Program Code: 5274

DIPLOMA IN ACCIDENT EMERGENCY CARE

SCHEME OF EXAMINATION

Subject code	Title of the Course	Credit	Hours	Passing Minimum
Semester I				
C21AC11 / E21AC01	Human Anatomy, Physiology and Clinical Biochemistry	6	90	40/100
C21AC12 / E21AC02	Fundamentals of Emergency Care	6	90	40/100
C21AC13 / E21AC03	Basic Pharmacology	6	90	40/100
C19CE10 /E19CE10	Communicative English	6	90	40/100
C21ACP1 / E21ACP1	Practical on Emergency Care procedures	4	120	40/100
Semester II				
C21AC21 / E21AC04	Trauma and Orthopedic Emergencies	6	90	40/100
C21AC22 / E21AC05	Circulation, Airway, Breathing, Maternal and Child care emergencies management	6	90	40/100
C19LS23 / E19LS05	Life Skills	6	90	40/100
C21ACP2 / E21ACP2	Practical: Case studies on Emergency Care	6	90	40/100
C21ACPW / E21ACPW	Internship Trauma Emergencies & Clinical Management	4	120	40/100

Eligibility for admission: Pass in 12thstd examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis of percentage marks of the total marks obtained in all the Courses and as given below:

40 % but less than 50 % - Third class
50 % but less than 60 % - Second class
60 % and above - First class

Theory Paper

Internal Marks-25 External Marks-75

Syllabus

Semester I

Course I - Human Anatomy, Physiology and Clinical Biochemistry Course II - Fundamentals of Emergency Care
Course III - Basic Pharmacology
Course IV - Communicative English
Course V - Practical on Emergency Care procedures

Semester II

Course VI - Trauma and Orthopedic Emergencies

Course VII - Circulation, Airway, Breathing, Maternal and Child care emergencies management

Course VIII - Life Skills
Course IX - Practical: Case studies on Emergency Care
Course X - Internship Trauma Emergencies & Clinical Management

***(Semester Pattern for Community College Only)**

SEMESTER I

COURSE I

(C21AC11 / E21AC01)**Human Anatomy, Physiology and Clinical Biochemistry**

Unit-I

1. Cell
2. Cardiovascular system
3. Respiratory system

Unit-II

4. GIT,
5. Endocrine system,
6. Genito urinary system,
7. Reproductive system

Unit-III

8. Head neck and face,
9. nervous system

Unit-IV

10. Bones and muscles,
11. Spine and thorax,
12. Skin
13. Basic Principles of Clinical Biochemistry

Unit – V

Practical demonstration of

1. Drawing and Labelling of Cell
2. Cardiovascular system
3. Respiratory system
4. GIT and Endocrine system
5. Genito-urinary system
6. Reproductive system
7. Head neck and face
8. Nervous system
9. Bones and muscles
10. Spine and thorax
11. Skin
12. Familiarization of diagnostic tests

COURSE II

(C21AC12 / E21AC02)Fundamentals of Emergency Care

Unit-I

1. Critical Thinking and Critical Decision Making
2. Cornerstones of effective paramedic practice
3. Range of patient conditions
4. Theory to practical application
5. Taking it to the scene

Unit-II

1. Patient Examination and Examination techniques
2. Vital signs
3. Equipments used in physical examination
4. physical examination of adults, infants and children
5. limits of physical exam

Unit-III

1. Patient History
2. Evaluation of Emergency scene
3. Content of patient history and Technique for history taking
4. Getting a history on sensitive topics
5. Special assessment challenges

Unit – IV

Practical demonstration of

1. Physical Examination – Inspection, Palpation, Percussion and Auscultation,
2. Assessing the head,
3. Examining the eye, ear, neck, chest, musculoskeletal system, peripheral vascular system, spine, nervous system
4. Auscultation of heart sounds, lung sounds, Examining the abdomen,

Unit V

5. Evaluation of deep tendon reflex,
6. Checking Vital signs,
7. Cardiac Monitor Electrode Placement

COURSE III

(C21AC13 / E21AC03)Basic Pharmacology

Unit-I

1. Pharmacology: medication names,
2. Sources of drugs,
3. Drug approval process,
4. General properties of medication

Unit - II

5. Routes of drug administration,
6. Drug forms,
7. Pharmacodynamics,
8. Pharmacokinetics,
9. Drugs by systemic classification,
10. Drug storage

Unit – III

11. Vascular Access and Medication Administration: Fluids and electrolytes, IV fluid composition,
12. IV techniques and administration,
13. External jugular vein cannulation,
14. Intraosseous infusion,

Unit – IV

15. Medication administration,
16. Routes of medication administration,
17. Calculation of drug dose and rate,
18. Medication direction

Unit – IV

Practical demonstration of

19. Intra Venous
20. Intra Muscular
21. Intra Dermal
22. Subcutaneous
23. Oral 24.Rectal

COURSE IV

(C19CE10 / E19CE10) Communicative English

1. Basic Grammar:
   a. Review of grammar
   b. Remedial study of grammar
   c. Simple sentence
   d. Word passive voice etc.
2. Bubbling Vocabulary:
   a. Synonyms
   b. Antonyms
   c. One – work Institution
3. Reading and Understanding English
   a. Comprehension passage
   b. Précis – writing
   c. Developing a story from hints.
4. Writing English
   a. Writing Business letters.
   b. Paragraph writing
   c. Essay writing
   d. Dialogue writing
5. Speaking English
   a. Expressions used under different circumstances
   b. Phonetics

Reference :

1. V.H.Baskaran – "English Made Easy"
2. V.H.Baskaran – "English Composition Made Easy"
(Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – "Teaching English Grammar"
(T.R.Publication, Chennai)
4. "Life Skill" – P.Ravi, S.Prabakar and T.TamzilChelvam,
M.S.University, Tirunelveli.

