

Gynaecologic Oncology



**Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560 041**



REGULATIONS, SYLLABUS AND SCHEME OF EXAMINATIONS

Master of Chirurgie in Gynaecologic Oncology



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28.8.17

Rajiv Gandhi University of Health Sciences, Karnataka

4th 'T' Block, Jayanagar, Bangalore - 560041

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REGUATIONS, SYLLABUS AND SCHEME OF EXAMINATIONS

Master of Chirurgie in Gynaecologic Oncology

This book can be had from:

The Registrar
Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560041

To be read along with the

Revised Regulations and Curricula for Post Graduate Degree and Diploma Courses in
Pre-Clinical Medical Sciences

(Annexure to University Notification No. AUTH/10Syn/ORD/006-007-008/2014-2015 dated 16.09.2014)

Also available from

The Registrar
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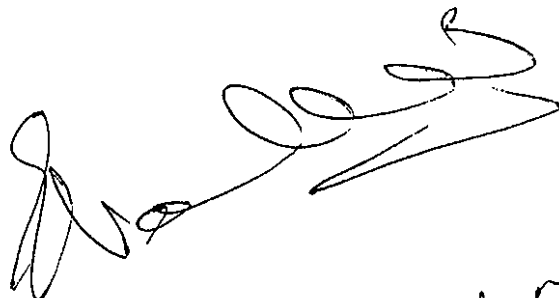

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Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore



The Emblem

The Emblem of the Rajiv Gandhi University of Health Sciences is a symbolic expression of the confluence of both Eastern and Western Health Sciences. A central wand with entwined snakes symbolises Greek and Roman Gods of Health called Hermis and Mercury is adapted as symbol of modern medical science. The pot above depicts Amrutha Kalasham of Dhanvanthri the father of all Health Sciences. The wings above it depict Human Soul called Hansa (Swan) in Indian philosophy. The rising Sun at the top symbolises knowledge and enlightenment. The two twigs of leaves in western philosophy symbolises Olive branches, which is an expression of Peace, Love and Harmony. In Hindu Philosophy, it depicts the Vanaspathi (also called as Oushadi) held in the hands of Dhanvanthri, which are the source of all Medicines. The lamp depicts human energy (kundalini). The script "Devahitham Yadayahu" inside the lamp is taken from Upanishath Shanthi Manthram (Bhadram Karnebhishrunuyanadev...), which says "May we live the full span of our lives allotted by God in perfect health" which is the motto of the Rajiv Gandhi University of Health Sciences.

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore

Vision Statement

The Rajiv Gandhi University of Health Sciences, Karnataka, aims at bringing about a confluence of both Eastern and Western Health Sciences to enable the humankind "Live the full span of our lives allotted by God in Perfect Health"

It would strive for achievement of academic excellence by Educating and Training Health Professionals who

- ☐ Shall recognize health needs of community,
- ☐ Carry out professional obligations Ethically and Equitably and in keeping with National Health Policy,

It would promote development of scientific temper and Health Sciences Research.

It would encourage inculcation of Social Accountability amongst students, teachers and institutions.

It would Support Quality Assurance for all its educational programmes

Motto

Right for Rightful Health Sciences Education

No.AUTH/108Syn/ORD/006-007-008/2014-15

dated 16.09.2014

Notification

Sub: Revised Ordinance pertaining to Post Graduate Courses (Pre-Clinical Medical subject) course in Anatomy, Physiology and Biochemistry.

- Ref 1. Notification No: UA/ORD -6/1999-2000 dated 01.01.2000, for pre-clinical subjects.
2. Minutes of the meeting of BOS Medicine (Pre-Clinical) (PG) held on 09/04/2014.
3. Minutes of the meeting of Faculty of Medicine held on 06/06/2014.
4. Minutes of the meeting of the Academic Council held on 19/06/2014.
5. Minutes of the 108th meeting of the syndicate held on: 14/08/2014

In exercise of the powers conferred under 35(2) of the Rajiv Gandhi University of Health Science Act 1994, the Syndicate at its meeting held on 14/08/2014 has been pleased to approve the Revised Ordinance pertaining to Post Graduate Courses in Pre-Clinical Medical subjects –Anatomy, Physiology and Biochemistry as shown in the annexure appended herewith.

The revised ordinance shall come into force from the academic year 2014-15 and onwards.

By order

Sd/-
Registrar

To,

The Principals of all Medical Colleges conducting Medical PG courses, affiliated to RGUHS

Copy to:

1. The Secretary to Governor, Governor's Secretariat, Raj Bhavan, Bangalore – 56001
2. The Secretary to Government, Medical Education, Department of Health and Family Welfare, VikasaSoudha, Bangalore -56001
3. All the member of the Syndicate/Senate/Academic Council
4. PA to VC/Registrar/Registrar (Evaluation)/Finance Officer
5. Programmer, Computer Section for Notification on the University Homepage on the internet, for general information of all interested.
6. Public Information Officer
7. Consultant, CDC/ DR Affiliation/DR Admission/ DR Examination 8. Guard File/Office Copy

Preface

Master of Chirurgie in Gynaecologic Oncology deals with prevention, early detection, investigations, diagnosis, evidence based management of de novo and recurrent gynaecologic cancers and complications, palliative care, terminal care, relevant clinical and basic science research along with awareness about psycho-socio-culturo-economic and policy issues. Gynaecologic cancers, i.e. cancers of the female genital tract consist of the malignant diseases of the cervix, body of the uterus, ovary, Fallopian tube, vagina, vulva and gestational trophoblastic disease. The course is designed to train candidates who have a postgraduate qualification in Obstetrics and Gynaecology that is recognised by the Medical Council of India. It is designed to be a formal comprehensive three-year training programme in all aspects of Gynaecologic Oncology and includes training in relevant aspects of allied specialities such as Radiation Oncology, Urology, Gastrointestinal Surgery, Medical Oncology, Radiology & Imaging, Pathology, etc.

The application for the institution of the course of Master of Chirurgie in Gynaecologic Oncology by the Medical Council of India was made by the Kidwai Memorial Institute of Oncology in 1995. The syllabus for the course was developed by the Department of Gynaecologic Oncology, Kidwai Memorial Institute of Oncology, Bengaluru, Karnataka. The course was instituted by the Medical Council of India in 2000. This syllabus has now been updated and integrated with the regulations, syllabus and scheme of examinations of the Rajiv Gandhi University of Health Science Karnataka. However, the University is extremely proud that the initiative to institute the course for the first time in India came from Karnataka. Hence the first five chapters of the original syllabus submitted by the Kidwai Memorial Institute of Oncology in 1995, to the Medical Council of India are reproduced unchanged in this document.

INTRODUCTION

The need for trained medical oncologists and surgical oncologists who are drawn from the medical and surgical specialist groups and will restrict their work to the subspecialty of oncology in their respective fields has been accepted. Such courses are now available in various institutions in the country.

Gynaecologic Cancers are cancers of the female genital tract. The malignant diseases of the cervix, body of the uterus, ovary, Fallopian tube, vagina, vulva and gestational trophoblastic disease are included within its purview. According to the national Cancer Registry Project of the Indian Council of Medical Research the incidence of this group of malignancies varies between 31.6 and 49.5/100,000. These gynaecological cancers form more than 45% of cancers in women.

At present the medical personnel who manage these patients vary in institutions all over the country. There are very few institutions all over the country. There are very few institutions in which there is a department of Gynaecologic Oncology, moreover there are less than 30 Indian Obstetrician and Gynaecologists who have restricted themselves professionally to the specialty of Gynaecology Oncology. Therefore, the care of the woman with a gynaecological cancer is generally fragmented between the Radiation Oncologists, medical Oncologist and Surgical Oncologist etc. The Obstetrician and Gynaecologist is the specialist who is trained to diagnose and treat benign diseases of the female genital tract. Therefore, it is but natural, that members of this speciality who already have the "feel" of the normal tissues of the female pelvis be trained to become Gynaecologic Oncologists and thus impart the necessary "sub-specialist" care to women with gynaecological cancer.

The proposal to train personnel as Gynaecologic Oncologists in a developing country like ours must lead to a debate. The accepted medical tradition in this country has been that Obstetricians and Gynaecologists must be the chief contributors towards:

- decreasing maternal morbidity and mortality
- decreasing perinatal morbidity and mortality
- measures for population control

No doubt these are important national priorities, however, when more than 45% of cancers in women are gynaecological, of which

- one is preventable – Cancer Cervix and
- others are Curable – Gestational Trophoblastic Disease and Germ Cell Tumours

then as part of the national priority and policy for measures to improve women's health, it becomes imperative that steps be taken to create from the specialty of Obstetrics and Gynaecology a sub group of personnel who will concentrate on this aspect of women's health and contribute positively towards:

- Prevention
- Early detection
- Improved survival
- Palliative care and pain relief of patients with gynaecologic cancers in Indian women.

Faculty (1995)

Kidwai Memorial Institute of Oncology,

Department of Gynaecologic Oncology

Bangalore, Karnataka

THE NEED FOR THE SUB-SPECIALITY IN INDIA

A series of articles were authored by prominent Obstetrician and Gynaecologists from well-established institutions from all over the country in the Journal of Obstetrics and Gynaecology in 1960 and 1961, reveal the magnitude of the problem of cancer of the female genital tract prevailing at that time. Carcinoma cervix was the most common condition (70%) encountered amongst the disorders of the female genital tract and was responsible for 20% of deaths from all forms of cancer in women and formed 84.28% of all malignancies of the female genital tract. At the Chittaranjan Cancer Hospital, Calcutta, between 1954-1958 there were 4258 cases of malignancy in women of which 2420 (56.8%) were of the female genitalia and 2135 (50.1%) of the cervix, and only 61 (1.4%) of the body of the uterus. At the Christian Medical College Hospital, Vellore between 1955 to 1960, cancer of the cervix formed 83.9%, body of the uterus 6.6%, ovary 5%, vulva 2.9%, and vagina 1.03% of the malignancies of the female genital tract. At the Radium Institute and Cancer Hospital, Hyderabad in 1957-1959 there were only 0.6% cases of carcinoma of the cervix in stage 0.

