

Krishna Institute Of Medical Sciences Deemed to Be University

Krishna Institute of Nursing Sciences. Karad

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**Program name: Postgraduate Diploma in Operation Theatre Technique.**

**CHOICE BASED CREDIT SYSTEM (C.B.C.S.)**

**1year program Syllabus**

**Program code: 4501**

**Course code: 4501-11 Syllabus**

**Course-paper-I**



**KRISHNA INSTITUTE OF MEDICAL SCIENCES “DEEMED TO BE” UNIVERSITY,  
KARAD**



## **Preface:**

The health needs are fast changing owing to the rapid change in the life style. It has significant impact on the development of diseases, its processes and treatment modalities. The advanced surgical procedures and technology has played a pivotal role in treatment modalities. This calls for specialized trained nurses in Operation theatre places the tremendous demand on the operation room nurses. Specially trained Operating Room nurses play a key role in the effective functioning of Operating Room surgical team.

The National Health Policy (NHP) 2002 emphasizes on the preventive, promotive, curative and rehabilitative aspects of the care. Since 1983 the NHP has guided the health care system in meeting the needs of the people to a great extent. The policy recognizes the need for establishing the training courses for the specialty nurses required for tertiary care institutions.

Operation Room Nursing is designed to prepare specially trained Operation Room Nurses. The outcome of the programme will be to have more nurses prepared as operation room nurses to work effectively as a member of the operation room surgical team.

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## **Philosophy:**

Krishna institute of Medical Sciences Deemed to be University recognizes the need to prepare the specialized cadre of Operating Room nurses with advanced knowledge, skills and attitude in providing comprehensive care to patients undergoing surgery.

Advances in surgical technology necessitate additional training to prepare them for effective participation as a health team member in operation room.

## **Aim:**

Prepare Post Graduate Nurses with advanced knowledge, clinical skills and attitude necessary to function effectively as a member of OR surgical team(OR/peri operative nursing includes immediate pre intra and immediate post operative nursing)

## **Objectives:**

### **General Objective:**

The purposes of the course are to train to:

At the end of the course the will be nurses able to provide quality care to patients in OR & manage & supervise care of patients in OR. Also teach nurses, allied health professionals and family members in areas related to OR nursing.

### **Specific Objectives:**

At the end of the course the student will be able to,

1. Imbibe the qualities of theatre nurse.
2. Explain the principles and concepts of Operation Theatre nursing.
3. Practice aseptic technique in the preparation of theatre and the care of the patient.
4. Explain the principles and methods of sterilization and disinfection.
5. Assist the Surgeon and Anesthetists effectively.
6. Appreciate the team work and co-ordinate the activities in the theatre.
7. Operate various types of modern equipment used in the Operation Theatre i.e. Microscope, Heart-Lung Machine, Defibrillator machine etc.

8. Assess the needs of patients immediately after operation plan, implement or evaluate nursing care.

### **Admission Requirements:**

**The candidate** seeking admission to this course **should be**

- Have passed B.Sc. Nursing course / Post Basic BSc.N. course recognized by Indian Nursing Council.
- Be registered with Maharashtra Nursing council.
- Nurses from other countries must obtain an equivalence certificate from INC before admission.
- Be physically fit.
- 100% of attendance for integrated practice experience
- 80 % of the theoretical instruction hours during the year.

### **Entrance / Selection test:**

Selection of the candidates should be based on the merit of the entrance examination held by University.

**Duration of Program:** 1 year

**.Intake Capacity:** 05

### **Attendance:**

A candidate has to secure 100%attendance in overall.

### **Fee**

As per University policy

### **Faculty :**

Dr Tukaram Zagade Course Convener Professor.KINS,Karad

Mr Mahesh Chedake- Associate Professor.KINS,Karad

Mrs.Namrata Mohite - Assistant Professor.KINS,Karad

Program pattern- Commencement of Semester

- First Semester: 1<sup>st</sup> August
- Second Semester: 1<sup>st</sup> February

**Vacation:** Three weeks vacation.

**Total Weeks per Semester: 20wks/semester**

**Number of Weeks per Semester for instruction: 20 weeks (30hrs/week x 20 weeks=555hours)**

**1<sup>st</sup> Semester :**

Theory -5 hrs /week = 105 hrs

Clinical -25hrs/week = 450hrs

Total Theory + Clinical hrs = 555 hrs

**2<sup>nd</sup> Semester:**

Theory -5 hrs /week = 105 hrs

Clinical -25hrs/week = 450hrs

Total Theory + Clinical hrs = 555 hrs

**Program of Studies**

<b>Program name</b>	<b>Semester</b>	<b>Theory</b>	<b>Practical</b>	<b>Grand Total</b>
Postgraduate Diploma In Operation Theatre Technique	First Semester	105 Hrs.	450 Hrs.	555hrs
	Second Semester	105 Hrs.	450 Hrs.	555hrs
	<b>Total</b>	210	900	1110 hrs

