES - ANSWER 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. 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**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY**  
**QP CODE: 6121, (RS -2 SCHEME)**  
**RADIOGRAPHY POSITIONING & RADIOGRAPHIC PHOTOGRAPHY**  
**(WRITE IN GREEN ANSWERBOOK)**

**TIME:3 HRS**

**MAX. MARKS: 100**

**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  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
OPERATION THEATRE TECHNOLOGY  
QP CODE: 3131, ANAESTHESIA & ALLIED TOPICS(RS -1 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

**TIME:3 HRS**

**MAX. MARKS: 90**

**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. Mention different types of centrineuraxial blockade. Describe the effect of centrineuraxial blockade on various organ systems.
3. Classify anaesthesia breathing systems. Write a note on Bain's circuit.

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

**10X5=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**

**10x2=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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SUPPLEMENTARY EXAMINATION, JANUARY 2020

III YEAR DIPLOMA IN OPERATION THEATRE & ANAESTHESIA TECHNOLOGY

QP CODE: 6131, ANAESTHESIA & ALLIED TOPICS(RS -2 SCHEME)

(WRITE IN GREEN ANSWERBOOK)

TIME:3 HRS

MAX. MARKS: 100

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

8 x 5 = 40

1. Classify muscle relaxants and write a note on Atracurium.
2. Intravenous fluids and differences between crystalloids and colloids.
3. Complications of spinal anaesthesia.
4. Safety features in anaesthesia machine.
5. Blood grouping, typing and blood transfusion reactions.
6. Classify breathing systems and write a note on Jackson Rees circuit.
7. ASA grading in preanesthetic evaluation.
8. Describe different components of BLS.
9. Non-invasive monitoring in anaesthesia.
10. Sterilization of OT instruments.

**II.SHORT ANSWERS**

20x3=60

11. Ketamine
12. Informed consent
13. PIN index
14. Mc Intosh Laryngoscope
15. Adrenaline
16. Premedication
17. Pulse oximetry
18. Fentanyl
19. Lignocaine
20. Lithotomy position
21. Ambu bag
22. Hydrocortisone
23. Colour coding of gas cylinders
24. Soda lime
25. Bougie
26. Bupivacaine
27. Indication of General Anaesthesia
28. Isoflurane
29. Drugs used in CPR
30. Preoperative fasting criteria

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /II CERTIFICATE COURSE IN MEDICAL RECORDS  
QP CODE: 3141, MEDICAL TERMINOLOGY (RS -1 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

TIME: 3 HRS

MAX. MARKS: 90

**Note: Question Paper contains 2 pages**

**I. Answer the following**

**5x3=15**

1. Differentiate between Prefix, Suffix & Root with one example?
2. Name five Plains of the body?
3. Define Eponyms & Give three example?

**II. Give the Meaning for the following Prefix**

**5x1=5**

- A) Contra B) Dys C) Hyper D) Endo E) Trans

**III. Give the Meaning for the following Suffixes**

**5x1=5**

- A) Mania B) Oma C) Pathy D) Scopy E) Plasty

**IV. Give the Meaning for the following Roots**

**5x1=5**

- A) Derm B) Cardi C) Enter D) Osteo E) Lip

**V. Give the Meaning for the Phobias**

**10x1=10**

- 1) Acrophobia 2) Anemophobia 3) Chromatophobia 4) Febre Phobia 5) Dipsuphobia  
6) Polyphobia 7) Pharacophobia 8) Photophobia 9) Osmophobia 10) Ochlophobia

**VI. Differentiate the following terms**

**5x2=10**

- A) Aural & Oral  
B) Cystostomy & Cystotomy  
C) Endemic & Epidemic  
D) Fascial & Facial  
E) Larynx & Pharynx

**VII. Write the Terms for the following Numerals**

**5x1=5**

1. One 2. Four 3. Five 4. Ten Lakhs 5. Six

**VIII. Give the Medical Terms for the following**

**10x1=10**

1. Crushing of Stones in the bladder
2. Suppurative inflammation of the uterus
3. Paralysis of one or more of nerves of the eye
4. The term for Pain in the Joints
5. Deficiency of White blood cells
6. Pus in the body cavity

P.T.O.

7. Inflammation of the Vertebrae
8. The term for removal of the tonsil
9. Formation of Blood Clot
10. Suture of Torn Cervix Uteri

**IX. Define the following**

**10x1=10**

1. Anemia
2. Angiothrombosis
3. Dysphagia
4. Hemiplegia
5. Hematoma
6. Myopathy
7. Otodynia
8. Dehydration
9. Nephropexy
10. Spondylitis

**X. Expand the following abbreviations**

**10x1=10**

- |            |          |
|------------|----------|
| 1. I.V.H   | 6. Hb    |
| 2. F.T.P   | 7. I.C.U |
| 3. D.O.B   | 8. E.C.G |
| 4. A.C.V.D | 9. G.T.T |
| 5. Ca      | 10. F.B  |

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

**5x1=5**

1. Leucos
2. Cirrhos
3. Albus
4. Erythros
5. Melan

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY  
QP CODE: 6141, MEDICAL TERMINOLOGY(RS -2 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**8x5= 40**

1. What are the objectives of Learning Medical Terminology?
2. What are the anatomical divisions of the back?
3. What are the clinical divisions of abdomen?
4. Name the planes of the body
5. Define a) Afferent b) Central c) Efferent d) lateral e) Medial
6. Differentiate between Amenorrhea and Dysmenorrhea
7. Differentiate between Tachycardia and Bradycardia
8. Differentiate between Addiction and Adduction
9. Define Simple fracture and compound fracture
10. Define prefix, suffix and roots with two examples for each

**II. SHORT ANSWERS**

**20x3=60**

11. Define adjective suffixes with two examples
12. Define noun suffixes with two examples
13. Define Diminutive suffixes with two examples
14. Give the meaning for the a) Candidus b) Cyanos c) Lividus
15. Give the meaning for the a) Bini b) Micro c) Tetra
16. Write the meaning for a) Acrophobia b) Demenophobia c) parthenophobia
17. Give the meaning for a) Ante b) Cata c) semi
18. Give the meaning for a) Megaly b) Rhexis c) itis
19. Give the meaning for a) Plasty b) Scopy c) Tripsy
20. Give the meaning for a) Dynia b) Stasis c) osis
21. Give the meaning for a) Blephar b) Cysto c) Gastr
22. Define the terms a) Apnea b) Antepartum c) Encephalopathy
23. Define the terms a) Hyperglycemia b) Cholelithiasis c) Cardiorrhesis
24. Define the terms a) Paracentesis b) Cystoscopy c) Glycopenia
25. Define the terms a) Adenomalacia b) Cervicitis c) Cholangitis
26. Define the terms a) Amblyopia b) Dyspnea c) Enuresis
27. Expand the abbreviations a) IHD b) LSCS c) CSOM
28. a) Abnormal increase of cerebral fluid is called-----  
b) Inability to sleep is called-----  
c) Stone in the salivary duct is called -----
29. a) pain in the muscle or muscular pain is called -----  
b) Enlargement of liver and spleen is called-----  
c) Inequality in the size of the cells is called-----
30. a) Membranes covering the uterus is called-----  
b) Abnormally large foot is called-----  
c) Outer layer of skin is called-----

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN DIALYSIS TECHNOLOGY**  
**QP CODE: 3151 (RS -1 SCHEME)**  
**FUNDAMENTALS OF HEMODIALYSIS & COMPONENTS**  
**(WRITE IN GREEN ANSWERBOOK)**

**TIME:3 HRS**

**MAX. MARKS: 90**

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

**2 x 10 = 20**

1. Describe in detail regarding dialysis solution preparation including disinfection of machine.
2. Describe Ultra filtration in Acute Renal Failure and Chronic Renal Failure patient .
3. Define the three main principles of dialysis. Write the steps of measurement, the formulae for calculation and the interpretation of urea reduction ratio and Kt/V in the assessment of adequacy of dialysis.

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

**10×5=50**

4. Initiation of Hemodialysis.
5. Regional anticoagulation.
6. Therapeutic Apheresis.
7. Dialyzer reaction.
8. Discounting dialysis and Saline Rinse.
9. Water treatment plant
10. Various alarms in Hemodialysis machines.
11. Two methods of Heparin Administration.
12. Sterilization.
13. Write about special precautions when initiating hemodialysis for pregnant woman.
14. Artificial Kidney.
15. Draw the diagram and describe dialysis fluid circuit of hemodialysis apparatus.

**III.WRITE SHORT ANSWERS**

**10×2=20**

16. Two types of EPO
17. Two causes for nausea during dialysis.
18. Normal pulse and blood pressure.
19. What are the cardiac complications in CKD patients.
20. Deionization.
21. Mass transfer area coefficient.
22. Activated partial thromboplastic time (APTT).
23. Define ultrapure water.
24. Two indications to start dialysis.
25. Surface area and priming volume of dialyzer

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN DIALYSIS TECHNOLOGY  
QP CODE: 6151, DIALYSIS PAPER-I (RS -2 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

**TIME:3 HRS**

**MAX. MARKS:100**

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

**8X5=40**

1. Indications and complications of plasmapheresis.
2. Peritoneal Equilibration Test (PET).
3. Write a note on adequacy of hemodialysis.
4. Ultrafiltration.
5. Dialyzer reuse.
6. Techniques of AVF Cannulation.
7. Non-infectious complications with dialysis by catheter.
8. Heparin Free hemodialysis.
9. Composition of standard Hemodialysis solution.
10. Therapeutic Apheresis.

**II.SHORT ANSWERS**

**20X3 =60**

11. Write three chronic complications of AV fistula.
12. Diagrammatic representation of AV fistula pricking.
13. Three advantages of AVF over AV graft.
14. Name three acute complications of IJV insertion.
15. Three steps of management of hypotension in HD.
16. An elderly chronic CKD patient was started with 300 ml/min blood flow on his first dialysis, the patient developed head ache followed by seizures after three and half hours of HD. What is the cause of this condition and its management in brief?
17. Three causes of intra dialytic hypotension.
18. Peritoneal dialysis solution dextrose concentration.
19. Peritoneal dialysis cyler.
20. Three pore model of peritoneal dialysis.
21. Factors determining clearance in peritoneal dialysis.
22. Clinical features of CAPD peritonitis.
23. What are the foods rich in potassium?
24. Common causes of cramps during HD.
25. Principles of peritoneal dialysis.
26. What is sodium and ultra filtration profiling?
27. Name three renal function tests.
28. Medical education to patient about fistula care.
29. Name the components of rule of 6.
30. Write any three indications for dialysis.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
OPHTHALMIC TECHNOLOGY

QP CODE: 3161, OPHTHALMOLOGY PAPER-I(RS -1 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

TIME:3 HRS

MAX. MARKS: 90

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

1. Define retinoscopy. Mention its types and stages and briefly describe its procedure
2. Name uses and maintenance of surgical instruments for cataract surgery
- 2 A. Define ametropia. Mention the types of surgical management of refractive errors.

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

3. Indications and contraindications of contact lenses
4. Color vision testing and its importance
5. Define low vision and add a note on low vision aids
6. Optical aberrations
7. OT fumigation
8. Cycloplegic refraction
9. Chalazion surgery
10. Discuss centering of the lens
11. Intra ocular lens power calculation
12. Gonioscopy
13. Maintenance of tonometer.
14. Add a note on bedmaking, preparation of eye, and ocular bandaging.
15. Describe various routes of drug administration in ophthalmology.