At the Department of Gynaecologic Oncology, Kidwai Memorial Institute of Oncology between 1980 and 1986, 7846 women were proved to have gynaecological malignancies. It was observed that women with non-cervical gynaecologic malignancies comprised of 11.55 % (905), while 88.47% (6941) of the women had carcinoma cervix. The stage distribution was as follows: Stage 0 0.32%, IA 0.01% IB 2.49%, IIA 0.55%, IIB 22.65%, IIIA 0.12%, IIIB 69.1%, and IV 4.55%. The reasons for patient delay as assessed in 1085 women who presented for treatment with the disease in stages IIB, IIIA, IIIb and IV were observed to be as follows: 57.6% stated that they were unaware of the symptoms of the disease and 33.7% indicated that they had not been adequately advised by the medical personnel to whom they had reported their symptoms.

The Biannual Report (1988-89) of the National Cancer Registry Project of the Indian Council of Medical Research observes that Carcinoma Cervix forms, at Bangalore 27%, Bombay 25% and at Madras 40% of the total malignancies in women. The number of cervical cancers in India by the year 2000 AD has been estimated to be 104000.

Thus, it is obvious over the past three decades that there has been no change in the occurrence of this preventable cancer. In the developed countries like the Scandinavian countries, there are well established contributions made by the trained Gynaecologic oncologists produced by these institutions in the prevention and management of Gynaecological cancers.

There are no significant organised screening programs for Cancer Cervix in the United States of America, however it would appear opportunistic screening is well established. This was the result of the impact that was produced on members of the speciality of Obstetrics and Gynaecology by the creation of the sub-specialty of Gynaecologic Oncology.

Research is being undertaken by the Indian Council of Medical Research to assess the feasibility of introducing the control of cervical cancer as a part of the regular work of the health infrastructure. When this is implemented it would mean that a serious attempt will be made to increase the awareness of the Indian women with regard to prevention and early detection of cancer cervix and cancer of the female genital tract. Hence, the time is fast approaching when there will be required on a national basis Obstetrician and Gynaecologists who are trained to manage these health problems of women.

At present, Obstetrician and Gynaecologists are not well equipped to respond to such a demand. Moreover, the teaching programme of Obstetrics and Gynaecology is directed almost entirely towards Obstetrics, with emphasis on the reduction of maternal morbidity, mortality and perinatal morbidity and morbidity. There is very little stress on the development of surgical skills which leads to the lack of confidence in the members of the speciality to tackle intraoperative surgical problems that will arise during surgery for gynaecological cancers.

The workshop "Control Strategies and early Detection in Cervical Cancer" held at Madras in November 1993, suggests that orientation programmes be conducted by institutions with the expertise, towards reorienting the Gynaecologists perception of Gynaecologic Oncology especially with regard to cervical cancer control. The policy of the Regional Cancer Centres towards the field of Gynaecologic Oncology is not uniform.

Though there have been many aspirants who have shown an interest and made enquiries regarding a Sub-specialisation course in Gynaecologic Oncology, they have finally joined the main stream of Obstetrics and Gynaecology, because of the lack of opportunity of a job oriented/placement oriented training programme.

Hence, it becomes necessary now to make available this sub-speciality in this country. This should gradually lead to the presence of at least one Gynaecologic Oncologist in every Department of Obstetrics and Gynaecology in this country.

Faculty (1995)

Kidwai Memorial Institute of Oncology,

Department of Gynaecologic Oncology

Bangalore, Karnataka

DEVELOPMENT OF SUB-SPECIALTY OF GYNAECOLOGIC ONCOLOGY IN INDIA

At present, it is necessary to depend upon international experience in order to formulate the regulations for a course of Gynaecologic oncology in India. This proposal has drawn heavily from the guidelines laid down by the Royal Australian College of Obstetricians and Gynaecologists, the Royal College of Obstetricians and Gynaecologists of the United Kingdom and the Division of Gynaecology, United States of America in order to formulate the course which will lead to the conferring of the M.Ch. degree to candidates who complete the course and are successful in the examinations.

Subsequently with our own national experience in conducting the course, suitable modifications can be made to suit the requirements of our country.

No attempt is made here unlike in the United States of America and Australia to project the number of gynaecologic oncologists needed in India. It is hoped that this initiative will snowball into the commencement of similar courses in other appropriate institutions in the country so that the necessary number of specialists will accrue with time.

The specialty of Obstetrics and Gynaecology of the United States of America which first started the subspecialty of gynaecologic oncology initially devised a 2 years course. Their experience of 20 years of conducting a 2-year course led them to increase the duration of the course to 3 years. The authorities in all the three countries have emphasised on the need to conduct the course with the aim to develop in the Gynaecologic Oncologist:

- Surgical skills for independent functioning
- Attitudes to research
- Adequate knowledge in the administration of chemotherapeutic agents
- Confidence in the capacity to manage the complications of the disease and the therapy
- Awareness about the psychosexual problems of Gynaecologic Cancers

Hence, the aim while drawing up the course details and the syllabus has been to create a course which will attempt in the "production" of trained personnel whose knowledge of the field will be on par with international standards.

The following responsibility also rests on the Gynaecologic Oncologist

- To inculcate public awareness about cancer cervix so as to contribute to the control of the disease by primary, secondary and tertiary prevention.
- To instil in colleagues the awareness of the need to avoid medical delay by timely referral of patients with Gynaecologic Cancers to specialised centres.

The Indian Gynaecologic Oncologist thus has an uphill task which in itself should prove to be challenging and render job satisfaction could compensate for "loss of obstetrics, infertility and endocrinology"

Faculty (1995)

Kidwai Memorial Institute of Oncology,

Department of Gynaecologic Oncology

Bangalore, Karnataka

A GYNAECOLOGIC ONCOLOGIST – THE DEFINITION

A Gynaecologic Oncologist is a specialist in obstetrics and gynaecology, who is trained and assessed as being competent in the comprehensive management of patients with gynaecological cancers i.e., prevention, early detection, investigation, diagnosis and therapeutic modalities including surgery and chemotherapy, research and all effective forms of cancer therapy – preventive, curative, palliative, pain relief, and the total care of the patient's gynaecological cancer or complications resulting there from.

Faculty of Gynaecologic Oncology- 2014
Rajiv Gandhi University of Health Sciences

A DEPARTMENT OF GYNAECOLOGIC ONCOLOGY – THE REQUIREMENTS

To be formally recognized and approved for the purposes of training, the Department of Gynaecologic Oncology should:

1. Be a referral and resource centre for the management of patients with gynaecological malignancies and precursors
2. Provide a full range of diagnostic services such as
 - Colposcopy
 - Pathology or have ready access to the same
 - Cytology or have ready access to the same
 - Organ imaging facilities or have ready access to same
3. Provide comprehensive cancer care including
 - Surgery
 - Chemotherapy
 - Have ready access to radiotherapeutic facilities
 - Critical care as required
4. Be involved in research
 - Clinical (including trials)
 - Basic
5. Be involved in education
 - Undergraduate, Postgraduate, and paramedical and nursing
6. Have a sufficient workload to
 - Maintain and develop the clinical skills of existing personnel
 - Train a gynaecologic oncologist
7. Collaborate closely with other specialties e.g. Cardiology, Urology, Nephrology, Plastic surgery, Gastroenterology, Pulmonary Medicine, Physiotherapy, etc.
8. Liaison with experts in pain relief
9. Liaison with organisation involved in hospice and palliative care
10. Be constantly striving to maximum standards on par with that of the international ones in the field of gynaecologic oncology.

Faculty (1995)

Kidwai Memorial Institute of Oncology,

Department of Gynaecologic Oncology

Bangalore, Karnataka

Regulations and curricula for the M.Ch. (Gynaecologic Oncology) Course (2014)

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore

1. **Name of the course** : M.Ch. (Gynaecologic Oncology)
2. **Eligibility for admission** :

Candidate seeking admission for M.Ch.in Gynaecologic Oncology must possess a recognised degree of MS (or its equivalent recognised degree) in Obstetrics and Gynaecology as specified in the regulations of the Medical Council of India from time to time.

3. Obtaining Eligibility Certificate by the University before making Admission

No candidate shall be admitted for any postgraduate degree/diploma course unless the candidate has obtained and produced the eligibility certificate issued by the University. The candidate must make an application to the University with the following documents along with the prescribed fee:

1. MBBS pass / degree certificate issued by the University.
2. Marks cards of all the university examinations passed MBBS course.
3. Attempt Certificate issued by the Principal.
4. Certificate regarding the recognition of the medical college by the Medical Council of India.
5. Completion of internship certificate.
6. In case internship was done in a non-teaching hospital, a certificate from the Medical Council of India that the hospital has been recognised for internship.
7. Registration by any State Medical Council and
8. Proof of SC/ ST or Category I, as the case may be.

Candidates should obtain the Eligibility Certificate before the last date for admission as notified by the University. A candidate who has been admitted to postgraduate course should register his / her name in the University within a month of admission after paying the registration fee.

4. Intake of Students

The intake of students to each course shall be in accordance with the ordinance in this behalf.