## Clinical Experience

Areas of clinical experience

<b>Sr. No</b>	<b>Area of posting</b>	<b>First Semester</b>	<b>Second Semester</b>	<b>Grand Total</b>	<b>Total Hrs</b>
1.	Major O.T.	4 week	4 week	8week	200
2.	Post operative Recovery room	4week	4week	8week	200
3.	C.S.S.D	4week	4week	8week	200
4.	O. T. Day care area	2weeks	2weeks	4weeks	100
5.	Minor O.T.	4weeks	4weeks	8weeks	200
	<b>Total</b>	18weeks	18weeks	36weeks	900hrs

## CHOICE BASED CREDIT SYSTEM (C.B.C.S.)

Syllabus

SEMISTER-I

Course Instruction

<b>Sr. Number</b>	<b>Content</b>	<b>Number of Hours</b>	<b>Credits.</b>
<b>A. Core Subject</b>			
<b>a. Theory</b>			
1	Review of surgical anatomy	15	1
2	Anesthesia	15	1
3	Pharmacodynamics.	30	2
4	O.R. Table And Organization	15	1
<b>b. Practical</b>		360	12
1	Review of surgical anatomy		
2	Anesthesia		
3	Pharmacodynamics.		
4	O.R. Table And Organization		
<b>B. Ability Enhancement Elective AEE( Any One )</b>			
<b>a.- Theory</b>			
1.	Communication Skills & IPR	30	2
2.	Legal Responsibilities		
<b>b.- Practice</b>			
1.	Practical aspects of Communication Skills & IPR with personal and professional.	90	3
2.	Practical aspects of Legal Responsibilities related to Operative procedures.		
	<b>Total</b>	555	22

Semester -2

Sr. number	Name of semester	Number of Hours	credits.
<b>A-Core Subject</b>			
<b>a.-Theory</b>			
1	Infection control	15	1
2	Preparation and assisting for various surgical procedures; as circulating and scrub nurse	15	1
3	Suture Material & Needles	15	1
4	Recovery Room /Surgical Intensive Care Unit	30	2
<b>b.-Practical</b>			
1	Infection control	90	3
2	Preparation and assisting for various surgical procedures; as circulating and scrub nurse	90	3
3	Suture Material & Needles	90	3
4	Recovery Room /Surgical Intensive Care Unit	90	3
<b>B-Generic Elective -( Any One )</b>			
<b>a-Theory</b>			
1.	Stress Management	30	2
2.	Health Economics		
<b>b-practical</b>			
1.	practice Stress Management techniques	90	5
2.	Planning and Implementation of Health Economics practice		
	Total	555	22

## POSTGRADUATE DIPLOMA IN OPERATION THEATRE TECHNIQUE

### SYLLABUS

#### COURSE DESCRIPTION:

This course is designed to help the nurses to review their knowledge of structure & functions of human body, Pharmacodynamics of drugs acting on various systems of body & their relation with promotion of health, anesthesia and responsibilities of the OR nurse. Further it would be enable to prepare OR nurses with specialized knowledge and skills in assisting for various surgical procedures and practicing infection control measures.

#### 1<sup>ST</sup> SEMISTER

Unit	Hours	Learning Objectives	Content	Teaching Learning Activities	Assessment Methods
<b>A. CORE SUBJECT</b>					
<b>a.Theory</b>					
Unit I	T-15hrs Practical 90hrs	<ul style="list-style-type: none"> <li>Explain the Anatomy &amp; physiology of various systems.</li> </ul>	<p><b>REVIEW OF SURGICAL ANATOMY</b></p> <ul style="list-style-type: none"> <li><b>GENERAL SURGERY</b> Abdominal Surgery-Anatomy of abdominal wall incisions, Hernia alimentary Canal, Gall bladder, bile duct, liver, spleen Pancreas, Surgery of Head &amp; Neck, Mouth and Breast, Thyroid gland.</li> <li><b>ORTHOPAEDICS</b> Bones and Joints</li> <li><b>UROLOGY</b> Kidney, ureters, Bladder, Prostate, Testes</li> <li><b>EAR, NOSE &amp; THROAT</b> Surgery of pharynx, Larynx, Nose &amp; Ear.</li> <li><b>GYNAEC &amp; OBST.</b> Pelvic viscera and other supports, Uterus, fallopian tubes, ovaries, cervix, vagina</li> <li><b>CARDIO THORACIC</b></li> </ul>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Activity</li> </ul>	<ul style="list-style-type: none"> <li>Short answers</li> <li>Objective type</li> <li>Assessment of skills with checklist</li> </ul>