III. SHORT ANSWERS 10 × 2 = 20

16. Lantern test
17. Describe simple transposition of lenses and its importance
18. Post mydriatic test
19. Toric lenses
20. Tests for binocular single vision
21. Pediatric spectacle prescription
22. Trial set and its accessories
23. Transposition of toric lenses
24. Pin hole test and its importance
25. Maddox rod test

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

III YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY

QP CODE: 6161, OPHTHALMOLOGY, PAPER-I(RS -2 SCHEME)

(WRITE IN GREEN ANSWERBOOK)

TIME:3 HRS

MAX. MARKS: 100

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

8x5=40

1. Laying of instruments trolley for Small incision cataract surgery
2. Describe various sutures used in Ophthalmic Surgeries & their Sterilization
3. Calibration of Keratometer
4. General work culture in OT (Operation Theatre)
5. OT (Operating Theatre) cleaning & maintenance
6. Technique of scrubbing, Gloving & Gowning
7. Segregation of OT Waste, Colour coding of Disposable Bin
8. How do you prevent transmission of HIV or HBsAg infection from patient to hospital staff ?
9. Trial Set
10. Instruments used for DCR surgery

**II. SHORT ANSWERS**

20x3=60

11. Trimming of Eye lashes
12. Bed making
13. Shifting of blind patient from ward to OT
14. Lensometer
15. Uses of indirect ophthalmoscope
16. Maintenance of OT register
17. Starting & care of IV Line
18. Drugs used for topical anaesthesia
19. Drugs used in GA cases
20. Uses of diathermy
21. Sterilization of phacotubings
22. Instruments used in chalazion surgery
23. Packing of sterilization bin
24. IPD (Inter Papillary Distance ) setting
25. Instrument sterilization in minor OT
26. Types of retinoscopes
27. Types of autoclaves
28. Pachymeter
29. Uses of cryo machine
30. Connecting cardiac monitors

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
DENTAL MECHANICS  
QP CODE: 3171, COMPLETE DENTURES (RS -1 SCHEME)  
(WRITE IN BLUE ANSWERBOOK)**

**TIME:1.30 HRS**

**MAX. MARKS: 45**

**I. LONG ESSAY**

**1X10=10**

1. Define dental cast and write different types and parts of the cast.

**II.WRITE SHORT NOTES**

**5X5=25**

2. Define articulator and write uses.
3. Immediate denture.
4. Beading and boxing.
5. Difference between acrylic and porcelain teeth.
6. Wax rims

**III. SHORT ANSWERS**

**5X2=10**

7. Define cast.
8. Materials used for repair of denture
9. Define immediate denture.
10. Define balanced occlusion
11. Uses of record base

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
DENTAL HYGIENE  
QP CODE: 3181, DENTAL HYGIENE & ORAL PROPHYLAXIS  
(RS -1 SCHEME)  
(WRITE IN BLUE ANSWERBOOK)**

**TIME:1.30 HRS**

**MAX. MARKS: 45**

**I. LONG ESSAY**

**1X10=10**

1. Define and classify calculus. Write difference between supragingival and subgingival calculus.

**II. SHORT NOTES**

**5X5=25**

2. Objectives of dental hygiene
3. Extrinsic and intrinsic dental stains
4. Clinical features of gingivitis
5. Stages of dental plaque formation
6. Periodontal abscess

**III. SHORT ANSWERS**

**5X2=10**

7. Oral cancer
8. Fluoride varnish
9. Interdental brush
10. Gingival sulcus
11. Periodontal probe

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN DENTAL MECHANICS  
QP CODE: 6171, COMPLETE DENTURES(RS -1 SCHEME)  
(WRITE IN BLUE ANSWERBOOK)**

**TIME:1.30 HRS**

**MAX. MARKS: 50**

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

**4X5=20**

1. 1) Posterior palatal seal area.
2. Tissue conditioner.
3. Define balanced occlusion and factors affecting it.
4. Classify articulators and write in detail about mean value articulator.
5. Advantages of immediate denture

**II. SHORT ANSWERS**

**10X3=30**

6. Boundaries of buccal shelf area.
7. Classification of impression techniques.
8. Finishing polishing of the denture.
9. Difference between natural artificial teeth
10. Waxing of trial denture.
11. SPA factor
12. Cast preparation.
13. Define relining and materials used.
14. Remounting of casts
15. Posterior tooth form.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA /III YEAR CERTIFICATE COURSE IN  
DENTAL HYGIENE

QP CODE: 6181, ETIOLOGY & PATHOGENESIS OF PERIODONTAL  
DISEASES (RS -2 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

1. Acute necrotizing ulcerative gingivitis
2. Microscopic features of gingiva.
3. Functions of periodontal ligament
4. Supra and subgingival dental plaque
5. Composition of calculus
6. classify periodontal pocket
7. Drug induced gingival enlargement
8. Clinical features of chronic periodontitis
9. Composition and functions of saliva
10. Causes for gingival recession

II. SHORT ANSWERS

20 X 3 =60

11. Define dental plaque and calculus
12. Accellular cementum
13. Alveolar bone proper
14. Clinical features of gingivitis
15. Radiographic features of aggressive periodontitis
16. Name the theories of mineralization of calculus.
17. Food impaction
18. Contents of periodontal pocket
19. Free gingiva
20. Cells of periodontal ligament
21. Periodontal abscess
22. Blood supply to gingiva
23. Puberty gingivitis
24. Gingival abscess
25. Cemento dentinal junction
26. Extrinsic stains
27. Inflammatory gingival enlargement
28. Clinical significance of calculus
29. Haversian system
30. Name principal fibres of periodontal ligament.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)

QP CODE: 5191, SECTION-A, PATHOLOGY(RS -2 SCHEME)

(WRITE IN BLUE ANSWERBOOK)

TIME: 3 HRS

MAX. MARKS: 100

I.SHORT NOTES - ANSWER ANY FOUR QUESTIONS

4 X 5 = 20

1. What is jaundice?Mention its types,etiology and diagnosis.
2. Hypertensive heart disease.
3. Leprosy and its types.
4. Poliomyelitis .
5. Factors promoting wound healing.

II. SHORT ANSWERS

10 x 3= 30

6. Metaplasia
7. Granulomatous Inflammation.
8. Embolism - types,fate and its effects.
9. Lab diagnosis of anemia .
10. Give some example of occupational lung diseases.
11. Components of Fallots Tetralogy.
12. Chronic venous congestion of liver.
13. Hematopoiesis regulators
14. Mention different types of infarctions with examples.
15. Alcoholic liver diseases.

QP CODE: 5192, SECTION - B, MICROBIOLOGY(RS -2 SCHEME)

(WRITE IN RED ANSWERBOOK)

I.SHORT NOTES - ANSWER ANY FOUR QUESTIONS

4 X 5 = 20

1. Classify immunoglobulins. Write about IgG immunoglobulin.
2. Humoral immunity and its functions.
3. Moist heat sterilisation.
4. Type I hypersensitivity.
5. Hospital acquired infections.

II.SHORT ANSWERS

10X3=30

6. What is a pandemic? Give two examples.
7. Name three chemical disinfectants.
8. Antibiotic susceptibility testing.
9. IgM immunoglobulin.
10. Vibrio cholera.
11. Name three infections caused by Staphylococcus.
12. Write three uses of ELISA.
13. Name three infections caused by Streptococcus.
14. Shigella.
15. Name three viral infections transmitted through blood.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA COURSES, QP CODE: 4101, PHYSICS(RS -2 SCHEME)  
(WRITE IN GREEN ANSWERBOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

**8 x 5 = 40**

1. State and explain the law of conservation of momentum.
2. What is friction? Mention the advantages and disadvantages of friction.
3. What are isothermal and adiabatic processes?
4. State and explain Pascal's law with example.
5. Match the following
  - i) Energy PV=a constant
  - ii) Speed Kelvin
  - iii) Conduction Distance/time
  - iv) Temperature Joule
  - v) Boyle's law Heat transfer in solids
6. Explain total internal reflection.
7. Derive an expression for capacitors in series.
8. What is P-N junction? Explain forward bias.
9. Write a note on radioactivity.
10. Multiple choice questions
  - a) Number of vibrations made by the particle in one second is .....
    - i) Period ii) Frequency iii) Wavelength iv) Amplitude
  - b) S.I Unit of resistance is.....
    - i) Volt ii) Ohm iii) Coulomb iv) Watt
  - c) Fast moving electrons suddenly stopped by a target produce .....
    - i) X-rays ii)  $\alpha$ -rays iii)  $\beta$ - rays iv)  $\gamma$ -rays
  - d) Device used to measure electric current is.....
    - i) Voltmeter ii) Ammeter iii) Transistor iv) Inductors
  - e) A perfect gas is one which obeys.....
    - i) Boyle's law ii) Charles' law iii) Both Boyle's law and Charles' law iv) Pascal's law

**II. SHORT ANSWERS**

**20 x 3 = 60**

11. Explain dimension with example.
12. Define centripetal and centrifugal force.
13. What is power? Explain with unit.
14. Define osmosis and diffusion.
15. Write a note on viscosity.
16. Describe potential energy with example
17. What are medical gases? Give example.
18. What is a lens? Explain the types.
19. Write a note on dispersion.
20. Fill in the blanks
  - i) Energy possessed by the body by virtue of its motion is.....
  - ii) Distance between principal focus and optic centre is .....
  - iii) Force between the molecules of different substances is.....
21. Write a note on atomic structure.
22. What are cathode rays? Mention the properties.
23. Write the types of photocells and uses.
24. Mention the uses of thermistor.
25. What are transverse waves? Explain.
26. Write a note on colorimeter.,
27. Explain n-type semiconductors.
28. Write the properties of sound.
29. Write a note on Laser.
30. Answer in one word / sentence
  - i) Which is the mode of heat transfer in liquids?
  - ii) Define angle of contact.
  - iii) What is modulus of elasticity?

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN  
MEDICAL LABORATORY TECHNOLOGY  
QP CODE: 2101 SECTION -A, ANATOMY (RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

I. LONG ESSAY- ANSWER ANY ONE

1X10=10

1. Name the parts Male Reproductive System. Write briefly about testis.
2. Mention the parts of Respiratory System. Write briefly about right lung.

II. WRITE SHORT ESSAYS ON ANY FIVE

5 X 5 = 25

3. Trachea
4. Histology of Liver
5. Small Intestine
6. Cerebrum
7. Kidney
8. Histology of Stomach
9. Thyroid gland

III. WRITE SHORT ANSWERS

5 X 2=10

10. Name any four muscles of upper limb.
11. Femur bone
12. Epithelial tissue
13. Uterus
14. Write neat labelled diagram of heart

QP CODE: 2102 SECTION -B, PHYSIOLOGY (RS -1 SCHEME)  
(WRITE IN RED ANSWER BOOK)

I. LONG ESSAY- ANSWER ANY ONE

1X10=10

1. Define Anemia. Describe different types of Anemia.
2. Describe transport of Oxygen in blood. What is Hypoxia?

II. WRITE SHORT ESSAYS ON ANY FIVE

5 X 5 = 25

3. Functions of cerebral cortex
4. Pregnancy tests
5. Factors affecting Cardiac output
6. Functions of Skin
7. Functions of Saliva
8. Draw a neat labeled diagram of Eye ball (cross section). Add a note on Myopia.

III. WRITE SHORT ANSWERS

5 X 2=10

9. Two functions of spleen
10. Name two bones of middle ear
11. Name any two abnormal constituents of urine
12. Give the normal values of A) Blood Pressure B) Pulse Rate
13. List any two differences between systemic and pulmonary circulation

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA COURSE IN MEDICAL LABORATORY TECHNOLOGY  
QP CODE: 5101 SECTION -A, ANATOMY(RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

4X5=20

1. Describe the heart in detail
2. Mention the parts of the urinary system and explain the kidney in detail
3. Biceps brachii muscle
4. Mention the lymphoid organs and explain palatine tonsil in detail.
5. Describe the hip joint

**II. SHORT NOTES**

10 X3 = 30

6. Name the long bones in upper limb
7. Types of cartilage with examples
8. Mention the movements at the knee joint
9. Great saphenous vein
10. Lumbar puncture
11. Mention the female reproductive organs
12. Mention any 3 types of epithelia with examples
13. Write the differences between right and left lung
14. Name the muscles of the anterior abdominal wall
15. Name the major salivary glands

**QP CODE: 5102 SECTION -B, PHYSIOLOGY(RS -2 SCHEME)  
(WRITE IN RED ANSWER BOOK)**

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

4X5=20

1. Conducting System of the Heart.
2. Erythropoiesis. Definition & stages.
3. Mechanisms of transport across cell membrane.
4. Draw a neat labelled diagram of Nephron. List its function.
5. Defecation reflex.