5. Duration of Study

The duration of the course shall be for a period of 3 years consisting of 6 terms.

6. Method of Training

The training for the M.Ch. course shall be residency pattern with graded responsibilities in the management and treatment of patients entrusted to his/her care. The participation of the students in all facets of educational process is essential. Every candidate should take part in seminars, group discussions, grand rounds, case demonstration, clinics, journal review meetings, CPC and clinical meetings. Every candidate will be required to participate in the teaching and training programme of undergraduate students and post graduate students of obstetrics and gynaecology. Training should include involvement in research studies. The student should be posted to allied specialty departments or institutions

7. Attendance, Progress and Conduct

7.1 A candidate pursuing the M.Ch. course should work in the concerned department of the institution for the full period as a full-time student. No candidate is permitted to run a clinic/laboratory/nursing home while studying postgraduate course.

7.2 Each year shall be taken as a unit for the purpose of calculating attendance.

7.3 Every student shall attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons.

7.4 Every candidate is required to attend a minimum of 80% of the training during each academic year of the post graduate course. Provided further, leave of any kind shall not be counted as part of academic term without prejudice to minimum 80% attendance of training period every year.

7.5 Any student who fails to complete the course in the manner stated above shall not be permitted to appear for the University Examinations.

8. Monitoring Progress of Studies:

8.1 Work diary / Log Book - Every candidate shall maintain a work diary and record of his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. (please see Chapter IV for model checklists and logbook specimen copy). Special mention may be made of the presentations by the candidate. The work diary shall be scrutinised and certified by the Head of

the Department and Head of the Institution, and presented in the university practical/clinical examination.

8.2 Periodic tests: In case of degree courses of three years duration (MD/MS, DM, MCh.), the concerned departments may conduct three tests, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce. Records and marks obtained in such tests will be maintained by the Head of the Department and sent to the University, when called for.

8.3 Records: Records and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University or MCI.

9. Dissertation

9.1 Every candidate pursuing M.Ch. degree course is required to carry out work on a selected research project under the guidance of a recognised post graduate teacher. The results of such a work shall be submitted in the form of a dissertation.

9.2 The dissertation is aimed to train the student in research methods and techniques.

It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, and comparison of results and drawing conclusions.

9.3 Every candidate shall submit to the Registrar (Academic) of the University in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the course on or before the dates notified by the University. The synopsis shall be sent through the proper channel.

9.4 Such synopsis will be reviewed and the dissertation topic will be registered by the University. No change in the dissertation topic or guide shall be made without prior approval of the University.

9.5 The dissertation should be written under the following headings:

- i. Introduction
- ii. Aims or Objectives of study
- iii. Review of Literature
- iv. Material and Methods

- v. Results
- vi. Discussion
- vii. Conclusion
- viii. Summary
- ix. References
- x. Tables
- xi. Annexures

9.6 The written text of dissertation shall be not less than 50 pages and shall not exceed

150 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. A declaration by the candidate that the work was done by him/her should be included. It should be endorsed and certified by the guide, head of the department and head of the institution.

9.7 Four copies of dissertation thus prepared shall be submitted to the Registrar (Evaluation) along with a CD, through proper channel, six months before final examination on or before the dates notified by the University.

9.8 The dissertation shall be valued by examiners appointed by the University. Approval of dissertation work is an essential precondition for a candidate to appear in the University examination. Grades will be awarded to the dissertation as under:

- A : Excellent > 70%
- B : Good 60 - 70%
- C : Satisfactory 50-60 %
- D : Not Satisfactory <50%

Could be accepted if there is possibility to provide corrections within the next 2 months and submit.

If not accepted: candidate to take up theory exam after 6 months with submission of thesis.

The candidate will be informed before the exam fees is to be paid. The thesis evaluation report of the students to be sent to the college from the university before student writes the university theory exam.

9.9 Guide: The academic qualification and teaching experience required for recognition by this University as a guide for dissertation work is as per Medical Council of India Minimum Qualifications for Teachers in Medical Institutions Regulations, 1998. Teachers in a medical college/institution having a total of eight years teaching experience out of which at least five years teaching experience as

Lecturer or Assistant Professor gained after obtaining postgraduate degree shall be recognised as post graduate teachers.

A Co-guide may be included provided the work requires substantial contribution from a sister department or from another medical institution recognised for teaching/training by Rajiv Gandhi University of Health Sciences/Medical Council of India. The co-guide shall be a recognised postgraduate teacher of Rajiv Gandhi University of Health Sciences.

9.10 Change of guide: In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the university.

10. Schedule of Examination

The examination for the M.Ch. course shall be held at the end of three years. The university shall conduct two examinations in a year at an interval of four to six months between two examinations. Not more than two examinations shall be conducted in an academic year.

11. Scheme of examination

The examination shall consist of theory, clinical/practical and viva voce examination.

11.1 (Theory) (Written Examination): The theory examination shall consist of four question papers, each of three hours' duration. Each paper shall carry 100 marks.

- | | |
|------------|--|
| Paper I: | Screening and Basic Sciences pertaining to Gynaecologic Oncology |
| Paper II: | Core Gynaecologic Oncology |
| Paper III: | Allied Specialities of Gynaecologic Oncology |
| Paper IV: | Recent Advances in Gynaecologic Oncology |

11.2 Practical / Clinical Examination: In case of practical examination it should be aimed at assessing competence, skills of techniques and procedures as well as testing student's ability to make relevant and valid observations, interpretation and experimental work relevant to his / her subject.

The clinical examination should aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist. Each candidate should examine at least one long case and two short cases.

The maximum marks for the clinical examination shall be 200.

11.3 Viva Voce: Viva Voce examination shall aim at assessing thoroughly depth of

knowledge, logical reasoning, confidence and oral communication skills. The maximum marks shall be 100.

11.4 Examiners: There shall be at least four examiners in each subject. Out of them, two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

11.5 Criteria for declaring as pass in University Examination*: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and viva voce examination.

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Registrar (Evaluation). * Amended as per notification UA/ORD-6/99-2000 dated 9.4.2001

12. Number of Candidates per day. The maximum number of candidates for practical/clinical and viva-voce examination for the M.Ch. Course will be 3 per day

**Goals and General Objectives of Postgraduate
Medical Education Program**

Goal

The goal of postgraduate medical education shall be to produce competent specialist and /or Medical teacher:

- (i) who shall recognise the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;
- (ii) who shall have mastered most of the competencies, pertaining to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system;
- (iii) who shall be aware of the contemporary advances and developments in the discipline concerned;
- (iv) who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and
- (v) who shall have acquired the basic skills in teaching of the medical and paramedical professionals.

General Objectives

At the end of the postgraduate training in the discipline concerned the student shall be able to:

- i) Recognise the importance of the concerned speciality in the context of the health need of the community and the national priorities in the health sector.
- ii) Practice the speciality concerned ethically and in step with the principles of primary health care.
- iii) Demonstrate sufficient understanding of the basic sciences relevant to the concerned speciality.
- iv) Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and promotive measures/strategies.
- v) Diagnose and manage majority of the conditions in the speciality concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
- vi) Plan and advice measures for the prevention and rehabilitation of patients suffering from disease and disability related to the speciality.

- vii) Demonstrate skills in documentation of individual case details as well as morbidity and mortality data relevant to the assigned situation.
- viii) Demonstrate empty and humane approach towards patients and their families and exhibit interpersonal behaviour in accordance with the societal norms and expectations.
- ix) Play the assigned role in the implementation of national health programmes, effectively and responsibly.
- x) Organise and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.
- xi) Develop skills as a self-directed learner, recognise continuing educational needs; select and use appropriate learning resources.
- xii) Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyse relevant published research literature.
- xiii) Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.
- xiv) Function as an effective leader of a health team engaged in health care, research or training.

Statement of the Competencies

Keeping in view the general objectives of postgraduate training, each disciplines shall aim at development of specific competencies, which shall be defined and spelt out in clear terms. Each department shall produce a statement and bring it to the notice of the trainees in the beginning of the programme so that he or she can direct the efforts towards the attainment of these competencies.

Components of the PG Curriculum

The major components of the PG curriculum shall be:

- Theoretical knowledge
- Practical/clinical Skills
- Training in Thesis.
- Attitudes, including communication.
- Training in research methodology.

TRAINING SYLLABUS IN GYNAECOLOGIC ONCOLOGY

Goal:

The Master in Chirurgie course in Gynaecologic Oncology should enable the medical postgraduate in obstetrics and gynaecology to be able to function as an independent consultant clinician in gynaecologic oncology with awareness about the psycho-socio-culturo-economic circumstances of the Indian woman with a gynaecologic cancer.

The educational curriculum

General aims of the training programme

At the end of the training programme the candidate should:

- i) Be able to function as an independent consultant clinician in gynaecologic oncology.
- ii) Have an understanding of the aetiology, epidemiology, screening, detection and prevention of gynaecological malignancy.
- iii) Acquire the necessary knowledge and skill to perform radical operations required in the management of gynaecological cancer and its complications, dissection of inguinal, pelvic, periaortic and supraclavicular lymph nodes and reconstructive techniques for the restoration of function. Understand the surgical principles and skills necessary to perform appropriate surgical procedures on the gastrointestinal tract, urinary tract and vascular systems as and when required for the management of gynaecologic cancers. The candidate must develop skill in the diagnosis and principles of management of disorders of the breast. Skills must also be acquired in a wide range of investigative procedures – including cystoscopy, sigmoidoscopy, thoracentesis, paracentesis and the placement and care of permanent central intravenous lines. In addition, detailed knowledge of relevant ultrasound, CT scan and lymphangiographic and other organ imaging techniques must be developed. A sound knowledge of parenteral nutrition and intensive care management of the perioperative patient is also required. Candidates also need to develop skill in the management of pain relief and the care of the terminally ill patient.
- iv) Be well-informed in the methods and techniques of radiation treatment, including brachytherapy, external and radioisotope therapy. The candidate must be capable of participating in the planning of radiation treatment and must acquire an understanding of the principles of radiobiology and radiation physics. The candidate must develop skill in the management of the side-effects and complications of radiotherapy.