			<p align="center"><b>SURGERY</b></p> <p>Chest wall, heart, blood vessels, trachea, bronchi, lungs,</p> <ul style="list-style-type: none"> <li>• <b>NEURO SURGERY</b></li> </ul> <p>brain, spinal cord, peripheral &amp; sympathetic nerves,</p> <ul style="list-style-type: none"> <li>• <b>PAEDIATRIC SURGERY</b></li> </ul> <p>Body systems</p> <ul style="list-style-type: none"> <li>• <b>OPHTHAMOLOGY</b></li> </ul> <p>Eyes</p>		
Unit II	T-15hrs OT Posting- P-90hrs	<ul style="list-style-type: none"> <li>• -Acquire knowledge regarding Anesthesia.</li> <li>• Identify role &amp; responsibilities of Ot Nurse about drugs in anesthesia.</li> </ul>	<p><b>ANAESTHESIA</b></p> <ul style="list-style-type: none"> <li>• Introduction, Principles, Types, Stages, Method of Administration</li> <li>• Anaesthetic Machines And Equipments</li> <li>• Nurses Role &amp; Responsibilities.</li> </ul> <p><b>DRUGS USED IN ANESTHESIA</b></p> <ul style="list-style-type: none"> <li>• anesthetic Agents used : Types</li> <li>• Methods of administration, Action and effects side effect, Antidotes Nurses responsibilities</li> </ul>	<ul style="list-style-type: none"> <li>• Practice session</li> <li>• Clinical practice</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Short answers</li> <li>• Assessment of skills with checklist</li> </ul>
Unit III	T-30hrs OT Posting- P-90hrs	<ul style="list-style-type: none"> <li>• Acquire &amp; present knowledge regarding anaesthesia drugs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Pharmacodynamics.</b></li> </ul> <p>Drugs</p> <p>Antiseptics and disinfectants, Hypnotics, Barbiturates, Tranquillizers and sedatives</p> <p>o Neuroleptic drugs, Phenothiazines, Butobarbitone.</p> <p>Anticonvulsants, Analgesics, Intraoperative Analgesia, Nonsteroidal anti-inflammatory drugs, Narcotic antagonists, Intravenous induction agents.</p> <p>Isopyenatine, Bronchodilators, Respiratory</p>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Objective type</li> <li>• Short answers</li> </ul>

			<p>stimulants  ,Antidysarrhythmias,  Vasopressor, Vasodilator,  antihypertensive agents  ,Ganglion blockers, Plasma  expanders, Muscle relaxant,  Beta blockers ,Uterine  stimulators, Uterine  inhibitors, Insulin, Histamin  and HI &amp; H2 receptor  antagonists, Anticoagulants,  Antiemetics,  Anticholinergics, Drugs  acting on eye , ENT and etc</p> <ul style="list-style-type: none"> <li>• Nurses role and responsibilities</li> </ul>		
Unit IV	T-30hrs OT Posting P-90 hrs	<ul style="list-style-type: none"> <li>• Demonstrate skill of organization of OR Table &amp; instrument</li> </ul>	<p><b>O.R. TABLE AND ORGANIZATION</b></p> <ul style="list-style-type: none"> <li>• Equipments and amenities</li> <li>• Different types of tables and accessories</li> </ul> <p>Organization of table and equipments nurses' role and responsibilities.</p>	<ul style="list-style-type: none"> <li>• Practice session</li> <li>• Clinical teaching care plan</li> <li>• Care study</li> </ul>	<ul style="list-style-type: none"> <li>• Short answers</li> <li>• Long answers</li> </ul>
<p><b>b.Practical</b>  Practice operation theatre techniques in various area in operation theatre complex.</p>					
<p><b>B. ABILITY ENHANCEMENT -ELECTIVE (any one)</b></p>					
<p><b>a.Theory</b></p> <p><b>1. COMMUNICATION SKILLS &amp; IPR</b></p>					