**II. SHORT ANSWERS**

10 X3 = 30

- 6) Normal value of    A) RBC                      B)WBC            C) Platelets.
- 7) Neuron.
- 8) Functions of Plasma Proteins.
- 9) Define Osmosis. Give two examples.
- 10) Three Contraindications of Blood Transfusion.
- 11) Surfactant. List three functions.
- 12) Functions of Stomach.
- 13) Name three hormones of Anterior Pituitary.
- 14) Functions of Skin.
- 15) Three Contraceptive methods in Male.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN MEDICAL  
X-RAY TECHNOLOGY  
QP CODE: 2121 (RS -1 SCHEME)  
GENERAL PHYSICS  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX. MARKS: 45

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

1. What are the various interactions of X ray with matter? Describe with neat diagrams.
2. What is electromagnetic radiation? Describe the electron concept.

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

3. Rotating anode
4. Space charge effect
5. Ohm's law
6. Step up and Step down transformers
7. Solid state rectifiers
8. Ammeter and Voltmeter

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

9. Inverse square law
10. Law of conservation of energy
11. Stationary anode
12. Insulators
13. Add a note on fuse resistors

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN MEDICAL**  
**RECORDS TECHNOLOGY**  
**QP CODE: 2141(RS -1 SCHEME)**  
**MEDICAL RECORD SCIENCE**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

1. Explain major functions of Medical Records Department?
2. Write about the right of the arrested person?
3. Explain the Values of Medical Records to Each of the following  
a) Patient b) Treating Doctor c) Hospitals and Research

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

4. Retention period of Medical Records
5. Assembling & Deficiency Check
6. Location of miss files
7. Duties & Responsibilities of M.R.T
8. Qualitative & Quantitative Analysis
9. Complete & Incomplete Records
10. List out the Special & General Forms
11. Differentiate between summons & warrant
12. Bailable & Non-bailable offences
13. Write about the preparing summoned records for the court
14. Compoundable & Non-Compoundable offences
15. Write about the Indexes and its importance

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

16. Pleader
17. Legal Representative
18. Hospital Number
19. Brought Dead
20. Daily Census
21. F.I.R
22. Master Index Card
23. Judgment
24. Decree
25. Tracer Card

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY**  
**QP CODE- 2131 (RS -1 SCHEME)**  
**FUNDAMENTALS OF OT & BASIC CONCEPTS IN SURGERY**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

1. Describe sterilization and disinfection. Explain CSSD.
2. Describe the preservation of the specimen and handling of the specimen to be sent for histopathology and microbiology.
3. Innumerate the different types of suture materials. Write the concept in laparoscopic surgery

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

4. Skin grafting
5. Sterile team members
6. Ultrasonography
7. Various types of cautery and precautions in using cautery
8. Wound infection
9. Patients skin preparation
10. Circumcision
11. Wound dressing
12. Pulse oximeter
13. Fumigation
14. Exchange areas in OT
15. Positions in surgery

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

16. Cannulas
17. Disinfection
18. Occupational hazards in OT persons
19. Vacuum suction
20. Manifold room
21. MRI
22. C-Arm
23. Gowning
24. Three techniques of draping
25. Endoscopy

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN  
OPHTHALMIC TECHNOLOGY  
QP CODE- 2161, (RS -1 SCHEME)  
OPHTHALMOLOGY PAPER-I  
(WRITE IN GREEN ANSWER BOOK)

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**2X10 = 20**

1. What is BSV? Write grades of BSV.
2. What is Aphakia? Signs of Aphakia.
3. Draw a labelled Diagram of Bifocals and progressives. What are different types of Bifocals?

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

**10X5=50**

4. Write a note on Objective retinoscopy
5. Drainage of Aqueous Humor.
6. How to check colour vision? What is the importance.
7. Uses of Prism in Ophthalmology
8. Write components of Vision. Write a note on methods to check Visual Acuity.
9. What is pinhole? Write the principle of pinhole.
10. Write anatomy of lens. Write a description of its layers.
11. What are causes of Ambyopia?
12. Aqueous Humor production.
13. Anatomy of Ciliary body
14. What is Astigmatism? Types of Astigmatism.
15. Anatomy of Pupillary Pathway.

**III. WRITE SHORT ANSWERS**

**10X2=20**

16. Write 3 types of refractive errors.
17. Write 3 layers forming the eye.
18. Write 3 components of tear film.
19. Mention 3 advantages of Progressives
20. Mention 3 methods to correct Myopia
21. Mention 2 methods to correct presbyopia
22. Mention 2 components of Biometry.
23. Mention 2 types of materials used in spectacle making
24. Types of near reading charts
25. Parts of Retina.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN DIALYSIS  
TECHNOLOGY

QP CODE- 2151, (RS -1 SCHEME)  
SECTION-A, PHARMACOLOGY  
(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

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

1. Name five **Anti Tubercular drugs**.. Mention two uses, two adverse effects and one contraindication of Rifampicin.
2. Name six **Antidiabetic drugs**. Mention two uses ,two adverse effects of insulin.

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

3. Intravenous route of drug administration
4. Aspirin
5. Diazepam
6. Aminoglycoside antibiotics
7. Vitamin D
8. Morphine.

III. WRITE SHORT ANSWERS 5x2=10

9. Name two live Attenuated Vaccines.
10. Two uses of formaldehyde
11. Mention two drugs for Organophosphorous poisoning
12. Name Two flavouring agents
13. Name two disadvantages of Oral drug administration

QP CODE- 2152, SECTION-B, THEORY OF DIALYSIS(RS -1 SCHEME)  
(WRITE IN REDANSWER BOOK)

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

1. List the various anticoagulant protocols and monitoring in hemodialysis. Write briefly on newer anticoagulants and their use in hemodialysis.
2. Explain the maintenance of records in dialysis unit.

II. SHORT NOTES ON ANY FIVE 5X5 =25

3. Write the composition of the dialysate used in hemodialysis.
4. Reverse osmosis
5. List the principles of hemodialysis and explain diffusion.
6. Chronic hemodialysis prescription
7. SLED
8. Lab investigations done in a patient on hemodialysis.

III. WRITE SHORT ANSWERS 5X2=10

9. Give 2 indications of starting dialysis in chronic renal failure
10. Name 2 sites for insertion of temporary hemodialysis catheters
11. Define ultrapure water
12. Two causes of sudden onset of unconsciousness during Hemodialysis.
13. Management of intradialytic hypotension - any two

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN DENTAL  
MECHANICS  
QP CODE- 2171, DENTAL MATERIALS & METALLURGY  
(RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX. MARKS: 45

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

- 1) What is an alloy? Mention the various alloys used in prosthodontics. Write in brief about base metal alloys.
- 2) Classify gypsum products and describe in detail about type II gypsum product.

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

- 3) Annealing and tempering
- 4) Properties of heat cure acrylic resin.
- 5) Reversible hydrocolloid
- 6) Uses of zinc phosphate cement
- 7) Types of stainless steel
- 8) Soldering and welding
- 9) Addition silicon impression material

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

- 10) Electroplating
- 11) Nickel Chromium alloys
- 12) Ni-Ti wires
- 13) Divestment
- 14) Soldering

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN DENTAL  
HYGIENE  
QP CODE- 2181, SECTION-A, GENERAL ANATOMY AND  
HISTOLOGY(RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX. MARKS: 45

- I. LONG ESSAY - ANSWER ANY ONE 1 x 9 = 9
1. Name the bones of the skull. Write briefly about mandible.
  2. Name the muscles of facial expression. Write briefly about 7<sup>th</sup>(facial) cranial nerve.
- II. SHORT NOTES - ANSWER ANY TWO 2 x 5 = 10
3. Maxilla bone
  4. 5<sup>th</sup>( trigeminal) cranial nerve
  5. Tongue
- III. SHORT ANSWERS 3 x 2 = 6
6. Name the types of muscles
  7. Pituitary gland
  8. Name muscles of mastication

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QP CODE- 2182, SECTION-B, GENERAL PHYSIOLOGY (RS 1 SCHEME)  
(WRITE IN REDANSWER BOOK)

- I. SHORT NOTES - ANSWER ANY FOUR 4X4=16
1. Parts of brain and their functions
  2. Functions of Blood
  3. Mechanism of action of Hormone
  4. Functions of cerebrum
  5. Composition of saliva
  6. Phonation
- II. SHORT ANSWERS 2x2=4
7. Give the normal values of A) Bleeding time B)Clotting time
  8. Draw a neat Labelled diagram of Neutrophil.

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY  
QP CODE- 5121, (RS -2 SCHEME) RADIATION PHYSICS  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I. SHORT NOTES- ANSWER ANY EIGHT

8x5 =40

1. Construction and working of step down transformer
2. Define purpose and mechanisms of Rectification
3. Explain different target interactions in X-ray production.
4. Explain common terms related to the X-ray beam.
5. Explain photodisintegration.
6. Types of acquisition, operation and techniques of digital fluoroscopy.
7. Write note on photoelectric effect.
8. Mention the factors that affect emission spectra.
9. Explain the conditions necessary for X-ray production.
10. State working principle of MRI

II .SHORT ANSWERS

20x3=60

11. Atomic number
12. Step up transformer.
13. Alpha emission in radioactivity.
14. Spatial resolution.
15. Define single and three phase AC
16. Stationary anode tube
17. Write note on atom
18. Define resistance
19. Write note on AEC
20. Define: primary, secondary and scattered radiation
21. Filament circuit.
22. Kvp
23. mA
24. Mammography
25. Compton scattering
26. Magnification
27. Brightness gain
28. Electromagnetic radiation.
29. Write note on techniques used in cooling X-ray tube.
30. State working principle of CT.

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN OPERATION THEATRE & ANESTHESIA**  
**TECHNOLOGY**  
**QP CODE- 5131 (RS -2 SCHEME)**  
**FUNDAMENTALS OF OT & BASIC CONCEPT IN SURGERY**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**8x5 =40**

1. Methods of Sterilization.
2. Pros and Cons of disposables.
3. Manifold room concept, supply of gases.
4. Preparation of operative site and draping.
5. Wound management and method of haemostasis.
6. Universal precautions in handling the instrument.
7. CSSD
8. Surgical scrubs
9. Sterile team members
10. Radiation hazards and safe guards

**II.SHORT ANSWERS**

**20x3=60**

11. Supply of gases
12. Iodine
13. Receiving patients and identification
14. Ryles tube (Nasogastric tube) - Uses
15. Gowning
16. Pre operative planning
17. Sitz bath
18. Check list
19. Harmonic scalpel
20. Pulse oximeter
21. Sims position
22. Types of suture materials
23. Bioburden
24. Vacuum suction
25. Various types of cautery and precautions in using cautery
26. Care and handling of instruments
27. Unscrubed team members
28. Preparation of patients for surgery
29. Parameters of sterilization
30. Prevention of infection

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN DIALYSIS TECHNOLOGY**  
**QP CODE- 5151, SECTION-A, APPLIED PHARMACOLOGY(RS -2**  
**SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

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

**4X5 = 20**

1. Mention the advantages and disadvantages of Intra-Venous route of Drug administration.
2. Mention the uses, precautions and contraindications of Morphine.
3. Diazepam
4. Mention the uses and adverse effects of Erythropoietin.
5. Mention the uses and contraindications of Heparin.