- v) Acquire an advanced knowledge in the clinical pharmacology of cancer chemotherapy and related treatment modalities. He should develop skills in the selection of patients for chemotherapy and the detailed practical use of the different drugs used in the management of Gynaecological malignancies. The candidate should develop skills in the management of toxic side-effects and acquire a wide knowledge of the use of these agents, sufficient to administer them in an independent capacity.
- vi) Develop a high level of skill in the assessment of the effects of treatment and the care of complications both of the disease and treatment. This includes skill in the assessment of the patient after treatment as well as skill in planning long-term management.
- vii) Acquire a high level of skill in colposcopy and in the management of pre-invasive and micro-invasive lesions of the female genital tract. Acquire competency in the management of premalignant and micro invasive lesions of the female genital tract including the techniques of colposcopy, LLETZ, Cryosurgery, Cold Coagulation, Conisation of the cervix
- viii) Develop a sound knowledge of gross and microscopic pathology and cytology relevant to gynaecological oncology. This knowledge must be sufficient for the candidate to interpret the details of reports concerning the histopathology of gynaecological malignant disease and to use pathological findings effectively in making decisions regarding treatment and prognosis.
- ix) Develop skill in the planning, conduct and reporting of research in gynaecological oncology. In addition, the candidate must develop a high level of skill in the interpretation and evaluation of research reports.
- x) Be acquainted with the current literature on relevant aspects of basic, investigative and clinical gynaecologic oncology.
- xi) Understand cancer survivor issues and the principles underlying the management of fertility issues in gynaecologic cancer patients.
- xii) Have an understanding of the psycho-socio-culturo-economic aspects of the gynaecologic oncology in the Indian situation.

The training must integrate:

1. Clinical Competence
2. Method of Training – Acquiring /Imparting Medical Knowledge
3. The theoretical and practical basis of gynaecologic oncology
4. Concepts of research

1. Clinical competency

This will consist of developing:

competency in the domains of patient care, professionalism and practice of ethical medicine, interpersonal & communication skills and spirit of collaboration with ability to function as part of a team and build a team, acquiring medical knowledge and its practical application, development of practical skills and develop the spirit to continue to do so even after the completion of the course. All the domains are interrelated.

Patient care, professionalism:

- a. The candidate should have the skill required for comprehensive clinical assessment of a patient who:
 - i) needs screening for a gynaecologic cancer,
 - ii) is suspected to have a gynaecologic cancer
 - iii) is diagnosed to have a gynaecologic cancer
 - iv) is a known gynaecologic cancer patient
 - v) requires palliative and terminal care
- b. The candidate should be able to:
 - i) Elicit a detailed and appropriate history as per the patterns of clinical presentation of disease including family history and genetic susceptibility to cancer
 - ii) Correlate presenting symptoms and co-morbid symptoms
 - iii) Perform the appropriate detailed physical examination
 - iv) Collate information of previous investigations and treatment
 - v) Assess the investigations required to make a diagnosis and plan or change treatment
 - vi) Plan and execute general and specific preoperative investigation
 - vii) Identify risk factors - surgical and anaesthetic
 - viii) Assess the requirements for fitness for surgery
 - ix) Identify, plan and execute management of the side effects of treatment
 - x) Identify and plan execute management of complications both of the disease and the treatment
- c. The candidate should be able to independently:
 - i) plan and execute Pre, Peri, and post-operative care and be aware about the principles of perioperative nutrition and total parenteral nutrition
 - ii) plan and perform the surgical procedures laid out in the section on the theoretical and practical basis of gynaecologic oncology
 - iii) plan and administer cancer chemotherapy as laid out in the section on theoretical and practical basis of gynaecologic oncology
- d. The candidate should be:
 - i) able to demonstrate a commitment to carrying out professional responsibilities
 - ii) able to demonstrate adherence to ethical principles

Interpersonal, communication skills and collaboration

The candidate should be able to:

- i) Counsel appropriately about need for screening and screening results and any necessary treatment
- ii) Communicate a working diagnosis to patient and relatives and counsel about required investigations to reach a diagnosis
- iii) Deal with the sexual, ethical implications and the problems associated with the loss of fertility and preservation of fertility
- iv) Counsel about diagnosis, investigations, and appropriate treatment plan – intention to cure and intention to palliate including adverse effects, complications and prognosis related issues
- v) Support the morale of the patient and attendants in such circumstances
- vi) Obtain an informed consent

The candidate should be able to liaison and collaborate with and function as part of a team of:

- i) Colleagues of anaesthesiology, radiation oncology, palliative care, medical oncology, urology, surgical and medical gastroenterology etc.
- ii) Professional colleagues of the Nursing services and other paramedical services

2. Method of Training – Acquiring Medical Knowledge

The training for the M.Ch. course shall be residency pattern with graded responsibilities in the management and treatment of patients entrusted to his/her care. The participation of the students in all facets of educational process is essential. Every candidate should:

A. participate in the work of the gynaecologic oncology department for 32 months;

B. be posted to allied specialty departments or institutions with

- Participation in the work of a department of surgical oncology or department of surgical gastroenterology for at least one month;
- Participation in the work of a urology department for at least two weeks;
- Participation in the work (both outpatient and in-patient) of medical oncology department for at least two weeks;
- Participation as a member of a team planning radiotherapy and performing radiation treatment for at least two weeks;
- Participation in pathology and cytology sessions related to gynaecological oncology (including blood bank) for at least one week;
- Participation in the work of the nuclear medicine department for at least one week.
- Participation in the work of a department of gynaecologic oncology at another institution one month.

C. take part in seminars, group discussions, grand rounds, case demonstration, clinics, journal review meetings, tumour board, CPC and clinical meetings.

D. participate in the teaching and training programme of undergraduate students and post graduate students of obstetrics and gynaecology, nursing students, students of paramedical courses, persons of nonmedical, social and nongovernmental organisations.

E. participate in health education and outreach programmes directed towards cancer prevention and screening

F. conduct at least one research study to be submitted as dissertation.

The candidate is required to carry out work on a selected research project under the guidance of a recognised post graduate teacher with the aim to train the student in research methods and techniques. The student should identify a problem, formulate a hypothesis, perform a search and review of literature, design the study, collect data, process and critically analyse the same, compare results and draw conclusions.

The synopsis containing of proposed dissertation work will have to be submitted within six months from the date of commencement of the course on or before the dates notified by the University through the proper channel. This will be reviewed and the dissertation topic will be registered by the University. No change in the dissertation topic or guide shall be made without prior approval of the University. The student should submit report of progress every four months to the guide. Assessment of the dissertation can

The dissertation shall be prepared according to the proforma prescribed by the Rajiv Gandhi University of Health Sciences under the following headings:

I	Introduction
ii	Aims or Objectives of study
iii	Review of Literature
iv	Patient and Methods
v	Results
vi	Discussion
vii	Conclusion
viii	Summary
xi	References
x	Tables
xi	Annexures

The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound. Four copies of dissertation will have to be submitted to the Registrar (Evaluation) along with a CD, through proper channel, six months before final examination on or before the dates notified by the University.

G. maintain a log book of all the daily activities and record:

the surgeries and procedures performed either in the capacity of an assistant to the primary surgeon and those performed independently

the participation in the training programmes journal reviews, seminars, mortality meetings, case presentations / case discussions etc.

The work diary shall be submitted every month for scrutiny and certification by the Head of the Department.

H. tumour board

Participate, organise and conduct the tumour board at least once a week with the Department of Pathology, and Departments of Radiation Oncology, Radiology & Imaging, Medical Oncology, Urology, Surgical Oncology and Medical gastroenterology etc.

I. Periodic tests:

Three tests, two annual tests, one at the end of first year and the other in the second year and a third may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce. Records and marks obtained in such tests will be maintained by the Head of the Department and sent to the University.

3. The theoretical and practical basis of gynaecologic oncology

The candidate is expected to keep abreast of the recent advances of basic and specific aspects related to Gynaecologic Oncology.

I EPIDEMIOLOGY, AETIOLOGY AND CARCINOGENESIS

General Aim

The candidate should have extensive knowledge of the epidemiological factors related to genital neoplasia. The candidate should understand the currently known effect of environmental and familial factors on carcinogenesis with respect to the female genital tract.