1.	T-30 P-90	<ul style="list-style-type: none"> <li>• Demonstrate skill of communication skill &amp; IPR in operation theatre.</li> <li>• Observe various incidents and events of communication and IPR Practices</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Communication Skills &amp; IPR</b></li> <li>• Process &amp; methods</li> <li>• Establishing &amp; maintaining good IPR &amp; communication with family, staff and colleagues</li> <li>• Breaking of bad news- Multidisciplinary team &amp; role of nurses</li> <li>• Guidance &amp; Counseling</li> </ul>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Short answers</li> <li>• Objective type</li> <li>• Assessment of skills with checklist</li> </ul>
<p><b>b Practical</b> Practice aspects of Communication Skills &amp; IPR with personal and professional.</p>					
<p><b>2. LEGAL RESPONSIBILITIES</b></p> <p><b>a. Theory</b></p>					
2.	T-30 P-90	<ul style="list-style-type: none"> <li>• Acquire skill of understanding of . Legal Responsibilities</li> <li>• Acquire skill to demonstrate recording and</li> </ul>	<p><b>LEGAL RESPONSIBILITIES</b></p> <ul style="list-style-type: none"> <li>• Identification of patients</li> <li>• Identification of right part to be operated</li> <li>• valid consent <ul style="list-style-type: none"> <li>✓ for operation</li> <li>✓ use of body tissue and organ transplant (donor and recipient)</li> </ul> </li> <li>• care of dentures</li> <li>• counting of sponges,</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Clinical practice</li> </ul>	<ul style="list-style-type: none"> <li>• Short Answers</li> </ul>

		reporting legal safety.	instruments etc <ul style="list-style-type: none"> <li>• prevention of unusual incidences (fall of patient, bum, fire hazards)</li> <li>• Records in operation theatre : Its medico - legal importance</li> </ul>		
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**b. Practical**

Practical aspects of Legal Responsibilities related to Operative procedures.

**2<sup>nd</sup> SEMESTER**

**A )CORE SYLLABUS**

**a. Theory**

Unit –I	T-15 OT Posting- P-90 Hrs	<ul style="list-style-type: none"> <li>• Update knowledge regarding infection control.</li> <li>• Identify infection control measures</li> </ul>	<p><b>Infection control</b></p> <ul style="list-style-type: none"> <li>• Environment : - Cleaning, disinfecting O.R. Area, equipments, Air conditioning rsystem,</li> <li>• Asptic techniques - Handwashing, use of mask, gowning, gloving, head cover</li> </ul> <p>Sterilization: - Preparing and packing of instruments, dressing materials, linen, suturematerials , drainage tubes and catheters, care of electro-medical equipments</p> <p>Handling and storing of sterilized material, equipments, instruments.</p> <ul style="list-style-type: none"> <li>• Collection of various specimens for laboratory tests</li> <li>• Bio-Medical Waste Management: - Universal standards and it's application in O.R.Nursing.</li> </ul> <p>Nurses Role and Responsibility</p>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Practice session</li> </ul>	<ul style="list-style-type: none"> <li>• Short answers</li> <li>• Long answers</li> </ul>
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Unit II	T-15  OT Posting- P-90Hrs	<ul style="list-style-type: none"> <li>Perform skill of assisting for various surgical procedures.</li> </ul>	<p><b>Preparation and assisting for various surgical procedures; as circulating and scrub nurse</b></p> <ul style="list-style-type: none"> <li>Setting up of operation room and table</li> <li>setting up of trays and trolleys for various surgical procedures</li> <li>Part preparation for surgical procedures</li> <li>positioning and draping according to the surgical procedures</li> <li>incisions for various surgical procedures</li> <li>Minor surgeries-surgical instruments and suturing materials</li> <li>Major surgeries - surgical instruments and suturing materials :</li> </ul> <p>General, Gynaec, Obstetrics, Orthopaedics, Plastic and Reconstructive surgery, Ophthalmic, Head and Neck, ENT, Cardio-Thoracic, Neuro, Paediatric Dental. Laser and robotic surgery</p> <ul style="list-style-type: none"> <li>Records and reports</li> </ul> <p>Nurses role and responsibilities</p>	<ul style="list-style-type: none"> <li>Demonstration</li> <li>Practice session</li> <li>Clinical practice</li> <li>Lecture discussion</li> </ul>	<ul style="list-style-type: none"> <li>Short answers</li> <li>Long answers</li> </ul>
Unit-III	T-15 p-OT Posting- 90	<ul style="list-style-type: none"> <li>Identify Types, uses, disinfection, storage of suture material &amp; needles.</li> </ul>	<p><b>Suture Material &amp; Needles</b></p> <p>Types, uses, disinfection, storage of suture material and needles.</p>	<ul style="list-style-type: none"> <li>Lecture</li> <li>Discussion</li> <li>Practice session</li> </ul>	Long answers