**II. SHORT ANSWERS**

**10X3=30**

6. Mention two uses and two adverse effects of Atropine
7. Mention three uses and three adverse effects of Furosemide.
8. Mention three drugs used in hypertensive urgency.
9. Mention the uses and adverse effects of Metoclopramide.
10. Pantoprazole.
11. Mention the uses and adverse effects of Insulin
12. Mention three local anaesthetics
13. Mention three uses of Adrenaline
14. Mention three B-Lactum antibiotics
15. Hepatitis B Vaccine.

**QP CODE- 5152, SECTION-B, THEORY OF DIALYSIS(RS -2 SCHEME)**  
**(WRITE IN RED ANSWER BOOK)**

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

**4X5 = 20**

1. Describe a peritoneal catheter (Types and parts) with a neat labelled diagram.
2. Heparin- Molecular size, types, uses, adverse effects and contraindications.
3. Describe in brief about blood circuit with its sensors.
4. Describe various alarms in HD machine with their significance.
5. Disinfection of haemodialysis machine- types, agents used and indications for disinfection.

**II. SHORT ANSWERS**

**10X3=30**

6. Compartments in body fluid composition
7. What is online haemodiafiltration?
8. What is surface cleaning of dialysis machine?
9. What are high flux dialyzers?
10. What is osmosis?
11. Mention levels of consciousness of a patient.
12. What are the types of dialysis catheters?
13. Types of renal failure
14.  $K_{UF}$  (Co efficient of ultrafiltration)
15. What is reverse osmosis?

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY  
QP CODE: 5141, MEDICAL RECORD SCIENCE(RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS:100

I. SHORT NOTES - ANSWER ANY EIGHT

8 x 5=40

- 1.Purpose and Uses of Medical records
- 2.Basic Medical Records forms
- 3.Organization of Medical record department
- 4.Cognizable and Non cognizable offence
- 5.Oral evidence and documentary evidence
- 6.History of Medical records in India
- 7.Complete and incomplete medical records
- 8.Types of filing system and write a note on Middle digit filing
- 9.Functions of Medical records department
- 10.Out patient and inpatient services

II. SHORT ANSWERS

20x3=60

- 11.Effect of non production of documents
12. Personal and impersonal records
13. Summons and warrant
14. Discharge summary
15. Accession register
16. Accident register
- 17.Birth register
18. Malpractice suits
- 19.Common deficiencies found in case sheets & procedure to complete
- 20.Duties and responsibilities of Medical record officer
- 21.Internal and external audit
- 22.Procedure for disposal of Medical records
- 23.Forms control program
- 24.Discharge analysis
- 25.Formula for Gross death rate and net death rate
- 26.Formula for calculation of bed occupancy rate and Average inpatients per day
- 27.Diagnostic index and operation index
- 28.Types of courts in India
- 29.Midnight census and its uses
- 30.Function of emergency medical services(EMS)

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY  
QP CODE: 5161, OPHTHALMOLOGY PAPER-I(RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS:100

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

8 x 5=40

1. Define myopia. Describe Clinical Types of Myopia
2. Name Cycloplegic Eye drops and describe their uses
3. Define Presbyopia. Describe Optical Correction of Presbyopia
4. Describe principle & uses of Snellen`s Chart
5. Draw a neat Labelled Diagram of Cut Section Of eyeball
6. Advantages of Contact Lenses over Spectacles
7. What Is Lasik Procedure? Mention its Uses
8. High Index Lenses
9. Formation & drainage of aqueous humour
10. Low visual aids and uses

**II. SHORT ANSWERS**

20x3=60

11. Draw a neat labelled diagram of cut section of eyelid
12. Describe 3 Methods of recording Intra ocular pressure
13. Layers of Tear Film
14. Name Extra Ocular Muscles and their Nerve Supply
15. Optical Correction of Aphakia
16. Fogging Technique
17. Duochrome Test
18. How to Identify a Convex Lens
19. Components of accommodation
20. Jackson`s cross Cylinder & its Uses
21. Write simple transposition of lens +2D sphere -1 D Cylinder at 90 Degree axis
22. Lenticular Lenses
23. Draw neat Diagram of optics of myopia
24. Describe different Designs of Spectacle Frame
25. Material Used for spectacle Frame
26. Trial Set
27. Layers of cornea
28. Mention Different Stereo acuity Tests
29. Types of colour Blindness
30. Types of Perimeter

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**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN DENTAL**  
**MECHANICS**  
**QP CODE: 5171, DENTAL MATERIALS & METALLURGY**  
**(RS -2 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 1.30 HRS**

**MAX. MARKS: 50**

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

**4X5=20**

1. Difference between self cure and heat cure acrylic resin.
2. Classification of gypsum and write theories of setting reaction of gypsum.
3. Inlay waxes.
4. Phosphate bonded investment material.
5. Classify impression material and write about Impression Compound.

**II. SHORT ANSWERS**

**10X3=30**

6. Uses and types of separating media
7. Annealing.
8. Die
9. Suck back porosity
10. Types of flux
11. Beading and boxing waxes.
12. Different types of duplicating material
13. Dust free alginate.
14. Forms of silica
15. Classify denture base materials

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA/II YEAR CERTIFICATE COURSE IN DENTAL HYGIENE  
QP CODE: 5181, SECTION-A, GENERAL ANATOMY,  
HISTOLOGY (RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX. MARKS: 50

I. SHORT NOTES -ANSWER ANY TWO QUESTIONS

2X5=10

1. Describe mandibular nerve
2. Describe epithelial tissue with examples
3. Describe gross anatomy of tongue

II. SHORT ANSWERS

5 x 3 = 15

4. Histology of tooth
5. Mention the branches of facial nerve
6. Name the muscles of mastication
7. Mention any six bones of skull
8. Name the endocrine glands

QP CODE: 5182, SECTION-B, GENERAL PHYSIOLOGY  
(RS -2 SCHEME)  
(WRITE IN RED ANSWER BOOK)

I. SHORT NOTES -ANSWER ANY TWO QUESTIONS

2X5=10

1. Explain the functions of Saliva
2. Draw neat labelled diagram of reflex arc. Give ONE example of reflex action
3. List the hormones secreted by Pituitary gland. Write the functions of any one of those hormones

II. SHORT ANSWERS

5 x 3 = 15

4. Define active transport. Give one example
5. Define Blood pressure. Give normal value
6. Name the muscles of respiration
7. List THREE Functions of blood
8. List the primary tastes

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA IN PHYSIOTHERAPY  
QP CODE: 4191, ANATOMY(RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

8 x 5 = 40

1. Ligaments of knee joint
2. Structures under the cover of Deltoid Muscle
3. Popliteal fossa
4. Lower part of the Humerus
5. Synovial joint
6. Coeliac trunk
7. Pericardium
8. Bronchopulmonary segments
9. Thyroid gland
10. Spinal cord

**II. SHORT ANSWERS**

20 x 03 = 60

11. Name the parts of Brainstem
12. Name the anatomical planes
13. Bicipital groove
14. Draw a neat labelled diagram of Transitional epithelium
15. Name the layers of Eye ball
16. Name the layers of Scalp
17. Name the Extraocular muscles
18. Name the parts of Stomach
19. Name the Intercostal muscles
20. Name the coverings of Spinal cord
21. Name the muscles of Tongue
22. Name the openings present in the Diaphragm
23. Name the contents of the Adductor canal
24. Name the types of Parietal pleura
25. Patella
26. Name the factors maintaining Arches of foot
27. Nerve supply of Hand
28. Classification of bone
29. Draw a neat labelled diagram of Blood supply of Stomach
30. Name the parts of Internal capsule

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN  
MEDICAL LABORATORY TECHNOLOGY (DMLT)  
QP CODE: 3102, PATHOLOGY (RS-1 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 90

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

**2X10=20**

1. Write a note on separation and uses of various components of blood.  
Mention the blood transfusion reactions.
2. Describe gross and microscopic examination of semen. Draw a neat labeled diagram of normal sperm.
3. Describe procedure for hematoxylin preparation. Write a note on hematoxylin and eosin staining technique.

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

**10x5=50**

4. Mounting of museum specimen.
5. Osmotic fragility test
6. Microwave tissue processing.
7. Mention the sites for bone marrow examination. Mention the needles used.
8. Write a note on CSF examination.
9. Describe the demonstration of BARR bodies.
10. Write a note on procedure and importance of Prothrombin Time (PT).
11. Donor selection criteria.
12. FNAC (Fine Needle Aspiration Cytology).
13. Describe sputum examination in cytology.
14. Describe the staining procedure and uses of PAS (Periodic acid Schiff) stain.
15. Quality control in Blood banking.

**III. SHORT ANSWERS**

**10x2=20**

16. Uses of Coomb's test.
17. Mention normal bleeding time and clotting time
18. Mention components of blood
19. Estimation of fetal haemoglobin.
20. Sickling test.
21. Mention types of hematoxylin
22. Which two authorities control blood bank.
23. Mention four special stains used in histopathology.
24. Mention the blood group systems.
25. Mention two indications for frozen sections.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY (DMLT)  
QP CODE: 6103, PATHOLOGY (RS-2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 100

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

**8X5=40**

1. Indication and contraindication for Bone marrow aspiration.
2. Write in detail about mechanism of normal coagulation.
3. Osmotic fragility test.
4. Differential Leucocyte count.
5. PT and APTT.
6. Write in detail about Transfusion reaction.
7. Quality control in Histopathology.
8. Frozen section.
9. Mounting of Museum specimens.
10. Hospital waste management.

**II. SHORT ANSWERS.**

**20X3=60**

11. Staining of bone marrow slides.
12. Foetal Hb.
13. Causes of neutrophilia.
14. Laboratory Information System (LIS).
15. Mention the normal values of coagulation tests.
16. Materials required for bone marrow examination.
17. Normal values of DC.
18. Giemsa stain procedure.
19. Anticoagulants.
20. Automation in coagulation tests.
21. Organization of Blood bank.
22. Cross matching.
23. Screening tests for donor.
24. Separation of components.
25. Transfusion reaction.
26. Disposal of unused Blood.
27. Clearing.
28. Alcian blue stain.
29. Mounting solutions used in Museum.
30. Different types of Haematoxylin.

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
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**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**HEALTH INSPECTOR (DHI)**  
**QP CODE: 3112, COMMUNITY MEDICINE, PAPER-II (RS-1 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX.MARKS: 90**

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

**2X10=20**

1. What is Malnutrition? How to know if a child is malnourished? What to do to Prevent Malnutrition at community level?
2. What is family planning? Discuss various methods used for family planning.
3. Write about risk factors and complications of Diabetes Mellitus. Add a note on Prevention of Diabetes Mellitus.

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

**10×5=50**

4. Alcoholism in society
5. What are the health effects from swimming pool? Write about swimming pool sanitation
6. Recommended dietary allowance (RDA)
7. Disability limitation and rehabilitation
8. Health problems of the aged women
9. List the name of screening tests for pregnant women and Newborn babies.
10. Beneficiaries of Anganwadi Centre
11. Benefits of Breast Feeding
12. Kayakalpa Awards
13. Designated microscopic centres (DMC)
14. Stages of disaster cycle
15. Benefits under Employees State Insurance act

**III. SHORT ANSWERS**

**10×2=20**

16. Palliative care
17. Expand AYUSH
18. Epidemic, Endemic, Pandemic
19. Do's and Don'ts after snake bite
20. What is the temperature range of Ice lined refrigerator and Deep freezer
21. Breast Self Examination
22. Junk food
23. List three bio medical wastes to be put in yellow bin
24. Registration of births and deaths
25. Bleaching powder

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PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)  
QP CODE: 6113, COMMUNITY MEDICINE, PAPER-II(RS-2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 100

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

**8 X 5 = 40**

1. School health programme
2. Medical Termination of Pregnancy Act
3. Behavioral problems in Children
4. Describe the causes of maternal mortality in India. Add a note on its prevention and control.
5. Risk factors and preventive measures for low birth weight babies
6. Postnatal complication
7. Community Needs Assessment Approach
8. Services in adolescent health clinics
9. Baby friendly hospitals initiatives
10. Abortion - causes and types

**II. SHORT ANSWERS**

**20 X 3 = 60**

11. Eligible couples
12. Weaning
13. No scalpel vasectomy
14. Juvenile Delinquency
15. Mass media of communication
16. Role play/ street play
17. List the causes of communication barrier
18. Write about "**personnel hygiene**" advice to pregnant lady
19. Adolescent health problems
20. Danger signals in intranatal care
21. Growth rate
22. The Child Labour (Prohibition and regulation) Act 1986.
23. Write about first aid in Injured victims in disaster
24. Write drugs commonly used by health inspector
25. Management dehydration in child
26. Objectives of antenatal care
27. Uses of condom
28. Child abuse and its prevention
29. Net reproduction rate.
30. Advantages of home visits

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**MEDICAL X-RAY TECHNOLOGY (DMXT)**  
**QP CODE: 3122, RADIOGRAPHY INCLUDING MEDICAL RECORDS (RS-1 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX.MARKS: 90**

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

- 1) Describe the procedures and indications of micturating cystourethrogram.
- 2) Write in detail about fluoroscopy.
- 3) What are the indications of Barium meal follow through? and write in detail about the procedure.