Specific Objectives

The candidate should be able to explain

A. The relationship between each of the following factors and carcinogenesis.

1. Virus
Relationship of herpes, papilloma and other viruses and malignancy
2. Hormones
 - (a) Antenatal oestrogens and genital tract malignancy
 - (b) Exogenous and endogenous oestrogens
 - (c) Tamoxifen therapy
3. Radiation
 - (a) Increased risk of sarcoma and other malignancies in previously radiated tissues.
 - (a) Risks of diagnostic radiation procedures
4. Chemotherapeutic Agents
 - (a) Risk of myeloproliferative disorders, including leukaemia after exposure to chemotherapeutic agents.
 - (b) Risks to the foetus of maternal chemotherapy
 - (c) Risks to medical, nursing and ancillary staff handling chemotherapeutic drugs.
5. Environmental Factors

- Relationship of carcinogens to gynaecological malignancy, e.g., talc, asbestos, smoking, etc.
6. Genetic mutations (BRCA1, mismatch repair genes, etc.) and their relationships to various cancers
 7. Granulomatous venereal diseases and carcinoma of the vulva

B. Familial patterns in cancers of breast, endometrium, ovary and colon.

C. Basic biology of neoplastic cells, including:

1. Structure of the cell
2. Enzymology and metabolism

D. The cell cycle

E. The patterns of spread of gynaecologic cancers

F. The principles of tumour invasion and metastasis including

1. Tumour initiation
2. Uncontrolled proliferation
3. Angiogenesis
4. Invasion of local tissues, lymphatics and blood vessels
5. Colony formation at distant sites
6. Tumour cell migration

G. The molecular markers that are important for metastasis and invasion

II SURGICAL ANATOMY

The candidate should be able to describe the following and identify the structures involved:

(a) Vascular anatomy of:

- (i) Small bowel
- (ii) Large bowel
- (iii) Omentum
- (iv) Vulva
- (v) Thigh
- (vi) Urethra
- (vii) Bladder
- (viii) Ureter
- (ix) Cervix
- (x) Uterus
- (xi) Ovary & Fallopian tube
- (xii) Vagina
- (xiii) Supraclavicular area

(b) Lymphatic drainage of

- (i) Ovary
- (ii) Peritoneum
- (iii) Cervix
- (iv) Uterus

- (v) Vulva
- (vi) Vagina
- (vii) Supraclavicular area
- (viii) Gastrointestinal tract, urinary tract and mediastinum

- (c) Neuroanatomy of the pelvis
- (d) Retroperitoneal anatomy of abdomen and pelvis (including urinary tract).
- (e) Anatomy of anterior abdominal wall, inguinal and femoral regions.
- (f) Anatomy of distal sites of involvement in genital malignancy eg., supraclavicular area and mediastinum.
- (g) Appropriate anatomy for insertion of chemoport, venous access lines, peritoneal port
- (h) Anatomy of peritoneum, diaphragm, spleen and hepatobiliary system required for advanced cytoreductive surgery

III GENETICS

The candidate should understand the current knowledge of genetic aspects of neoplasia – oncogenes, tumour suppressor genes, DNA repair genes and oncogenesis and be familiar with the influence of genetics on the clinical practice of gynaecologic oncology.

Specific Objectives

The candidate should be able to:

1. Describe the chromosome and DNA changes associated with neoplasia.

The nature and extent of chromosome changes in cancer.

- a. numerical vs. structural changes
- b. specific vs. nonspecific changes
- c. inherited vs. acquired changes

2. Describe the laboratory and clinical evidence to support a genetic role in the development of neoplasia.

- a. Chromosome abnormalities in premalignant conditions
- b. Chromosome abnormalities and oncogenes

3. Describe the genetic changes known to occur in neoplasms of the genital tract in females.

4. Describe the role of oncogenes in the development of human cancer.

- a. Properties of oncogenes/proto-oncogenes and their products
- b. Mechanisms of oncogenes activation
- c. Specific families of oncogenes proteins

5. The role of oncogenes including the

- a. Properties of oncogenes
- b. Mechanism of action of oncogenes
- c. Specific families of oncogenes
- d. Relationship between growth factors and oncogenes

6. Describe the principles of the molecular biology techniques which are used in cancer research. E.g. DNA hybridization etc..
7. Explain the familial aspect of cancer eg. Breast, endometrial, ovarian and colorectal cancer especially with regard to risk related screening and relate the information to the practice of gynaecological oncology.
8. Cardinal principles of cancer genetics with respect to
 - a. age,
 - b. bilaterality
 - c. multiple primary cancers

IV PREVENTION AND SCREENING

1. Discuss the effects of the cervical screening programmes on incidence and mortality rates.
2. The different methods of screening including economic considerations
3. HPV classification, natural history of HPV infection, methods of detection, indication for HPV testing,
4. Vaccination
5. Discuss risk directed screening for cancer ovary
6. Prevention and screening of other gynaecological and other malignancies including breast and oral cancer.
7. Management of the screened patient
8. Management of precancerous lesions of the female genital tract

V DIAGNOSTIC TECHNIQUES AND STAGING

General Aims

The candidate should be able to acquire sufficient knowledge of diagnostic techniques and staging to diagnose and stage gynaecological malignancies

The candidate should be able to:

1. Take a comprehensive medical history and perform a general physical examination.
2. Taking a specific gynaecological history and performing a gynaecological examination.
3. Taking an oncologic history and perform the appropriate examination for the same.
4. Select the diagnostic techniques needed to:
 - a. Establish the diagnosis.
 - b. Establish the extent of disease.
 - c. Evaluate co-existing disease which may have been important bearing on selection of and response to treatment.
 - d. Evaluate the response of cancer to treatment.
5. Stage the cancer according to the current FIGO classification for gynaecological organ site tumours. Knowledge of the TNM staging system is also required.

Specific Objectives

1. Visual Diagnostic techniques

The candidate should be proficient in:

(a) Colposcopy

- (i) Describe the indications for, advantages and limitations of colposcopy in the evaluation of abnormal cervical or vaginal cytology and vulvar neoplasia
- (ii) Identify normal and abnormal epithelial and vascular patterns involving the cervix, vagina and vulva.

(b) Differential staining

Describe the principle underlying the use of various chemicals or stains (ascetic acid, toluidine blue, Lugol's solution) to contrast normal from abnormal epithelium in the cervix, vagina and vulva and to use these agents correctly.

(c) Cystoscopy

Conduct the procedure and interpret findings correctly

(d) Proctosigmoidoscopy

Interpret findings correctly

(e) Gastrointestinal Endoscopy

Describe the indications and limitations of the procedure

(f) Laparoscopy

Conduct the procedure and describe the indications for it.

(g) Hysteroscopy

Indications and techniques

2. Biopsy and Cytology

The candidate should be proficient in:

(a) Open Biopsy

- (I) Describe the indications for and conduct the following procedures: directed cervical biopsies, cone biopsy of the cervix, endocervical curettage, endometrial biopsy and curettage biopsy of the vulva and nodal sites such as groin, supraclavicular etc.
- (II) Describe the indications for and techniques for biopsies of possible metastatic sites such as lung, liver and spine.

(b) Percutaneous Biopsy

- (I) Describe the indications for and conduct the following procedures: nodal, transvaginal and transabdominal needle biopsy for the diagnosis or evaluation of extent of pelvic cancer, either in the form of fine needle aspiration (cytology) needle biopsy (tissue) paracentesis abdominis or thoracocentesis (fluid).

- (II) Describe the indications for other percutaneous (tissue or aspiration) biopsies as for pulmonary, hepatic and breast lesion.

(c) Cytology

- (I) Describe the correct techniques for collection of cytologic specimens from the various genital sites as used for cancer detection.
- (II) Describe the use, advantages and limitations of cytologic methods for cancer detection. e.g.. Sensitivity, specificity, false positives, false negatives.

3. Radiographic Diagnosis

The candidate should be able to describe the indications for the following techniques and their relative value and limitations. They are:

- (a) Standard plain film of heart and lungs, abdomen and skeletal system.
- (b) Computerised tomography of the head and body
- (c) Lymphography
- (d) Angiography (pulmonary, renal and pelvic)
- (e) Intravenous and retrograde urography
- (f) Gastrointestinal and colonic radiography
- (g) Nuclear magnetic resonance
- (h) PET scanning

4. Radioisotope Scanning

- (a) The candidate should be able to describe the important characteristics of the radioisotopes in general use as diagnostic aids.
- (b) The candidate should be able to describe the indication for the relative value of and current use of isotopic scanning of:

- (I) Liver-spleen
- (II) Bone
- (III) Brain
- (IV) Kidneys
- (V) Lungs
- (VI) Peripheral vascular system

5. Sonography

The candidate should be able to describe the various types of sonographic examinations, their indications, relative value, limitations and current use, in evaluation of the:

- (a) Liver
 - (b) Kidneys
 - (c) Intraperitoneal masses
 - (d) Retroperitoneal masses
- Abdominal & pelvic

- (h) Bartholin's gland
 - (I) Normal
 - (II) Duct cyst
 - (III) Carcinoma

- (i) BCC
- (j) Verrucous carcinoma

2. Explain the relationship between virus infection, benign lesion, carcinoma and other genital tract malignancies.
3. Compare and contrast in situ and invasive squamous cell carcinoma and identify features of invasion.
4. Explain the significance of early invasive carcinoma in prognosis and management.
5. Describe the natural history and biologic behaviour and routes of spread.

- (a) Squamous cell carcinoma
- (b) Extra mammary Paget's disease
- (c) Malignant melanoma
- (d) Sarcoma
- (e) BCC
- (f) Adenocarcinoma

Vagina

The candidate should be able to:

1. Identify the following conditions correctly by gross and or microscopic evaluation:

- (a) Benign conditions

- (I) Endometriosis
- (II) Adenosis
- (III) Acuminatum and other forms of wart virus disease
- (IV) Subclinical papilloma infection of vagina
- (V) Vaginal cysts, fibromas and other benign lesions

- (b) Intraepithelial neoplasia (VAIN)
- (c) Squamous cell carcinoma
- (d) Adenocarcinoma (including clear cell carcinoma)
- (e) Metastatic carcinoma
- (f) Malignant melanoma
- (g) Embryonal carcinoma
- (h) Sarcoma botryoides
- (i) Verrucous carcinoma

2. Describe the natural history, sites of occurrence and route of spread of vaginal carcinoma.

Vagina and Cervix

Discuss the possible consequences (and their relative occurrence) of administration of hormones to the mother during pregnancy upon the vagina and cervix of the female who was exposed to these agents while in utero.