Unit-IV	T-15 p- OT Posting- 90	<ul style="list-style-type: none"> <li>Students able to manage the patient in recovery room and Present organization of recovery room.</li> </ul>	<b>Recovery Room /Surgical Intensive Care Unit</b> Set up and organization, management of patient, reporting and recording, transportation of patient, Nurses role and responsibilities	<ul style="list-style-type: none"> <li>Lecture</li> </ul>	Long answers
<b>b. Practical</b> Practice operation theatre techniques in various area in operation theatre complex					
<b>B) GENERIC ELECTIVE – any one</b> <b>a. Theory</b>					
I	30	-Able to manage stress in personal and professional life -	<b>STRESS MANAGEMENT</b> <ul style="list-style-type: none"> <li>Introduction, Meaning, Definition, Causes, sources, Signs &amp; symptoms of Stress.</li> <li>Stress Model</li> <li>Managing Stress- Concept, Benefits</li> <li>Managing Stress at Individual level</li> <li>Models of Stress Management.</li> </ul>	Lecture Activity	Short Answers
<b>b. Practical</b> Practical of stress management. Students will demonstrate techniques of stress management after observing experiment by resource person.					

## 2. Health Economics

### a. Theory

II	30	Able to Develop plan for Health Economics & implement for individual and family.	<p><b>Health Economics</b></p> <p>p Introduction, Definition, Importance of Health Economics</p> <ul style="list-style-type: none"> <li>• Essentials of Health Economics</li> <li>• Developing plan of Health Economics.</li> <li>• Presentation of Health Economics plan</li> <li>• Problem-Solving Skills of Health Economics.</li> <li>• Health Economics implementation Skills</li> </ul>	Lecture Activity	Short Answers
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### b. Practical

Planning and Implementation of Health Economics practice

### Reference Book :

1. Blackwell, Caroline C. and D. M. Wein. Principles of Infection Immunity in Patient care, New York. Churchill Livingstone, 1981.
2. Br igden, Raymond J. Operation Theatre Technique, London, Churchill Livingstone, 1980.
3. Davidson Ws et al, Cross infection Hazards and Prevention, Australlia; WA Department of Health, 1965.
4. Dixon Eillen, Theatre Technique, London : Bailliege Tindall and Cassell, 1983.
5. Gray, E. T. Principles of Surgery, New York : Churchill Livingstone, 1981.
6. Houghton Mayorie, *Nurses Aid Series* Tray and Trolley setting 6th edition, London, Bailliege Tindall and Cassell, 1965.

7. Houghton Marjorie and Jean Hudd, *Aid to Theatre Technique*. London: Bailliege Tindall and Cassell, 1961.
8. Nash, D. F. Ellison, *The Principles and Practice of Surgery for Nurses and Allied Profession*, 7th Ed. Edward Arnold, 1980.
9. Palmer Monica, *Infection Control, A Policy and Procedure Mannual* Philadelphia W. S. Saunders Company, 1984.
10. Perkins John J. *Principles and Methods of Sterilization and Health Sciences*, 2nd Ed. Illinois, Charles C. Thomas, 1983.
11. Perkins E. W. *Aseptic Techniques for Operating room Personnel*, London: B. Saunders and Co., 1959.
12. Thresyamma, C. Po. *Notes on: Operating room Technique for General Nursing Course*. Williams Rooetal; *Hospital Infection Causes and Prevention*, London, Llyod Luke Ltd., 1966.

## SCHEME OF EXAMINATION

### CHOICE BASED CREDIT SYSTEAM

Theory and practical examinations are at the end of the semester at University Level:

Theory Internal Assessment = 25 Marks

Practical Internal Assessment = 25 Marks

End semester University examination:

Question Paper Pattern:

**Theory:** 75 Marks

Answer all the questions.