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

- 4) Myelography
- 5) Transducer
- 6) X-ray tube
- 7) PACS
- 8) Oesophagus
- 9) Swimmer's view
- 10) Neat diagram of broncho-pulmonary segments
- 11) MMR
- 12) Sinogram
- 13) General radiography views
- 14) Use of Bucky
- 15) Non-ionic contrast

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

- 16) X-Ray centering
- 17) Stationary anode tube
- 18) Single emulsion film
- 19) Orthopantomogram
- 20) Safe light
- 21) Methods of dark room processing
- 22) Beam restrictors
- 23) Mammography
- 24) Photographic emulsion
- 25) Indications for Barium enema

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY (DMIT)  
QP CODE: 6123, (RS-2 SCHEME)  
SPECIAL PROCEDURES, RADIOGRAPHIC PHOTOGRAPHY AND  
MEDICAL RECORDS  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 100

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

8 X 5 = 40

1. Barium enema and its uses
2. Care to be taken in using contrast media
3. Requirement of ultrasound as a special investigation of cardiovascular system
4. Bronchography
5. Explain barium swallow
6. Retrograde cystourethrography
7. Sinography
8. Mammography
9. Mobile radiography
10. Arteriography

**II. SHORT ANSWERS**

20 x 3 = 60

11. Micturating cystourethrography
12. Uses of barium studies
13. Types of cholangiography
14. Hypotonic duodenography
15. Oral cholecystography
16. Percutaneous transhepaticcholedochography
17. Lymphangiography
18. Fistulography
19. Barium swallow
20. Hysterosalpingography
21. Peripheral venography of upper limb
22. Intravenous urography
23. Role of MRI as special investigation of pelvic pathologies
24. Tomography
25. Theatre radiography
26. Barium sulphate
27. Arthrography
28. Foreign body localization
29. Percutaneous nephrostomy
30. Side effects of contrast agents

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN

OPERATION THEATRE TECHNOLOGY (DOTT)

QP CODE: 3132, OPERATIVE PROCEDURE (RS-1 SCHEME)

(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 90

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

1. Laparoscopic surgery, mention the advantages and name five surgeries done by laparoscopic methods
2. Special features of orthopaedic surgery
3. Define shock. Types of shock and explain in detail about hypovolemic shock

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

4. Diabetic foot care
5. Plaster of Paris (POP) slat and its application
6. Bronchoscopy
7. TURP
8. Robotic surgery
9. Retractors
10. Burns
11. Renal stones
12. Sebaceous cyst
13. What is transplantation? Describe the types of transplantation
14. Hydrocele
15. Buerger's disease (TAO)

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

16. Fissure in ano
17. Universal precautions on surgery
18. Indirect laryngoscopy
19. Bowel preparation
20. Debridement
21. Traction for fracture
22. Appendectomy
23. Suction drain
24. Sitz bath
25. Abdominal drain

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN OPERATION THEATRE & ANAESTHESIA**  
**TECHNOLOGY (DOT &AT)**  
**QP CODE: 6133, OPERATIVE PROCEDURES (RS-2 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX.MARKS: 100**

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

**8 X 5 = 40**

1. Types of Abdominal incisions and their uses
2. Fracture femur
3. Mesh hernioplasty
4. Procedure of Fibroadenoma
5. MTP
6. Colostomy
7. G J and Vagotomy
8. Repair of tendons and ligaments
9. Liver Resections
10. Thyroidectomy

**II SHORT ANSWERS**

**20x3=60**

11. Haemorrhoidectomy
12. Lymph node Biopsy
13. Types of amputations
14. Incision and drainage
15. Caesaerian sections
16. Tonsillectomy
17. Cataract surgery
18. Foreign body nose
19. Tracheostomy
20. Endoscopy
21. Sitz bath
22. Indications for splenectomy
23. Fistula in ano
24. Indication for above knee amputation
25. MRI
26. Care of Colostomy
27. Laser surgery
28. Nasal operative procedures
29. Indications for Open/ Lap Cholecystectomy
30. Pilonidal sinus

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN

MEDICAL RECORDS TECHNOLOGY (DMRT)

QP CODE: 3142, HOSPITAL ADMINISTRATION (RS-1 SCHEME)

(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 90

- I. LONG ESSAY - ANSWER ANY TWO** **2x10=20**
1. Define Structure of Emergency Department. Mention about Organization and Functions of Emergency department.
  2. Organization and Functions of Blood Bank.
  3. Mention the qualities of Hospital Administrator.
- II. SHORT NOTES - ANSWER ANYTEN** **10 x5=50**
4. Advantages and disadvantages of Health Insurance.
  5. Role of Dietary department in a hospital.
  6. Inventory control.
  7. Hospital records as a Health Information System.
  8. Functions of Primary Health Center.
  9. Define Hospital waste. Write in detail health effects of improper handling of hospital waste.
  10. Functions of nurses.
  11. Ancillary services in Out-Patient Department.
  12. Medical Audit.
  13. Functions of Tertiary Care Hospital.
  14. Forensic Department - organization and function.
  15. Role of Medico-social worker.
- III. SHORT ANSWERS.** **10X2=20**
16. Define nosocomial infection.
  17. Define delegation.
  18. Write history of hospital in India.
  19. Enumerate hospital committees.
  20. Role of computers in MRD.
  21. Mention personal protective measures in handling hospital waste.
  22. What is quality control?
  23. Cost-benefit Analysis.
  24. Doctor-patient relationship.
  25. What is actuating?

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN**  
**MEDICAL RECORDS TECHNOLOGY (DMRT)**  
**QP CODE: 6143, HOSPITAL ADMINISTRATION (RS-2 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX.MARKS: 100**

**I. SHORT NOTES - ANSWER ANY EIGHT 8x5=40**

01. What is Hospital Infection Control Committee? What are their responsibilities?
02. Patients' rights and responsibilities
03. Responsibilities of Hospital Administrator
04. Briefly Describe organization of outpatient department
05. Organization of Nursing Department
06. Standard Operating Procedure
07. Safe Injection practice
08. Hospital Quality Control
09. Central Sterilization Service Department
10. Staffing in a Hospital

**II. SHORT ANSWERS 20x3=60**

11. Functions of Medical Superintendent
12. Medical Record Officer
13. Nursing Superintendent
14. Dietician
15. Purchase Committee
16. Health Insurance
17. Triage in Emergency
18. ICU
19. Labour Ward
20. Operation Theatre
21. Critical Value
22. Functions of Resident Medical Office
23. Sewage treatment plant
24. FIFO in Pharmacy
25. Functions of Blood Bank
26. Components of a Radiology Unit
27. Mortuary
28. Injection Room
29. Corporate Hospitals
30. Fire Safety in Hospital

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN**  
**DIALYSIS TECHNOLOGY (DDT)**  
**QP CODE: 3152 (RS-1 SCHEME)**  
**RENAL REPLACEMENT THERAPY OTHER THAN HAEMODIALYSIS &**  
**PATIENT TEACHING**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX.MARKS: 90**

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

1. Mention various types of dialysis in critically ill patient. Compare haemodialysis with CRRT.
2. What are the treatment modalities available for removal of poisons? Write about principles and complications of haemoperfusion.
3. Describe clinical, laboratory features and management of CAPD peritonitis. How to prevent PD peritonitis?

**II. SHORT NOTES- ANSWER ANY TEN** **5x10=50**

4. Describe PD fluid composition.
5. Describe types of PD catheter and parts of PD catheter.
6. Immunization of patient with CKD.
7. Describe hygienic measures for CAPD.
8. Factors affecting removal of poisons by haemodialysis and haemoperfusion.
9. Mention the factors affecting adequacy of PD.
10. Tabulate the records of various parameters involved in acute PD.
11. Anticoagulation during CRRT.
12. Composition of dialysis team.
13. What is CRRT and its types?
14. Haemoperfusion- Principles, indications.
15. Write a note on nutrition of patient undergoing maintenance haemodialysis

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

16. Two osmotic agents in peritoneal dialysis fluid
17. Two contraindications for peritoneal dialysis
18. Mention the types of PD
19. Name two vaccines used for patients with CKD.
20. Two non infectious complications of CAPD
21. Two drugs used for prevention of exit site infection (PD)
22. Two replacement fluids used in plasmapheresis
23. What is SLED? One indication for SLED
24. Two drugs removed by haemoperfusion
25. Two factors affecting drugs removal by extracorporeal methods

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA INDIALYSIS TECHNOLOGY (DDT)  
QP CODE: 6153, DIALYSIS PAPER-II (RS-2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

**TIME: 3 HRS**

**MAX.MARKS:**

**100**

**I. SHORT NOTES ANY EIGHT**

**8X5=40**

1. Describe about dialysis team and responsibilities of each member.
2. What is hemoperfusion? Name the indications of hemoperfusion.
3. Describe anatomy and physiology of peritoneal membrane.
4. What are the merits and demerits of HD over PD?
5. Describe psychosocial problems in patients undergoing maintenance dialysis.
6. Indications of CRRT and SLED.
7. Write a note on adequacy of peritoneal dialysis.
8. Monitoring of critical patient undergoing SLED/ CRRT
9. Factors affecting removal of drugs by haemodialysis and haemoperfusion.
10. How will you assess the adequacy of PD and factors affecting it?

**III. SHORT ANSWERS**

**20x3=60**

11. Three complications of hemoperfusion.
12. Composition of PD fluid.
13. Types of CAPD catheter infection.
14. Define CCPD, CAPD, and NIPD.
15. Mention ionotropes used in managing hypotension during hemodialysis.
16. Name three drugs removed by haemodialysis
17. Types of PD fluids according to osmotic agents.
18. Name three indications for SLED/CRRT.
19. Name three drugs removed by hemoperfusion.
20. Contents of CAPD catheter kit.
21. Name three antibiotics used in infection of PD catheter.
22. What should be the blood flow rate and dialysate flow rate in SLED and CRRT?
23. What are the steps in hand washing?
24. Name three acute complications of PD.
25. What are the common organisms causing PD catheter exit site infection?
26. Write dietary advice for CAPD patients.
27. Three anticoagulants used in SLED/CRRT
28. Name three clinical features of PD peritonitis.
29. Name the types of PD transfer sets.
30. Name three indications for PD.