Cervix

The candidate should be able to

1. Identify correctly cytological preparation and describe the problems in evaluation of:
 - (a) Normal epithelium
 - (b) Wart/Virus Atypia
 - (c) Squamous cervical intraepithelial neoplasia (CIN)
 - (d) Squamous cell carcinoma
 - (e) Adenocarcinoma & Adenocarcinoma in situ
 - (f) Trichomonads and Candida

2. Identify correctly by microscopic evaluation classic examples of the following conditions:
 - (a) Squamous metaplasia
 - (b) Micro glandular hyperplasia
 - (c) Condyloma acuminatum or squamous cell papilloma
 - (d) Squamous cervical intraepithelial neoplasia (CIN) (dysplasia and carcinoma in situ)
 - (e) Micro invasive carcinoma
 - (f) Squamous cell carcinoma
 - (g) Adenocarcinoma including clear cell and Adenocarcinoma in situ
 - (h) Adeno squamous carcinoma
 - (i) Glassy cell carcinoma
 - (j) Other malignant tumours, e.g.,
 - (i) Carcinosarcoma
 - (ii) Sarcoma
 - (iii) Choriocarcinoma
 - (iv) Melanoma
 - (v) Lymphoma
 - (vi) Carcinoid Tumours

3. Describe the development of the transformation zone with the formation of squamous metaplasia and its various stages of maturation and the development of CIN

4. Differentiate between the patterns of viral atypia and CIN

5. Differentiate between gland involvement by CIN and stromal invasion

6. Describe the various definitions of micro invasive carcinoma

7. Describe, discuss and correlate the colposcopy patterns, cytological findings and histologic characteristics in CIN and carcinoma

8. State methods by which adenocarcinoma of the endometrium may be distinguished from adenocarcinoma of the cervix

(e) Peripheral vascular thrombosis

6. Tumour Markers

The candidate should be able to:

- (a) Explain the basic principles, indications and interpretations of Radioimmune (RIA) and other assays for tumour markers:
 - (I) hCG and beta hCG, Alpha fetoprotein, Carcinoembryonic antigen, Ectopic hormone production eg. Growth hormone, Steroid hormones (oestrogen/androgen/corticosteroids), Monoclonal antibodies, CA125 and other tumour markers
 - (II) Receptor hormone assays.

7. Biochemistry

The candidate should be able to interpret abnormal values in blood chemistry as they pertain to gynaecological malignancy and its therapy in the following areas:

- (a) Liver function-alkaline phosphatase, bilirubin, SGOT, SPGT, LDH, serum proteins, clearance tests.
- (b) Renal function-BUN, creatinine, creatinine clearance, urine, electrolytes, osmolality
- (c) Serum electrolytes, osmolality and pH
- (d) Carbohydrate tolerance

8. Blood Coagulation

The candidate should be able to:

- (a) Describe tests needed to screen for coagulopathies, including disseminated intravascular coagulation, platelet and other disorders and interpret the results of these tests.
- (b) Interpret the results of tests needed to assess status of anticoagulant therapy.

9. Pulmonary Function Tests (PFT)

The Candidate should be able to:

- (a) Describe PFT and their indications in preoperative and postoperative evaluation when indicated either because of pre-existing disease or because of complications of therapy.
- (b) Interpret results of specific volume, and gas exchange tests, arterial PO₂, PCO₂ and pH.
- (c) Recognise normal values of arterial po₂, pco₂ and pH and the values associated with chronic lung disease and acute postoperative disease (adult respiratory distress syndrome, emboli).

10. Cardiovascular Function

The candidate should be able to:

- (a) Describe the indications for preoperative cardiac evaluation based on past history and physical findings.
- (b) Describe the indications for and interpret, in terms of normal and abnormal physiology:
 - (I) Central venous pressure
 - (II) Pulmonary wedge pressure
 - (III) ECG changes
 - (IV) (iv) systemic vascular resistance

11. Nutritional Assessment

The candidate should be able to:

- (a) Describe and interpret the routine laboratory and anthropometric assessment of the patient's nutritional status.
- (b) Explain the need, benefits and complications associated with hyperalimentation (enteral and parenteral)

VI PATHOLOGY

General Aim

The candidate should be able to identify, on the basis of direct visual and microscopic evaluation, lesions that are premalignant or malignant and distinguish them from benign disorders. The candidate should understand the genesis of malignant tumours, the biologic behaviour of premalignant and malignant tumours, important characteristics and prognostic features. The candidate should have extensive knowledge of the minutiae of clinic-pathological correlation.

Specific Objectives

Vulva

The candidate should be able to:

1. Identify the following conditions correctly by gross and or microscopic evaluation
 - (a) Benign conditions
 - (I) Hyperplastic and hypoplastic dystrophy
 - (II) Lichen sclerosis
 - (III) Condyloma accuminata
 - (IV) Subclinical papilloma virus infection
 - (V) Naevi
 - (VI) Granular cell myoblastoma
 - (b) Intraepithelial neoplasia (VIN)
 - (c) Squamous cell carcinoma
 - (d) Adenocarcinoma
 - (e) Paget's disease
 - (f) Malignant melanoma
 - (g) Sarcoma

9. Describe the identification and implementation of lymph vascular space invasion and other prognostic factors in cervical cancer.

10. Describe the natural history of cervical carcinoma and its precursors.

Endometrium

The candidate should be able to:

1. Identify histologic preparations of the following conditions:
 - (a) Benign cyclical endometrial changes including those of pregnancy
 - (b) Hyperplastic endometrium
 - (i) Cystic glandular hyperplasia - simple
 - (ii) Adenomatous hyperplasia - complex
 - (iii) Hyperplasia with "atypia" - atypical
 - (c) Carcinoma
 - (i) Adenocarcinoma including clear cell and serous papillary
 - (ii) Adenocarcinoma with squamous elements
 - (a) Adenoacanthoma
 - (b) Adenosquamous carcinoma
 - (d) Metastatic carcinoma
 - (e) Squamous carcinoma
2. Identify classic cytologic examples of the following:
 - (a) Endometrial cells, benign
 - (b) Adenocarcinoma
3. Explain the relationship between endometrial hyperplasia and adenocarcinoma
4. Describe the natural history, biologic behaviour and routes of spread of tumours of the corpus
5. Biologic behaviour and natural history of endometrial hyperplasias

Sarcomas

The candidate should be able to:

1. Identify histology and understand the clinic-pathological significance of:
 - (a) Mixed müllerian tumours
 - (i) homologous
 - (ii) heterologous
 - (b) Endometrial stromal sarcomas
 - (i) high grade
 - (ii) low grade
 - (c) Leiomyosarcomas

The candidate must be able to identify and understand the significance of low grade variants of these lesions.

2. Describe the natural history, sites of origin and routes of spread of uterine sarcomas and correlate with significant histological points of prognosis

Myometrium

The candidate should be able to:

1. Identify the following conditions grossly and or microscopically –
 - (a) Adenomyosis
 - (b) Leiomyoma
 - (c) Leiomyosarcoma
2. State clearly the accepted criteria for differentiating leiomyoma and leiomyosarcoma

Fallopian Tube

The candidate should be able to:

1. Identify the following conditions grossly and or microscopically-
 - (a) Benign Tumours
 - (b) Benign lesions simulating tumours
 - (i) Salpingitis
 - (ii) Tuberculous salpingitis with an active epithelial component
 - (iii) Salpingitis isthmica nodosa
 - (iv) Marked chronic salpingitis
 - (v) Healed follicular salpingitis
 - (c) Benign endometrial – type lesions
 - (i) Endometriosis
 - (ii) Pseudodecidual reaction
 - (d) Pregnancy related
 - (i) Ectopic pregnancy
 - (ii) Placental site (villi not in section)
 - (e) Adenocarcinoma and carcinosarcoma
 - (f) Metastatic carcinoma
2. Explain how to distinguish between primary and secondary tubal tumours.

Ovary

The candidate should be able to:

1. Identify the following conditions grossly and or microscopically –
 - (a) Normal and non-neoplastic ovarian structures
 - (i) Normal primary oocytes
 - (ii) Developing and regressing follicles (and cysts)

- (iii) Corpus luteum
- (iv) Epithelial inclusions
- (v) Mesonephric remnants
- (vi) Hilar cells
- (vii) Endometriosis

(b) Epithelial tumours (differentiate between benign and malignant and tumours of low malignant potential)

- (i) Serous
- (ii) Mucinous
- (iii) Endometrioid
- (iv) Clear Cell
- (v) Brenner
- (vi) Mixed and undifferentiated tumours

(c) Gonadal stromal tumours

- (i) Granulosa theca cell tumour
- (ii) Thecoma-fibroma
- (iii) Sertoli-Leydig cell tumours (androblastoma)
- (iv) Sex cord stromal tumours

(d) Germ cell tumours

- (i) Benign cystic teratoma (dermoid)
- (ii) Malignant teratomas
- (iii) Dysgerminoma
- (iv) Endometrial sinus tumours
- (v) Embryonal carcinoma
- (vi) Mixed germ cell tumours
- (vii) Choriocarcinoma

(e) Gonadoblastoma

(f) Sarcoma, Lymphoma

(g) Metastatic tumours

(h) Pseudomyxomaperitonei

2. Describe the natural history, biologic behaviour and frequency of various ovarian tumours and understand the theoretical classifications of these tumours.
3. Discuss the significance of ovarian tumours of low malignant potential.
4. State the frequency of various ovarian tumours of low malignant potential.
5. State the frequency of various ovarian tumours and the likelihood of their being bilateral.
6. State the features that distinguish primary from metastatic tumours in the ovary.