COURSE V

(C21ACP1 / E21ACP1) Practical on Emergency Care procedures

***Cumulative Skills Practice from all the four papers from SEM I in the simulation lab

SEMESTER II

COURSE VI

(C21AC21 / E21AC04) Trauma and Orthopedic Emergencies

Unit-I

1. Head and Face Injuries
2. Assessment and management of injuries to Skull and facial bones, eyes, ears teeth, mouth, anterior part of neck, brain, face

Unit-II

3. Spine Injuries: Anatomy, Pathophysiology, patient assessment, management, pharmacotherapy of spinal cord injury, complications of spinal cord injuries.

Unit-III

4. Thoracic Injuries: Anatomy, Physiology and Pathophysiology of thoracic injuries, General assessment and management, Specific injuries.

Unit-IV

5. Abdominal Injuries: mechanism of abdominal injuries, Pathophysiology, assessment, management of abdominal injuries, pelvic injuries.
6. Musculoskeletal Injuries: Patterns and mechanism of musculoskeletal injuries,
7. Fractures
8. Ligament injury and dislocation
9. Muscle and tendon injuries

Unit V

10. Arthritis
11. Amputations
12. Laceration
13. Vascular injuries
14. General principles of assessment and management
15. General interventions and Complications

COURSE VII

(C21AC22/E21AC05)

Circulation, Airway, Breathing, Maternaland Child care emergencies management

Unit I

1. Patient assessment
2. Cardiac arrhythmias
3. ECG
4. Pathophysiology and management of cardiovascular diseases
5. Management of symptomatic bradycardia , cardiac arrest and tachycardia
6. Techniques of management of cardiac emergencies
7. Medications commonly prescribed to patients with cardiovascular diseases.

Unit II

1. Endotracheal intubation - orotracheal intubation, Nasotracheal intubation, digital intubation
2. Transillumination techniques for intubation
3. Field extubation
4. Pediatric intubation
5. Multilumen airways
6. The laryngeal mask airway
7. Surgical and non surgical airways

Unit-III

1. Gynecology – Menstruation, pathophysiology
2. Patient assessment
3. General management
4. Assessment and management of specific conditions
5. Sexual assault

Unit-IV

6. Obstetrics – introduction
7. Anatomy and physiology of female reproductive system
8. Conception and gestation
9. Physiologic maternal changes during pregnancy
10. Medical conditions affected by pregnancy and Complications of pregnancy
11. Assessment of pregnant patient
12. Trauma in pregnancy
13. Child birth, abnormal deliveries, complications of labor and delivery
14. Emergency pharmacology in pregnancy
15. Post delivery care

Unit-V

16. Neonatology – Introduction, General pathophysiology and assessment, Specific intervention and resuscitation steps, Special conditions, Pre-mature and low birth weight infants, Thermoregulation, hypoglycemia, vomiting and diarrhea

17. Common birth injuries in new born
18. Pediatrics – Introduction, Approach to pediatric patients, Pediatric assessment , Respiratory, cardiovascular, medical and Toxicological emergencies
19. SIDS, apparent life threatening event, Child abuse and neglect, trauma, Burns, Children with special health care needs and Pediatric mental health

COURSE VIII

(C19LS23 / E19LS05) Life Skills

I Life Coping or adjustment
- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality Coping with stress
- (d) shyness, fear, anger far live and criticism.

II Attitude
- (a) Attitude
- (b) Self acceptance, self – esteem and self actualization
- (c) Positive thinking

III Problem Solving
- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

IV Computers
- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

V Internet
- (a) Introduction to internet
- (b) E – mail
- (c) Browsing

References:

1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai – 28
2) MSikgz;Gtsh;j;jy; kw;Wk; jfty; njhlh;G by M.Selvaraj Community College,Palayamkottai
3) "Life Skill" –P.Ravi, S.Prabahar&T.TamilChelvam, M.S. University, Tirunelveli

COURSE IX

(C21ACP2 / E21ACP2)

Practical: Case studies on Emergency Care

Unit I

1. Drawing and Labelling anatomical Parts of Circulation
2. Patient Assessment
3. Basics of ECG
4. Arrhythmia
5. Recognition and Management of Cardiovascular Emergencies

Unit II

1. Emergency Childbirth
2. Clamping the cord
3. Assisting a normal (cephalic presentation) and breech delivery

Unit III

4. Assessment of Pregnant patient
5. Examination of FHS
6. Examination of gravid uterus
7. Transporting a pregnant patient in left lateral position

Unit IV

1. Neonatology
2. Intubation of a neonate
3. Inserting a orogastric tube in the newborn
4. Insertion of oropharyngeal airway in a child
5. Inserting a nasopharyngeal airway in a child

Unit V

6. One rescuer bag mask ventilation for a child
7. Performing paediatric endotracheal intubation
8. Paediatric IO infusion
9. Performing infant and child chest compressions,
10. Decompression of a tension pneumothorax Immobilization of child and infant

Course X

(C21ACPW / E21ACPW)

Internship Trauma Emergencies & Clinical Management

Unit I

1. Spinal Immobilization - Long Backboard and Standing Position
2. Helmet Removal
3. Hare Traction Splint
4. KED Splint

Unit II

5. Application of Restraints
6. Needle decompression
7. Treatment of a Sucking Chest Wound
8. Management of an Abdominal Evisceration

Unit III

1. Bleeding Control
2. Pelvic Immobilization

Unit IV

1. Flail Chest Immobilization
2. Neck wound management

Unit V

1. IV Cannulation
2. Fluid Resuscitation
3. Temperature control