- I. Multiple Choice Question (MCQ) =  $15 \times 1 = 15$
- II. Essay question :  $20 \times 1 = 20$
- III. Long Answers (Answer 2 out of 3) =  $2 \times 10 = 20$
- IV. Short Answers (Answers 4 out of 6) =  $4 \times 5 = 20$

Total = 75 Marks

#### **Practical:**

Oral Examination: 25 Marks

Practical Examination 50 Marks

Total Marks : 75.

Total exam marks for end semester are 100 marks theory and 100 marks practical.

**1. Promotion and award of grades**

A student shall be declared PASS and eligible for getting he/she secures at least 50% marks in that particular course including internal assessment..

**2. Carry forward of marks**

In case a student fails to secure the minimum 50% in any Theory or Practical course as specified ,then he/she shall reappear for the end semester examination of that course. However his/her marks of the Internal Assessment shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.

**3. Improvement of internal assessment**

A student shall have the opportunity to improve his/her performance only once in the Sessional exam component of the internal assessment. The re-conduct of the Sessional exam shall be completed before the commencement of next end semester theory examinations.

**Grading of performances:**

**Letter grades and grade points allocations:**

Based on the performances, each student shall be awarded a final letter grade at the end of the semester for each course. The letter grades and their corresponding grade points are given in table I

**Table –I Letter grades and grade points equivalent to Percentage of marks and performances**

<b>Percentage of Marks Obtained</b>	<b>Letter Grade</b>	<b>Grade Point</b>	<b>Performance</b>
90.00 – 100	O	10	Outstanding
80.00 – 89.99	A	9	Excellent
70.00 – 79.99	B	8	Good
60.00 – 69.99	C	7	Fair
50.00 – 59.99	D	6	Average
Less than 50	F	0	Fail
Absent	AB	0	Fail

A learner who remains absent for any end semester examination shall be assigned a letter grade of A Band a corresponding grade point of zero. He/she should reappear for the said evaluation/examination in due course.

**18. The Semester grade point average(SGPA)**

The performance of a student in a semester is indicated by a number called ‘Semester Grade Point Average’ (SGPA). The SGPA is the weighted average of the grade points obtained in all the courses by the student during the semester. For example, if a student takes five courses(Theory/Practical) in a semester with credits C1, C2, C3, C4 and C5 and the student’s grade points in these courses are G1, G2, G3, G4 and G5, respectively, and then students’ SGPA is equal to:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4G_4 + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

$$C_1 + C_2 + C_3 + C_4 + C_5$$

The SGPA is calculated to two decimal points. It should be noted that, the SGPA for any semester shall take into consideration the F and ABS grade awarded in that semester. For example if a learner has a F or ABS grade in course 4, the SGPA shall then be computed as:

$$\text{SGPA} = \frac{C_1G_1 + C_2G_2 + C_3G_3 + C_4 * \text{ZERO} + C_5G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

$$C_1 + C_2 + C_3 + C_4 + C_5$$

### Cumulative Grade Point Average(CGPA)

The CGPA is calculated with the SGPA of all the II semesters to two decimal points and is indicated in final grade report card/final transcript showing the grades of all II semesters and their courses. The CGPA shall reflect the failed status in case of F grade(s),till the course(s) is/are passed. When the course(s)is/are passed by obtaining a pass grade on subsequent examination(s) the CGPA shall only reflect the new grade and not the fail grades earned earlier. The CGPA is calculated as:

$$\text{CGPA} = \frac{C_1S_1 + C_2S_2 + C_3S_3 + C_4S_4 + C_5S_5 + C_6S_6}{C_1 + C_2 + C_3 + C_4 + C_5 + C_6}$$

$$C_1 + C_2 + C_3 + C_4 + C_5 + C_6$$

where C<sub>1</sub>, C<sub>2</sub>, .... is the total number of credits for semester I,II.... and S<sub>1</sub>,S<sub>2</sub>,....is the SGPA of semester I,II....

### Declaration of class

The class shall be awarded on the basis of CGPA as follows:

First Class with Distinction= CGPA of. 7.50 and above

First Class= CGPA of 6.00 to7.49

Second Class= CGPA of 5.00 to5.99

**Award of Ranks**

Ranks and Medals shall be awarded on the basis of final CGPA.

**Award of degree**

Candidates who fulfill the requirements mentioned above shall be eligible for award of PG Diploma during the ensuing convocation.

**Final Mark list Of University Examination**

Sr. No.	Semester	Internal Assessment		End Semester Examination		Total	
		Theory 25 marks	Practica25 marks	Theory 75 marks	Practical 75marks	Theory 100 marks	Practical 100 marks
1	Semester I						
2	Semester II						