Trophoblast

The candidate should be able to:

1. Identify grossly and/or microscopically normal early pregnancy.
 - a. Normal early pregnancy (including an ovum)
 - b. Hydatidiform mole
 - (I) Complete
 - (II) Partial
 - c. Invasive mole
 - d. choriocarcinoma
2. Describe the different histologic patterns grouped together gestational trophoblastic disease and understand their natural history.

Lymph Nodes

The candidate should be able to:

1. Identify the following conditions microscopically.
 - (a) Metastatic carcinoma
 - (b) Benign epithelial inclusions
2. Recognize malignant epithelial cells in lymph-node aspirations.

Omentum

The candidate should be able to:

Recognize foci of metastatic carcinoma, distinguishing them from reactive mesothelial cells.

Peritoneal Fluid and Washings

The candidate should be able to:

Distinguish between reactive mesothelial cells and carcinoma.

VII PHYSIOLOGY AND PATHOPHYSIOLOGY

The candidate should have sufficient knowledge of normal physiology and pathophysiology to manage appropriately the gynaecologic oncology patients.

Specific Objectives

1. Fluid and Electrolytes

The candidate should be able to:

Describe the static and dynamic considerations of fluid, electrolyte and acid-base values in health and illness relative to gynaecologic oncology.

- A. Fluid compartments and toxicity

The candidate should be well versed:

- (a) with the implications of cancer treatment on menarche, menstruation, reproduction, menopause,
- (b) with strategies to preserve fertility

VIII. TUMOUR IMMUNIOLOGY

General Aims

The candidate should know the essential components and functions of the immune system and understand their relationship to oncology.

Specific Objectives

1. The Immune System and Responses

The candidate should be able to

- (a) Describe the origin and function of T and B lymphocytes
- (b) Describe the processing of antigens and activation of immune system
- (c) Describe the processing of subsets of T lymphocytes and K cells
- (d) Describe the production of antibodies
- (e) Describe the classification of antibodies, their synthesis and function
- (f) Describe the function of lymphokines and macrophages as effective mechanisms
- (g) Outline the description of complement and its role in the immune response
- (h) Describe the basis of humoral and cell-mediate immunity.

2. Applied Immunology

The candidate should be able to:

- (a) Describe the measurement of immediate and delayed hypersensitivity
- (b) Describe the measurement of humoral and cell mediated immunity
- (c) Describe the effects of nutrition, drugs and radiation on the immune response.
- (d) Describe the immune status of patients with cancer
- (e) Describe the role of immunity in host resistance
- (f) Describe the effect of immunodeficiency and immunosuppression on carcinogenesis
- (g) Explain the principles of immunological enhancement and tolerance.

3. Host-tumour Interactions

The candidate should be able to:

- (a) Define the following: tumour-specific transplantation antigen (TSTA); tumour associated antigen(TAA); human leukocyte antigen (HLA); oncofetal antigen
- (b) Evaluate the evidence for tumour- specific and tumour-associated antigen in tumours of the female genital tract
- (c) Describe antibody-mediated and cell-mediated tumour cell cytotoxicity and the evidence for "blocking factors"
- (d) Explain the theory of immunological surveillance and the evidence for immune-modulation
- (e) Describe the role of natural growth and inhibitory factors in tumours
- (f) Discuss specific tumours of the female genital tract associated with clinically-useful markers.

4. Tumour Markers

The candidate should be able to:

- (a) Define a tumour marker and describe the requirements of a tumour marker
 - (b) Describe the properties of current markers, e.g., carcinoembryonic antigen (CEA), alphafetoprotein (AFP), human chorionic gonadotrophins (hCG), CA 125, CA 19-9, B2 microglobulin, HE4,
 - (c) Describe the methods for the measurement of markers in terms of the principles involved, sensitivity, specificity and cross reactivity
 - (d) Describe the properties and generation of monoclonal antibodies and their application to sero-diagnosis and tumour localisation and targeted killing of tumour cells
 - (e) Discuss the clinical value and limitations of current tumour markers in use and the significance of false-positive and false-negative results
 - (f) Discuss specific tumours of the female genital tract associated with clinically-useful markers
5. Define and describe the principles of vaccine therapy of cancer

IX PHARMACOLOGY

General Aim

The candidate should know the pharmacologic properties of the agents commonly used in gynaecological oncology.

Specific Objectives

1. Principles

The candidate should be able to explain the following terms

- (a) Absorption
- (b) Distribution
- (c) Metabolism
- (d) Excretion
- (e) Pharmacokinetics
- (f) Mode of action
- (g) Factors that modify the drug effect and dosage

2. Total Parenteral Nutrition

The candidate should be able to describe the following aspects of total parenteral nutrition:

- (a) Indications
- (b) Routes of administration
- (c) Composition of solutions
- (d) Daily requirements for routine supplementation
- (e) Specific requirements in pathological states
- (f) Vitamin and mineral supplements
- (g) Complications associated with renal and hepatic dysfunction and complications of venous access sites

3. Gastrointestinal Alimentation

The candidate should be able to describe the following aspects of gastrointestinal alimentation:

- (a) Indications
- (b) Composition of preparations available

- (a) Total body water permeability and toxicity
- (b) Normal exchange of fluid and electrolytes
 - (I) Water balance
 - (II) Electrolyte balance, sodium and potassium

B. Fluid and Electrolyte Abnormalities

- (a) Volume deficits and excesses
- (b) Abnormalities of sodium concentration
- (c) Abnormalities of potassium concentration
- (d) Respiratory and metabolic acidosis and alkalosis.

2. *Nutrition*

The candidate should be able to:

- (a) State the normal adult daily requirements for water, electrolytes and essential nutrients
- (b) Describe the effects of deprivation/excess of above
- (c) Calculate nutritional replacement requirements.

3. *Blood and blood Components*

The candidate should understand the principles of:

- (a) Transfusion
Describe the composition, indications, risks (with special emphasis hepatitis and AIDs) and advantages of the following blood components: red blood cells, platelets, cooled and fresh frozen plasma, albumin, concentrated leucocytes, packed, washed, frozen red cells, cryoprecipitate.
- (b) Blood Clotting
 - (I) Describe the process of normal haemostasis
 - (II) Describe changes in the process of haemostasis in abnormal coagulation states.
 - (III) Describe the aetiology, diagnosis and treatment of congenital and acquired bleeding disorders.

4. *Pulmonary Function*

The candidate should be able to:

- (a) Outline the normal physiology of pulmonary function and pulmonary function tests (see also section on Diagnostic techniques and preoperative Evaluation).
- (b) Diagnose and treat ventilatory failure due to acute or chronic pulmonary disease in operative or non-operative patients.
- (c) Understand the use of mechanical ventilator including IMV, assist-control and positive and expiratory pressure modes.

5. *Shock*

The candidate should be able to:

- (a) Describe the assessment of normal cardiac status (see also sections on Diagnostic Techniques and Pharmacology)
- (b) Aetiology, diagnosis and treatment of physiologic alterations in major organs induced by:
 - I. Hypovolemic shock
 - II. Cardiogenic shock
 - III. Septic shock

6. Renal Function

The candidate should be able to:

- (a) Describe normal renal function including control mechanisms and the evaluation of function (see also section on Diagnostic techniques).
- (b) Describe the physiology of abnormal function with particular reference to hypertensive disorders, infectious disease, urinary tract obstruction, drug toxicity and immunological disease.

7. Digestive Tract

The candidate should be able to:

- (a) Outline the normal physiology of the digestive tract
- (b) Describe the changes in the physiology of the digestive tract which are induced by malignancy, extensive resection, irradiation, and chemotherapy.
- (c) Describe the changes in the physiology of the digestive tract which are related to intestinal obstruction, blind loop syndrome, short bowel syndrome, and fistula formation
- (d) Describe the changes in hepatic physiology related to extrahepatic and intrahepatic tumours, infectious agents, cirrhosis, and hepatocellular toxicity
- (e) outline the metabolism and trace elements

8. Endocrine System

The candidate should be able to:

- (a) Outline the normal physiology of the endocrine system
- (b) Describe the changes in endocrine physiology which are induced by malignancy, extensive surgery, irradiation and chemotherapy
- (c) Describe the indications, risks and management of hormone replacement therapy

9. Central nervous System

The candidate should be able to:

- (a) Outline the normal physiology of the CNS, particularly in relation to pain
- (b) Describe the physiological basis of abnormal function resulting from gynaecological malignancy

10. Management of the critically ill patient

The candidate should be able to manage the critically ill patient and be aware of the importance of the multidisciplinary approach to such a patient.

11. Reproductive medicine in relation to gynaecologic cancer

- (c) Complications
- (d) Routes of administration

4. Haematinics

The candidate should be able to describe the treatment of marrow depression secondary to neoplasia and caused by its treatment e.g., cytotoxic drugs.

The use, effects and side effects of the following agents should be understood:

- (a) Agents that accelerate erythropoiesis – erythropoietin and darbepoietin
- (b) Agents that accelerate myeloid recovery – filgrastim, pegfilgrastim, sargramostim

5. Anti-infective Agents

The candidate should understand the antibacterial, antiviral and antifungal agents and should know the principles of prophylactic anti-infective therapy.