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN

OPHTHALMIC TECHNOLOGY (DOT)

QP CODE: 3162, OPHTHALMOLOGY PAPER-II (RS-1 SCHEME)

(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 90

**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 ESSAY- ANSWER ANY TEN**

**10x5=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 two charts to test near vision
- 17) Name two common eye diseases.
- 18) Why statistics is important in hospital setup?
- 19) Mention two major surgical records.
- 20) Classification of vitamin A deficiency.
- 21) Corneal FB management in a PHC
- 22) Mention two functions of an eye bank
- 23) Disease index.
- 24) Alphabetical index.
- 25) Name two antibiotics.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY (DOT)  
QP CODE: 6163, PAPER-II, OPHTHALMOLOGY(RS-2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

**I. SHORT NOTES- ANSWER ANYEIGHT**

8x5=40

1. Facts & myths of eye donation
2. Vision 2020
3. Define Amblyopia & its management
4. Eye bank
5. Classify anti glaucoma Drugs
6. Describe 5 Causes for Leukocoria(White pupillary reflex)
7. DBCS (District blindness control society)
8. Keratoplasty
9. School eye screening
10. Eye camps

**II. SHORT ANSWERS**

20x3=60

11. Topical anaesthesia
12. Drugs used in peribulbar block
13. Mention the contra indication for eye donation
14. Signs& symptoms of corneal ulcer
15. Vision recording
16. Mydriatics uses & contra indication
17. Causes for Sudden Painless Vision Loss
18. Uses of Antibiotic eye Drops
19. Drugs used for intra-Vitreous injection
20. Uses of NSAIDS
21. Causes of headache
22. Educational & vocational rehabilitation of the blind
23. Maintenance of In patient records
24. Enucleation of eye ball
25. Causes of lid swelling
26. Causes of photophobia
27. Difference between corneal congestion & conjunctival congestion
28. Causes for blindness in India
29. Anisometropia
30. Epilation

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY

PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN

DENTAL MECHANICS (DDM)

QP CODE: 3172, PARTIAL DENTURES, ORTHODONTIA, (RS-1

SCHEME)MAXIOFACIALMPROSTHESIS

(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX.MARKS: 45

**I. LONG ESSAY**

**1x10=10**

1. Define pontic. Write different types of pontic designs.

**II. SHORT NOTES**

**5x 5=25**

2. Die systems

3. Connectors in FPD.

4. Adam's clasp

5. Obturatos

6. Appligate's rules

**III. SHORT ANSWERS**

**5x2=10**

7. Mention components of RPD.

8. Parts of surveyor

9. Define rest

10.Refractory cast.

11.Mention 4 different types of casting machine

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN**  
**DENTAL MECHANICS (DDM)**  
**QP CODE: 6172(RS-2 SCHEME)**  
**PARTIAL DENTURES, ORTHODONTIA, MAXIOFACIALMPROSTHESIS**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 1.30 HRS**

**MAX.MARKS: 50**

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

**4X5=20**

1. Discuss pontic designs and principles.
2. Objectives of surveyor.
3. Define direct retainers and write in detail about gingival approaching clasp design.
4. Casting defects.
5. Define block out and types of Block out

**II. SHORT ANSWERS**

**10X3=30**

6. Uses of surveyor.
7. Indirect retainer.
8. Rest
9. Adam's clasp
10. FPD retainers
11. Die systems.
12. Colour coding in RPD
13. Connectors
14. Mention Principles of wax pattern
15. Appligate's rule any three.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA/III YEAR CERTIFICATE COURSE IN  
DENTAL HYGIENE (DDH)  
CODE: 3182(RS-1 SCHEME)  
DENTAL HEALTH EDUCATION, SOCIAL & PUBLIC HEALTH &  
PREVENTIVE DENTISTRY  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX.MARKS: 45

**I. LONG ESSAY**

**1x10=10**

1. Describe the dental plaque control measures.

**II. 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. 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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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
III YEAR DIPLOMA IN DENTAL HYGIENE (DDM)  
QP CODE: 6183(RS-2 SCHEME)  
DIAGNOSIS & TREATMENT OF PERIODONTAL DISEASE  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX.MARKS: 100

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. Classification of periodontal instruments.
4. Write indications and contra indications of ultrasonic scalers.
5. Mention Difference between supra and subgingival calculus..
6. Management of syncope patient.
7. Rules and regulations of dental hygiene.
8. Management of diabetes mellitus patients.
9. Classify periodontal diseases.
10. OHIS index.

II. SHORT ANSWERS

20X3=60

11. Name emergency drugs.
12. Inter dental aids.
13. Define dental hygiene.
14. Name Sutures materials.
15. Name periodontal dressing.
16. Treatment of pericoronitis.
17. Oral irrigation devices
18. Drugs used in Asthma.
19. Periodontal findings in 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. Signs of Shock.
25. Name types of Haemophilia.
26. Name some anticoagulants.
27. Precautions to be taken in HIV patient..
28. Precautions to be taken in HBV infection.
29. Name some curettes.
30. Name periodontal diseases in children.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN PHYSIOTHERAPY (DTP)  
QP CODE: 5193(RS-2 SCHEME)  
THERAPEUTIC EXERCISE  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

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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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU  
SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR CERTIFICATE COURSES  
QP CODE: 1102(RS-1 SCHEME)  
CHEMISTRY  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX.MARKS: 45

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

1. Explain the preparation, properties and uses of sulphuric acid.
2. Explain the preparation, properties and uses of hydrogen peroxide.

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

3. Difference between RNA and DNA.
4. Classification of carbohydrates. Give example for each.
5. Preparation of ethyl alcohol from molasses.
6. Preparation and uses of ethane.
7. Functional properties of enzymes and antibodies.
8. Explain the structure of maltose.
9. Mention the names with structure of any five amino acids.

**III. SHORT ANSWERS** **5×2=10**

10. Define i) Reducing agent ii) Oxidizing agent.
11. Tyndall effect.
12. Uses of fluorine.
13. Isotopes.
14. Define a) Acid b) Base.

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**FIRST YEAR DIPLOMA COURSES, (RS-2 SCHEME)**  
**QP CODE: 4103, CHEMISTRY**  
**(WRITE IN GREEN ANSWER BOOK)**

**Time: 3.00hrs**

**Max Marks:100**

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

**8 x 5=40**

1. Preparation of Nitric acid by Ostwald's process and mention two uses
2. What are isotopes? Mention the applications of cobalt-60, iodine 131 isotopes
3. Brownian movement and Tyndal effect
4. What are the strategies to control water pollution?
5. Classify the proteins on the basis of composition & biological importance

**6. MATCH THE FOLLOWING**

- |                                    |                       |
|------------------------------------|-----------------------|
| a) NaOH                            | i) Calcium Carbonate  |
| b) CaCO <sub>3</sub>               | ii) Sulphuric Acid    |
| c) H <sub>2</sub> SO <sub>4</sub>  | iii) Sodium Hydroxide |
| d) CaSO <sub>4</sub>               | iv) Sodium Carbonate  |
| e) Na <sub>2</sub> CO <sub>3</sub> | v) Calcium Sulfate    |

7. Uses of toluene

8. Write a note on fluorocarbons and its applications

9. Discuss effect of temperature and pressure for the reaction



10. Choose the correct answers

i) General formula of alcohol

- a) R-COOH   b) R-COOR'   c) R-OH   d) R-CHO

ii) Proteins are the polymers of

- a) Amines   b) Acids   c)  $\beta$ -Amino Acid   d)  $\alpha$ -Amino Acid

iii) General formula of aldehyde

- a) R-COOH   b) R-COOR'   c) R-OH   d) R-CHO

iv) Immunoglobulin is

- a) Hormone   b) Enzyme   c) Antibody   d) Transport Agent

v) Hybridization of ethane a) sp   b) sp<sup>2</sup>   c) sp<sup>3</sup>   d) sp<sup>2</sup>d

**II. SHORT ANSWERS**

**20X3=60**

11. Define Normality, Molarity, Molality

12. Uses of washing soda

13. What is the action of a) Cu   b) Zn   c) H<sub>2</sub>S in H<sub>2</sub>SO<sub>4</sub>

14. Write the composition of bleaching powder. Mention any 2 uses.

15. Plaster of Paris- Preparation and uses

16. Define a) Alkanes   b) Alkenes. Give example for each

17. Classification of enzymes

18. Mention any three uses of iodoform

19. 2cm<sup>3</sup> of 6N H<sub>2</sub>SO<sub>4</sub> is mixed with 3 Cm<sup>3</sup> of water. What is the normality of the final solution?

20. Fill in the Blanks

i) General formula for alkane is..... ii) Hybridization of ammonia.....

iii) Fructose is a.....

21. What is peptide bond? write the formula of amino acids (1) Cysteine   ii) Glycine

22. Write a note on global warming

23. Define i) Electronegativity ii) Electron gain enthalpy iii) Ionic radii

24. Name three fundamental particles of an atom

25. Octate rule

26. Mention importance of buffers in medicine

27. Ozone Layer

28. Types of RNA and their functions

29. Structure of sucrose & maltose

30. Give an example for a) Acidic amino acid   b) Basic amino acid   c) Neutral amino acid

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**MEDICAL LABORATORY TECHNOLOGY(DMLT)**  
**QP CODE: 2103, BIOCHEMISTRY(RS -1 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**2x10=20**

1. Definition, classification and biomedical importance of Carbohydrates.
2. Explain colorimeter with principle, maintenance and applications.
3. What are the different types of auto analyzers? Give the differences between semi and fully automated analyzer.

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

**10x5=50**

4. Enzymes of diagnostic importance
5. Biomedical importance of lipids.
6. Indicators - definition, uses and types.
7. Centrifuge - principle and applications.
8. Functional classification of proteins with examples.
9. Laboratory hazards and precautions while handling chemicals.
10. Quality control
11. Buffers with examples.
12. pH meter
13. Normal organic and inorganic constituents of urine
14. Analytical balance
15. Aromatic and aliphatic compounds with examples

**III. SHORT ANSWERS**

**10x2=20**

16. Essential amino acids
17. Structure of atom
18. Define an acid and a base. Give examples.
19. Examples of isoenzymes. .
20. Functions of Calcium.
21. Applications of flame photometer.
22. Homo polysaccharide.
23. Sucrose
24. Essential fattyacids
25. Normal range of urea and creatinine

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY  
(DMLT)

QP CODE: 5103, BIOCHEMISTRY (RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I. SHORT NOTES -ANSWER ANY EIGHT QUESTIONS

8 x 5 = 40

- 1) Explain different types of Centrifuges. Write about their maintenance & uses.
- 2) Reflux condenser use, care and maintenance.
- 3) Different types of flasks.
- 4) Phlebotomy procedures.
- 5) Normal solution.
- 6) Classification of enzymes with examples.
- 7) Normal organic & inorganic constituents of Urine.
- 8) Name the types of RNA. Write briefly on structure of tRNA.
- 9) Normal serum calcium level? Name any four functions of calcium in the body.
- 10) Classification of lipids. Mention the functions of Phospholipids.

II. SHORT ANSWERS

20 x 3=60

- 11) Different types of pipettes.
- 12) Heparin.
- 13) Different types of Cuvettes.
- 14) Water bath.
- 15) P<sup>H</sup> meter.
- 16) Cold Box.
- 17) Hydrogen ion concentration.
- 18) Preparation of buffer solution using P<sup>H</sup> meter.
- 19) Essential amino acids.
- 20) Homopolysaccharides.
- 21) Plasma proteins.
- 22) Conjugated proteins.
- 23) Deficiency diseases of Vitamin A.
- 24) Reference forms.
- 25) Isoenzymes.
- 26) Commonly used indicators
- 27) Log Books.
- 28) Rancidity of Fat.
- 29) Different cleaning solutions.
- 30) Classify salts with examples.

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN  
HEALTH INSPECTOR (DHI)

QP CODE: 2111, COMMUNITY MEDICINE, PAPER-I (RS 1 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

**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 NOTES - 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. Functions 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**

**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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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN HEALTH INSPECTOR (DHI)

QP CODE: 5111, COMMUNITY MEDICINE, PAPER-I(RS -2 SCHEME)  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

**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 labeled diagram and list function of heart
4. The Femur bone
5. Define Health & write about determinants of health
6. Explain Epidemiological triad with labeled 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 ANSWERS**

20 x3 = 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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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY

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SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN

MEDICAL X-RAY TECHNOLOGY (DMXT)

QP CODE: 2122, ANATOMY(RS -1 SCHEME)

(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX. MARKS:45

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

**2 x 10 = 20**

1. Classify Joints with examples. Describe Synovial Joints.
2. Name the parts of Respiratory System with a labelled diagram. Describe Lungs in brief.
3. Name the parts of Female Reproductive System with a labelled diagram. Describe Ovary in brief.

