OPJS UNIVERSITY, CHURU (RAJASTHAN)

SYLLABUS

FOR

DIPLOMA IN EMERGENCY & TRAUMA CARE

(DETC)

*S*

SCHOOL OF PARA MEDICAL SCIENCE
OPJS UNIVERSITY, CHURU (RAJASTHAN)
2013-14

~~*~~
## SCHEME OF EXAMINATION

Duration of course – 2 year (4 semesters)

### SEMESTER-I

<table>
<thead>
<tr>
<th>S.No.</th>
<th>PAPER CODE</th>
<th>NAME OF PAPER</th>
<th>M.M.(T-S-P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DETC-11</td>
<td>GENERAL ANATOMY &amp; PHYSIOLOGY</td>
<td>70+30+50 = 150</td>
</tr>
<tr>
<td>2</td>
<td>DETC-12</td>
<td>APPLIED ANATOMY &amp; PHYSIOLOGY</td>
<td>70+30+50 = 150</td>
</tr>
</tbody>
</table>

### SEMESTER-II

<table>
<thead>
<tr>
<th>S.No.</th>
<th>PAPER CODE</th>
<th>NAME OF PAPER</th>
<th>M.M.(T-S-P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DETC-21</td>
<td>PHARMACOLOGY</td>
<td>70+30+50 = 150</td>
</tr>
<tr>
<td>2</td>
<td>DETC-22</td>
<td>PATHOLOGY &amp; MICROBIOLOGY</td>
<td>70+30+50 = 150</td>
</tr>
</tbody>
</table>

### SEMESTER-III

<table>
<thead>
<tr>
<th>S. No.</th>
<th>PAPER CODE</th>
<th>NAME OF PAPER</th>
<th>M.M.(T-S-P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DETC-31</td>
<td>BASIC OF CRITICAL CARE SERVICES</td>
<td>70+30+50 = 150</td>
</tr>
<tr>
<td>2</td>
<td>DETC-32</td>
<td>CLINICAL MEDICINE</td>
<td>70+30+50 = 150</td>
</tr>
</tbody>
</table>

### SEMESTER-IV

<table>
<thead>
<tr>
<th>S.No.</th>
<th>PAPER CODE</th>
<th>NAME OF PAPER</th>
<th>M.M.(T-S-P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DETC-41</td>
<td>TRIAGE - TECHNOLOGY</td>
<td>70+30+50=150</td>
</tr>
<tr>
<td>2</td>
<td>DETC-42</td>
<td>EQUIPMENT IN EMERGENCY</td>
<td>70+30+50=150</td>
</tr>
</tbody>
</table>

***
Details of Syllabus

**SEMESTER-I**

**GENERAL ANATOMY & PHYSIOLOGY**

- Head, Neck & Brain
- Upper limb anatomy
- Visceral organ of abdomen
- Lower limb anatomy
- Thorax:-
  - Anatomy of upper respiratory tract (nose, oral cavity, pharynx, larynx).
  - Anatomy of lower respiratory tract (trachea, bronchi, hilum, bronchial tree, alveolus).
  - Anatomy of thoracic cage (bone, muscle, innervations).
  - Anatomy of lung (pleura, lobes).
- Cardiac Anatomy:-
  - Pericardium, myocardium, endocardium, valves, chamber vascular system.
- Respiratory physiology:-
  - Physiology of breathing, Respiratory gas exchange, transport of $O_2$, $CO_2$.
  - Acid base balance.
- Cardiovascular physiology:-
  - Heart sound, cardiac cycle, cardiac output, cardiac conducting system, blood pressure.
  - Physiology of E.C.G.

**APPLIED ANATOMY & PHYSIOLOGY**

- Respiratory system:-
  - Medical terminology, pleura, lobes of long, bronchopulmonary tree, passage to deliver artificial respiratory gases, Surface marking of lungs, approach to different lobes, method of pulmonary drain, nebulization process, homeostasis, lung volume, $O_2$ transport abnormality, $CO_2$ transport abnormalities, ventilation and perfusion $V/Q$ ratio, acid base balance, pulmonary function test, ABG.
- Regional circulation:-
  - Coronary, cerebral, splanchnic regulation of rate, basic arrhythmias, Principles of ECG, Hypertension, mean pulse pressure, central line, central veins pressure, CVP monitoring, Basic electrolytes
• CNS : -
  Central , peripheral and autonomic nervous system, pain pathway and pain modulation,
  Metabolic requirement of the brain , consciousness, coma, brain injury, sedetion ,

***

SEMESTER-II

PHARMACOLOGY

GENERAL PHARMACOLOGY –
Defination , pharmacokinetics & pharmacodynamics, Adverse drug effects.