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

**3 x 5 = 15**

4. Shoulder Joint
5. Right Atrium
6. Para Nasal Air Sinuses
7. Tongue

**III. SHORT ANSWERS**

**5 x 2 = 10**

8. Name the types of Bones
9. Write two differences between Large Intestine and Small Intestine
10. Bones forming Hip Joints
11. Name the Carpal bones
12. Name any four Cranial Nerves

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY

PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN MEDICAL IMAGING TECHNOLOGY (DMIT)

QP CODE: 5123, ANATOMY (RS -2 SCHEME)

(WRITE IN BLUE ANSWER BOOK)

TIME: 1.30 HRS

MAX. MARKS: 50

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

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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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
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**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN**  
**OPERATION THEATRE TECHNOLOGY (DOTT)**  
**QP CODE: 2132, SECTION-A, BIOCHEMISTRY(RS -1 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 90**

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

**1x10=10**

1. Define FBS and PPBS blood glucose levels? Explain the factors regulating blood glucose levels.
2. Define Acids, Bases and Salts. Write a note on body buffers

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

**2x5=10**

3. Formation of creatinine.
4. Urea and creatinine Clearance tests.
5. Write a note on serum electrolytes.

**III. SHORT ANSWERS**

**5x2=10**

6. Name tests to detect protein in urine
7. Normal constituents of Urine.
8. Benzidine test
9. Theory of Ionization
10. Normal values of blood urea and serum creatinine.

**QP CODE: 2133, SECTION-B, PHARMACOLOGY (RS -1 SCHEME)**

**(WRITE IN RED ANSWER BOOK)**

**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.
2. Name four commonly used PENICILLINS . Mention two uses, two adverse effects & mechanism of action of PENICILLINS.

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

**2x5=10**

3. Lignocaine
4. Diazepam
5. Calculate the dose of a drug for the patient weighing 50 kg. , if a adult dose is 10 mg/kg

**III SHORT ANSWERS**

**5 x2=10**

6. Mention two Intravenous Anaesthetics.
7. Name two Antiseptics.
8. Mention two Adverse effects of Aminoglycoside Antibiotics
9. Name Two complications of Spinal anaesthesia.
10. Name four Antitubercular drugs.

**QP CODE: 2134, SECTION-C, MICROBIOLOGY (RS 1 SCHEME)**

**(WRITE IN PURPLE ANSWER BOOK)**

**I LONG ESSAY- ANSWER ANY ONE**

**1x10=10**

1. Define and classify Immunity. Describe in detail acquired immunity.
2. Define and classify sterilisation. Discuss moist heat methods of sterilisation.

**II SHORT NOTES - ANSWER ANY TWO**

**2x5=10**

3. Standards of air quality in the operation theatre
4. Nosocomial infections
5. Anaphylaxis

**III SHORT ANSWERS**

**5 x2=10**

6. Joseph Lister
7. Cold sterilisation
8. Draw a neat labelled diagram of Hepatitis B Virus
9. Name four Gram negative bacteria
10. Name two DNA viruses

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY**  
**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**II YEAR DIPLOMA IN OPERATION THEATRE & ANAESTHESIA TECHNOLOGY**  
**(DOT &AT)**

**QP CODE: 5133, SECTION-A, BIOCHEMISTRY(RS -2 SCHEME)**  
**(WRITE IN BLUE ANSWER BOOK)**

**TIME: 3 HRS**

**MAX. MARKS: 100**

**I.SHORT ESSAY - ANSWER ANY FIVE.** **5x5=25**

1. Write in brief about renal function tests.
2. Define plasma proteins. Write their functions.
3. Define buffer? Write different types of buffer.
4. Define carbohydrate? Write their classification.
5. Write function and deficiency of vitamin A.
6. Discuss the concepts of acid base reaction.

**II. SHORT ANSWERS** **5×3=15**

7. Define lipoprotein and write their functions.
8. Write the common indicators used for acids and bases.
9. Metabolic acidosis.
10. Name serum electrolytes and write their normal values.
11. Define nucleosides and nucleotides.

**QP CODE: 5134, SECTION-B, APPLIED PHARMACOLOGY (RS 2 SCHEME)**  
**(WRITE IN RED ANSWER BOOK)**

**I.SHORT ESSAY - ANSWER ANY THREE** **3x5=15**

1. Mention three Non steroidal anti inflammatory drugs. Mention the uses and adverse effects of Paracetamol.
2. Mention three corticosteroids and name the uses and adverse effects of corticosteroids.
3. Mention the advantages and disadvantages of Halothane.
4. Spinal Anaesthesia

**II SHORT ANSWERS** **5 x 3 = 15**

5. Mention Three Solid dosage forms
6. Name three intra venous general anaesthetic agents
7. Mention three drugs used in Anaphylactic shock
8. Mention three Opioid analgesics and name the antidote used in opioid poisoning
9. Name three anti emetics

**QP CODE: 5135, SECTION-C, MICROBIOLOGY (RS2 SCHEME)**  
**(WRITE IN PURPLE ANSWER BOOK)**

**I. SHORT ESSAY - ANSWER ANY THREE** **3x5=15**

1. Louis Pasteur
2. Autoclave
3. Acquired immunity
4. Type I hypersensitivity reaction

**II. WRITE SHORT NOTES** **5x3=15**

5. Infections caused by Staphylococcus
6. Name three chemical disinfectants.
7. Universal precautions.
8. Fumigation of operation theatre.
9. Write three methods of biomedical waste disposal.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA /II YEAR CERTIFICATE COURSE IN MEDICAL  
RECORDS TECHNOLOGY (DMRT)

QP CODE: 2142, SECTION-A, ANATOMY (RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

- I. LONG ESSAY - ANSWER ANY ONE 1 x 10 = 10  
1. Name the parts of female reproductive system. Write briefly about uterus.  
2. Name the bones of upper limb. Write briefly about shoulder joint.
- II. SHORT NOTES - ANSWER ANY TWO 2 x 5 = 10  
3. Spinal cord  
4. Liver  
5. Left lung
- III. SHORT ANSWER 5 x 2 = 10  
6. Small intestine  
7. Lymph node  
8. Draw neat labelled diagram of neuron  
9. Mention the parts of urinary system  
10. Name the types of muscle tissue

QP CODE: 2143, SECTION-B, PHYSIOLOGY (RS 1 SCHEME)  
(WRITE IN RED ANSWER BOOK)

- I. SHORT NOTES ON ANY FOUR 4 x 5 = 20  
1. Blood clotting mechanism.  
2. Oxygen transport in blood.  
3. Composition & functions of gastric juice.  
4. Hormones of anterior pituitary gland.  
5. Menstrual cycle.
- II. SHORT ANSWERS 5x2=10  
6. Functions of kidney.  
7. Give normal values of bleeding time & clotting time.  
8. Write two functions of plasma proteins.  
9. What is apnoea?  
10. Name two family planning methods.

QP CODE: 2144, SECTION-C, PATHOLOGY & MICROBIOLOGY (RS1 SCHEME)  
(WRITE IN PURPLE ANSWER BOOK)

- I. LONG ESSAY - ANSWER ANY ONE 1x 10=10  
1. Explain record keeping in Histopathology  
2. What is Microbiology? Write briefly about different sections in Microbiology
- II. SHORT NOTES- ANSWER ANY TWO 2x5=10  
3. Ziehl-Neilson stain  
4. Methods of estimation of Hemoglobin  
5. Mention various common haematology investigations
- III. SHORT ANSWERS 5x2=10  
6. Mention four parasites that infect man  
7. Mention parts of light microscope  
8. Name the normal components found in the microscopic examination of urine  
9. Name four fungal diseases  
10. Name four bacterial diseases

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN MEDICAL RECORDS TECHNOLOGY (DMRT)

QP CODE:5143, SECTION-A, ANATOMY(RS -2 SCHEME)

(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I. SHORT NOTES- ANSWER ANY TWO

2 x5 = 10

1. Name the endocrine organs and describe the thyroid in detail
2. Describe the diaphragm in detail
3. Describe the shoulder joint

II SHORT ANSWERS

10x3=30

4. List the parts of urinary system
5. Mention the paranasal sinuses
6. Classify epithelia with examples
7. Mention the parts of the nervous system
8. Mention the types of vertebrae
9. Mention the parts of large intestine
10. Mention the branches of arch of aorta
11. Palatine tonsil
12. Name any 3 bones in upper limb
13. Name any 3 arteries in the lower limb

QP CODE:5144, SECTION-B, PHYSIOLOGY (RS 2 SCHEME)

(WRITE IN RED ANSWER BOOK)

I. SHORT NOTES- ANSWER ANY THREE

3x5=15

- 1) Errors of Refraction & its correction.
- 2) Draw neat labelled diagram of Cell with its organelles.
- 3) Functions of Plasma Proteins.
- 4) Olfactory Pathway.

II. SHORT ANSWERS

5 x 3=15

- 5) Normal count of a)RBC b) WBC c) Platelets
- 6) State Landsteiner's Law.
- 7) Name the Body fluid compartments.
- 8) Name two Clotting Factors.
- 9) Define Receptor. Types of Sensory Receptors.

QP CODE:5145, SECTION-C, PATHOLOGY & MICROBIOLOGY (RS 2 SCHEME)

(WRITE IN PURPLE ANSWER BOOK)

I. SHORT NOTES: ANSWER ANY THREE.

3X5=15

1. Define edema. Write in detail about pathogenesis of edema.
2. Define inflammation. Write in detail about vascular response of acute inflammation.
3. Define neoplasia. Write difference between benign and malignant tumors.
4. Define osteomyelitis. Mention in detail about Pott's spine.

II SHORT ANSWERS

5 x 3=15

5. Tuberculosis of lung.
6. Mention 4 parasites of medical importance.
7. Gall stones.
8. Papillary carcinoma of thyroid.
9. Mention 4 diseases caused by viruses.

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN  
DIALYSIS TECHNOLOGY (DDT)

QP CODE: 2153, SECTION-A, BIOCHEMISTRY(RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

I. LONG ESSAY - ANSWER ANY ONE

1x10=10

1. What is glycolysis? Describe anaerobic glycolysis pathway
2. What is Renal Function Test (RFT)? Describe the clearance tests.

II. SHORT NOTES ON ANY FIVE

5x5=25

3. Factors maintaining blood sugar level
4. Explain theory of ionization.
5. Define blood buffers with examples.
6. Specific gravity of urine.
7. Heat coagulation test
8. Types of diabetes mellitus.

III. SHORT ANSWER

5x2=10

9. Write normal values of a). Serum Uric acid b). Blood urea level.
10. Define electrolytes. Give normal values of serum electrolyte levels.
11. Define buffers with examples.
12. Applications of chromatography.
13. Test for detection of bile pigments and bile salts in urine.

QP CODE: 2154, SECTION-B, MICROBIOLOGY (RS 1 SCHEME)

(WRITE IN RED ANSWER BOOK)

I. LONG ESSAY - ANSWER ANY ONE

1x10=10

1. Mention the sterilization methods. Describe the chemical disinfectants used in hospitals.
2. Define hospital infection. Mention the causative organisms, sources & prevention of hospital infection.

II. SHORT NOTES - ANSWER ANY FIVE

5x5=25

3. Robert Koch.
4. Dialysis room sterility check.
5. Labeled diagram of bacterial cell.
6. OT Fumigation.
7. Autoclave.
8. Example for active and passive immunity.

III SHORT ANSWERS

5x2=10

9. Name the organisms causing  
A) Tuberculosis B) Dysentery C) Cholera D)Enteric fever
10. Name the diseases caused by  
A) Candida B) Salmonella typhi C) Clostridia D)E.coli
11. Method of sterilization of  
A) Endotracheal tube B) OT dress C) Equipment D) Glove
12. Normal flora of skin.
13. Infections caused by streptococci.