RESPIRATORY SYSTEM DRUG –
  Drugs use for cough & bronhial asthma.
  Drugs used for nebulization.

DRUG ACTING ON CENTRAL NERVOUS SYSTEM –
  General anaesthesia , sedative- Hypnotics, drugs.

DRUG ACTING ON KIDNEY –
  Diuretics & Anti diuretics drugs

DRUGS AFFECTING BLOOD FORMATION –
  anticoagulants, antithrombotic & antiplatelet drugs.

CARDIOVASCULAR DRUG –
  Cardiac glycosides and drug for CHF, Antiarrhythmic drug, antianginal & anti ischemic drugs, antihypertensive drugs.

ESSENTIAL DRUG & DRUG USED IN EMERGENCY –
  Cardiac glycosides and drug for CHF, Antiarrhythmic drug, antianginal & antiischemic drug, antihypertensive drugs.

EMERGENCY DRUGS
• Adrenaline : Mode or administration, dilution, dosage,
• Isoprenaline
• Atropine, bicarbonate, calcium, ephedrine, xylocard,
• Ionotropes : dopamine, dobutamine, amidaron
• Aminophylline, hydrocortisone, antihistamlnics, potassium.
• Cardlovascular drugs
• Antihypertensives
• Antiarhythmics
• Beta - Blockers
• Ca - Channel blockers.
• Vasodilators - nitroglycerin & sodium nitroprusside
• Respiratory system - Bronchodilators, respiratory stimulants
  Bronchiolytic agents
• Renal system - Diuretics, furosemide, mannitol

***

**SEMESTER-III**

**BASIC OF CRITICAL CARE SERVICES**

• Introduction
• Cardiopulmonary resuscitation- basic & advanced
• Advanced cardiac life support
• Oxygen therapy
• Aerosol therapy
• Mechanical ventilation
• Patient para monitoring
• Complication in ICU care
• Nutrition for critically ill patients
• ICU infection
• Ethics & behavior in ICU

**CLINICAL MEDICINE**

**PUBLIC HEALTH**

• Introduction of community medicine
• Transmission of disease
• Preventive of Disease
• Principle of prevention of control & disease
• Hospital infection and & control of infection Disease
• Hospital west management
• Communicable disease
• Health education & promotion
• Accident as non communicable disease

PATIENT CARE
• History taking
• Physical examination
• The unconscious patient
• Diagnosis of emergency
• Diagnosis to brain death
• Case presentation

MEDICAL CARE
• Introduction of medical care & health care system
• Hospital staff patient relationship
• hemodynamics
• First aid & emergency care

CHAIN OF SURVIVAL IN EMERGENCY

EMERGENCY MEDICAL SAPORT & LIFE SAVEING DRUGS

***

SEMESTER-IV

TRIAGE -TECHNOLOGY

TRIAGE AND GENERAL EMERGICIES
• Hospital infection
• Shock, dehydration
• Hypoglycemia & hyperglycemia
• Anaphylaxis
• Extremity trauma
• Head trauma
• General traumatic condition
• Spine injury
• Chest injury
• Abdomen trauma
• Bleeding condition
• Oxygen Therapy
- IV fluid
- Sodium bicarbonate
- rehydration Therapy
- Administration of
  - Administration of Adrenalin
  - Administration of atropine
  - Administration of antifailure
- Blood transfusion
- ACLS (Advance cardiac life Support)
- BCLS (basic cardiac life Support)

**EQUIPMENT IN EMARGENCY**

- BP operatus
- Pulse Oximeter
- Thermometer
- Personal Protective equipment
- MPM monitor
- ABG Analyzer
- Syringe pump
- Infusion pump
- maintenance therapy
- Glucometer
- Defibrillator
- Suction aperture
- Airway
- Trolley
- Crash chart & their application
- Cervical color
- Spine board/ scoop
- Stretcher
- Pelvic binder.