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN DIALYSIS TECHNOLOGY (DDT)

QP CODE: 5153, SECTION-A, BIOCHEMISTRY (RS -2 SCHEME)

(WRITE IN BLUE ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

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

1. Define enzyme? Write factors affecting enzyme activity.
2. Discuss in brief about abnormal constituents of urine.
3. Write in brief about liver function tests.
4. Define buffer? Write different types of buffer.
5. Define lipids? Write its classification..

**II. SHORT ANSWERS.** 10×3=30

6. Respiratory acidosis.
7. Different types of RO water.
8. Lipid profile.
9. Write three differences between DNA and RNA.
10. Essential amino acids with examples.
11. Define isoenzyme? Write two examples.
12. Creatinine clearance test.
13. Define protein? Write their functions.
14. Common indicators used for acids and bases.
15. Deficiencies of vitamin A.

QP CODE: 5154, SECTION-B, MICROBIOLOGY (RS2 SCHEME)

(WRITE IN RED ANSWER BOOK)

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

1. Define sterilization. Add a note on Autoclave
2. Louis Pasteur
3. OT Sterilization
4. Bacterial growth curve
5. Classify Immunity. Add a note on Active immunity

**II. WRITE SHORT ANSWERS** 10 x 3 = 30

6. Name any three material used to sterilize in Hot air oven
7. Name three diseases caused by staphylococcus aureus
8. Name three gaseous disinfectants
9. Name any three lactose fermenters
10. Draw a neat labelled diagram of bacterial cell
11. List the sterilization control of Autoclave
12. Name any three nosocomial infections
13. Local Immunity
14. List any three Routes of Infection
15. List Bio-Medical waste disposal in a dialysis unit

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

I YEAR DIPLOMA / II YEAR CERTIFICATE COURSE IN  
OPHTHALMIC TECHNOLOGY (DOT)

QP CODE: 2162(RS1 SCHEME) OPHTHALMOLOGY PAPER-II  
(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 90

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

1. Classify conjunctivitis. Discuss clinical features and management of trachoma
2. Classify uveitis. Discuss etiology, clinical features and management of iridocyclitis
3. Describe Grades of Binocular Single Vision

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

4. Angular conjunctivitis
5. Vernal kerato conjunctivitis
6. Fungal corneal ulcer
7. Exposure keratitis
8. Homatropine
9. Keratoplasty
10. Scleritis
11. Signs symptoms and management of angle closure glaucoma
12. Define cataract and mention the classification of cataract
13. Urine analysis
14. Atropine sulphate.
15. Diabetic retinopathy.

III. SHORT ANSWERS 10 x 2 = 20

16. Pannus
17. Difference between true and pseudo pterygium
18. Keratoconus
19. Indication of evisceration
20. Staphyloma
21. Atrophic bulbi
22. Panophthalmitis
23. Keratic precipitates
24. Uses of steroid drops in ophthalmology
25. Timolol maleate

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN OPHTHALMIC TECHNOLOGY (DOT)  
QP CODE: 5163, OPHTHALMOLOGY PAPER-II (RS -2 SCHEME)

(WRITE IN GREEN ANSWER BOOK)

TIME: 3 HRS

MAX. MARKS: 100

I. SHORT NOTES- ANSWER ANYEIGHT

8x5=40

1. Glaucoma
2. Diabetic Retinopathy
3. Post operative complication of cataract surgery.
4. Corneal Ulcer
5. Cataract and it's management
6. Mention Vitamin 'A' deficiency and treatment
7. Types of Squint
8. Types of blephritis and complication
9. Eye lid diseases
10. Procedure for measuring intraocular pressure.

II. SHORT NOTES

20x3=60

11. Types of cataract surgery
12. What is mature and hyper matured cataract
13. Methods of removing corneal foreign body
14. Treatment of chalazion
15. Epilation
16. Complications of corneal ulcer
17. Clinical signs of acute congestive glaucoma
18. Causative organism of conjunctivitis
19. External and internal hordeolum
20. Epiphora
21. Pseudophakia
22. Lacrimal syringing
23. Management of acid burns
24. Ophthalmic emergencies
25. Eye health education in preventing common Eye diseases
26. What are the investigations done before cataract surgery
27. Post operative health education to cataract patients
28. Pterygium
29. Keratoconus
30. Lid Diseases

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KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA /II YEAR CERTIFICATE COURSE IN DENTAL  
MECHANICS (DDM)

QP CODE: 2172, APPLIED ORAL ANATOMY (RS -1 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME:1. 30 HRS

MAX. MARKS: 45

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

- 1) Describe the Anatomy of Mandibular permanent first molar.
- 2) What are the muscles of mastication? Write in detail about function of masseter

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

- 3) Muscles of facial expression
- 4) Movements of temporomandibular joint
- 5) Significance of incisive papilla
- 6) Muscles of tongue
- 7) Class II and class III occlusion
- 8) Maxillary lateral incisor
- 9) Maxillary supporting structures

III. SHORT ANSWERS 5 x 2 = 10

- 10) Incisive papilla
- 11) Velar sounds
- 12) Freni and its significance
- 13) Mid-palatine raphe
- 14) Lateral throat form

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020  
II YEAR DIPLOMA IN DENTAL MECHANICS (DDM)  
QP CODE: 5172, APPLIED ORAL ANATOMY(RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME: 1. 30 HRS

MAX. MARKS: 50

I. SHORT NOTES- ANSWER ANY FOUR

4 x 5 = 20

- 1) Anatomy of Permanent Mandibular 1<sup>st</sup> Molar
- 2) Teeth numbering systems
- 3) Stress bearing and relieving areas in maxilla
- 4) Muscles of Mastication
- 5) Balanced Occlusion

II. SHORT ANSWERS

10 x 3 = 30

- 6) Class 1 Occlusion
- 7) Bilabial Sounds
- 8) Muscles of Tongue
- 9) Lateral Throat Form
- 10) Incisive Papillae
- 11) Hamular Notch
- 12) Branches of Facial Nerve
- 13) Buccinator
- 14) Rugae
- 15) Mid-Palatine Raphae

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**KARNATAKA NURSING & PARAMEDICAL SCIENCES EDUCATION (REGULATION) AUTHORITY  
PARAMEDICAL BOARD, BENGALURU**

**SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA /II YEAR CERTIFICATE COURSE IN DENTAL  
HYGIENE (DDH)**

**QP CODE: 2183, (RS -1 SCHEME)**

**SECTION-A, GENERAL PATHOLOGY & MICROBIOLOGY  
(WRITE IN BLUE ANSWER BOOK)**

**TIME:1. 30 HRS**

**MAX. MARKS: 45**

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

**1 x 9= 9**

1. Define inflammation. Mention the cardinal signs and write the types of inflammation. Describe the vascular events.
2. Write a note on Pathology and Bacteriology of dental caries, gingival and periodontal inflammation.

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

**4x5=20**

3. Define healing. Mention its types and factors affecting the healing.
4. Define neoplasia. Write the difference between benign and malignant
5. Vitamin D deficiency.
6. Write a note on oral manifestations of systemic diseases.
7. Define sterilization. Write the different methods of sterilization.
8. Write a note on dental anomalies.

**III. SHORT ANSWERS**

**3x2=6**

9. Histology of periodontal tissue.
10. Name two viral infections.
11. Name two fungal diseases.

**QP CODE: 2184, SECTION-B, PHARMACOLOGY (RS 1 SCHEME)  
(WRITE IN RED ANSWER BOOK)**

**I. SHORT ANSWERS**

**5 x 2 = 10**

1. Name TWO advantages and TWO disadvantages of Oral route of drug administration
2. Name TWO analgesics used in Dentistry
3. Write the antidote for overdose of following drugs  
A) Heparin B) Warfarin
4. Name FOUR local anaesthetics
5. Name FOUR antibiotics commonly used in Dentistry

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PARAMEDICAL BOARD, BENGALURU

SUPPLEMENTARY EXAMINATION, JANUARY 2020

II YEAR DIPLOMA IN DENTAL HYGIENE (DDH)

QP CODE: 5183 (RS -2 SCHEME)

SECTION-A, GENERAL PATHOLOGY & MICROBIOLOGY

(WRITE IN BLUE ANSWER BOOK)

TIME:1. 30 HRS

MAX. MARKS: 50

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

**4x5=20**

1. Describe the investigations done in pathology.
2. Define Inflammation. Discuss the vascular events of acute inflammation.
3. Dental nomenclature.
4. Oral manifestations of systemic diseases.
5. Sterilization procedure.

**II. SHORT ANSWERS:**

**5x3=15**

6. Vitamin D deficiency.
7. Dental erosion.
8. Name three common infectious diseases.
9. Gingival infections.
10. Leucoplakia.

**QP CODE: 5184, SECTION-B, APPLIED PHARMACOLOGY (RS 2 SCHEME)**

**(WRITE IN RED ANSWER BOOK)**

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

**1 X 5 = 5**

1. Mention the various routes of Drug administration. Write the advantages of Oral routes of administration.
2. Classify NSAID's and Write briefly on Salicylates.

**II. SHORT ANSWERS**

**5 X 2 = 10**

3. Name 2 local Anaesthetic agents.
4. Name 2 uses of Penicillins.
5. Name 2 Glucocorticoids and 2 uses of it.
6. Name 2 Oral Hypoglycemic agents.
7. Name 2 adverse effects of Barbiturates.

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SUPPLEMENTARY EXAMINATION, JANUARY 2020  
I YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)  
QP CODE: 4193, SECTION-A, PHYSIOLOGY (RS -2 SCHEME)  
(WRITE IN BLUE ANSWER BOOK)

TIME:3 HRS

MAX. MARKS: 100

I. SHORT NOTES -ANSWER ANY FOUR QUESTIONS

4 X 5 = 20

1. Classify Body Fluid Compartments. Give their normal values.
2. Functions of Plasma Proteins
3. Myasthenia Gravis.
26. Describe saltatory Conduction. Mention its Importance and Advantages..
27. Heart Sounds.

II.SHORT ANSWERS10x3=30

28. Functions of Testis.
29. Define ageusia and anosmia.
30. Taste buds.
31. Four Pulmonary Function Tests.
32. Chemoreceptors.
33. Name the Expiratory Muscles.
34. Surfactant and its role.
35. Functions of Parathyroid Hormone.
36. Tetany.
37. Role of Vitamin D in the Prevention of Osteoporosis.

QP CODE: 4194, SECTION-A, BIOCHEMISTRY (RS 2 SCHEME)  
(WRITE IN RED ANSWER BOOK)

I. SHORT NOTES- ANSWER ANY FOUR QUESTIONS

4 X 5 = 20

- 1) Define and classify amino acids with examples.
- 2) Renal function tests.
- 3) Effect of hormones on various metabolisms.
- 4) Functions and deficiency symptoms of Vit A.
- 5) Clinical importance of enzymes.

II. SHORT ANSWERS

10x3= 30

- 6) Classify carbohydrates with examples.
- 7) Mitochondria.
- 8) Vit B2
- 9) Detoxification.
- 10) Balanced diet.
- 11) Unsaturated fatty acids.
- 12) Kwashiorkor.
- 13) Denaturation.
- 14) Cholesterol.
- 15) Nitrogen equilibrium.

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**PARAMEDICAL BOARD, BENGALURU**  
**SUPPLEMENTARY EXAMINATION, JANUARY 2020**  
**III YEAR DIPLOMA IN PHYSIOTHERAPY (DPT)**  
**QP CODE: 3202, YOGA & MENTAL HEALTH(RS -1 SCHEME)**  
**(WRITE IN GREEN ANSWER BOOK)**

**TIME:2 HRS**

**MAX. MARKS: 65**

**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. Jalaneti
9. Padmasana
10. Samadhi
11. Yogic diet

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