The candidate should be able to:

- (a) Describe the indications for prophylactic anti-infective therapy, the relevant use, mode and timing of administration
- (b) Describe the mechanism of action and spectrum of the major anti-infective agents
- (c) Select appropriate therapeutic agents or their combinations for the treatment of different infections
- (d) Describe the side-effects and major toxicity of these agents
- (e) Use of topical anti-infectives in wounds

6. Analgesics, Sedatives and Antiemetic's

The candidate should be able to:

- (a) Describe the mode of action of common drugs
- (b) Describe the indication for their use and their routes of administration
- (c) Describe the side-effects of these drugs
- (d) Management of acute pain (tumour related and postoperative), chronic pain (WHO guidelines)
- (e) Choice of drugs – NSAID, opiate agonists,
- (f) Use of adjuvants in pain control
- (g) Routes of administration and administration techniques
- (h) Diagnosis of toxicities and complications of pain management

7. Anaesthetic Agents

The candidate should be able to:

- (a) Describe the pharmacology, uses and effects of common inhalation anaesthetic agents
- (b) Describe the indications, methods of use, side-effects and pharmacology of common regional and local anaesthetics.
- (c) Support of patient in the postoperative period

8. Anticoagulants

The candidate should be able to:

- (a) Describe the prophylactic use of anticoagulants
- (b) Describe the indications for the use of anticoagulants
- (c) Describe the mode of action of short and long-acting anticoagulants, their side effects, control and reversal of action.

9. Cardiovascular, Respiratory and Urinary Systems

The candidate should be able to describe the indications, pharmacology and side effects of the following drugs:

- (a) Drugs acting on heart muscle, coronary vessels and cardiac nerve function
- (b) Drugs acting on peripheral vasculature in management of septic shock
- (c) Drugs acting on pulmonary function
- (d) Diuretics
- (e) Anti lipemic agents

10. Hormones

The candidate should know the role of estrogens, antiestrogens, progestational agents in the gynaecologic oncology population.

11. Agents for prevention of osteoporosis

The candidate should know the choice of agents and indications of therapy for prevention and treatment of osteoporosis in gynaecologic oncology population.

12. Pharmacology of Wound Healing

The candidate should be able to describe the effects of the following on wound healing and to explain the pharmacological basis for these effects:

- (a) Vitamins
- (b) Trace metals
- (c) Factors adversely affecting wound healing either due to illness or drugs e.g., steroids, chemotherapy, radiation therapy

13. Miscellaneous – drug interaction

The candidate should be able to discuss the pharmacology of drugs used in common medical conditions which may at times be encountered in the oncology patient e.g., insulin and oral hypoglycemic agents, anti-convulsants, steroids, antihistamines, antidepressants, antiemetics, antidiarrhoeal, laxatives, antacids.

X CHEMOTHERAPY OF GYNECOLOGICAL TUMOURS

General Aims

The candidate should:

1. Understand the pharmacology of the major drugs in human tumour chemotherapy.
2. Be able to use them competently in a clinical setting.
3. Have a critical understanding of the advantages and limitations of drugs used in human tumour chemotherapy in each type of gynaecological malignancy.
4. Critically determine at the onset the goal of a given therapeutic action.

Specific Objectives

1. *Biology*

The candidate should be able to:

- (a) Discuss the kinetics of cancer cell growth and the cell growth and the cell cycle

(b) Discuss the following general principles of action:

- (I) Log kill hypothesis
- (II) Cycle specificity
- (III) Phase specificity
- (IV) Growth fraction
- (V) Dose intensity
- (VI) Dose density
- (VII) Resistance mechanisms

2. *Classes of Chemotherapeutic Agents*

The candidate should be able to describe the characteristics of the following classes of chemotherapeutic agents:

- (a) Alkylating agents
- (b) Antimetabolites
- (c) Natural products, including mitotic inhibitors, antibiotics and enzymes
- (d) Hormones
- (e) Biologic response modifiers e.g. BCG, Interferon etc.

3. *Mechanisms of Action*

The candidate should be able to describe the specific mode of action of a given chemotherapeutic agent and where possible, relate it to cell cycle.

4. *Pharmacology of Specific Agents*

The candidate should be able to describe the following characteristics of the chemotherapeutic agents used to treat gynaecological cancers:

- (a) Routes of administration and absorption
- (b) Distribution
- (c) Biotransformation
- (d) Excretion
- (e) Interaction with other drugs
- (f) Interaction with radiotherapy and hyperthermia
- (g) Mechanism of drug resistance and approaches to reducing tumour resistance to anti-cancer drugs
- (h) Schedule dependency
- (i) Rationale for regional therapy e.g. Intraperitoneal therapy, Intra-arterial perfusions.

5. *Combination Chemotherapy*

The candidate should be able to:

- (a) Describe the principles of combination chemotherapy
- (b) Describe drug combinations in current use for gynaecological malignancy
- (c) Construct logical drug combinations, given the pharmacology of single agents and the principles for the design of combination chemotherapeutic regimes.
- (d) Principles of specialised therapies such as high dose chemotherapy with bone marrow transplant and intraperitoneal chemotherapy

6. General Guidelines for Clinical Evaluation

The candidate should be able to:

- (a) Describe criteria for complete response, partial response, progressive disease, relapse, stable disease and survival duration.
- (b) Describe the concept of Phase I, II, III and IV drug trials
- (c) Evaluate the evidence for favourable adjunctive use of chemotherapy with surgery and /or radiation therapy.
- (d) Describe the criteria or prerequisites for adjuvant chemotherapy.
- (e) The rationale of dose schedule, cycle length, dose intensity and duration

7. Toxicity

The candidate should be able to:

- (a) Describe the effects of chemotherapeutic agents on rapidly proliferating epithelium such as bone marrow, GI tract and hair follicles.
- (b) Describe the major toxic effects of specific chemotherapeutic agents.
- (c) Discuss the following aspects of the management of toxicity.
 - (I) Supportive (nutritional , hematonic, prophylactic antibiotics)
 - (II) Specific (blood component therapy, specific antagonists)
 - (III) Protective environment
 - (IV) Role of growth factors and cytokines in the prevention of chemotherapy toxicity and in the treatment of malignancies

8. Treatment by Organ Site, Histology and Stage

The candidate should be able to describe the use of agents of established value within established guide lines for specific tumours.

9. Safety

The candidate should be able to describe methods for the safe handling of cytotoxic drugs.

XI THERAPEUTIC PRINCIPLES

General Aims:

The candidate should possess sufficient knowledge of therapeutic principles to permit accurate diagnosis, pre-treatment evaluation and management of the oncology patient.

Specific Objectives

1. Pre-treatment Evaluation:

The candidate should be able to fully evaluate clinically and order the appropriate tests to assess: -

- (a) Major organ system (e.g., cardiac, renal, pulmonary, hepatic)
- (b) Coagulation profile
- (c) Presence of metastatic disease
- (d) The ability of the patient to psychologically cope with the treatment programme and her disease.

2. Preoperative Preparation

The candidate should be able to:

- (a) Prepare the bowel preoperatively
- (b) Select ostomy sites
- (c) Correct fluid, electrolyte, haematological and nutritional deficiencies
- (d) Order pulmonary preparation when indicated
- (e) Fully inform and counsel the patient and family
- (f) Order anticoagulant and prophylactic antibiotics where indicated.

3. Choice of treatment

The candidate should be able to discuss the evaluation and management of patients with the following diseases in addition the candidate should be able to describe the aetiology, pathology, natural history, staging and alternatives of treatment of all stages of the disease, and symptoms and signs produced by the malignancy. This should include management of patients of all age group, those who are pregnant and those with recurrent disease.

1. Diseases of –

(a) Cervix

- (i) Intraepithelial neoplasia and the implications of HPV infection
- (ii) Microinvasive cancer
- (iii) Invasive cancer-primary therapy
- (iv) Invasive cancer-recurrence

(b) Ovary

- (i) Benign ovarian tumours
- (ii) Low malignant potential tumours
- (iii) Invasive cancer (all pathologic types and stages)
- (iv) Recurrent cancer
- (v) Hereditary ovarian cancer syndromes
- (vi) Pseudomyxomaperitonii

(c) Fallopian tube

Invasive Cancer

(d) Vulva

- (i) Vulval non-neoplastic epithelial disorders
- (ii) Intraepithelial cancer
- (iii) Micro invasive cancer
- (iv) Invasive cancer (all pathologic types)
- (v) Recurrent cancer

(e) Uterine corpus

- (i) Endometrial hyperplasia
- (ii) All pathological types of malignancy
- (iii) Recurrent malignancy
- (iv) Hereditary syndrome associated with endometrial cancer

(f) Vagina

- (i) Intraepithelial neoplasia

- (ii) Invasive cancer (all pathologic types) at various locations in the vagina
- (iii) Recurrent cancer

(g) Gestational trophoblastic disease

- (i) Hydatidiform mole
- (ii) Continuing GTT – metastatic and non-metastatic
- (iii) Choriocarcinoma
- (iv) PSTTT other variants

(h) Malignant disease in pregnancy

- (i) Pelvic cancer complicating pregnancy
- (ii) Extra pelvic disease in pregnancy
- (iii) Effects of radiotherapy and chemotherapy on a pregnancy

(i) Metastatic cancers to pelvic reproductive organs

(j) Hormone replacement therapy

The candidate should be able to discuss the potential risks and benefits of HRT in patients treated for invasive carcinoma arising in the female reproductive tract and breast

2. Intraoperative Complications

The candidate should be able to evaluate and manage the following complications:

- (a) Transfusion reaction
- (b) Coagulopathies
- (c) Massive pelvic venous haemorrhage
- (d) Trauma to major artery or vein
- (e) Cardiac arrest
- (f) Injury to bladder, ureters or bowel
- (g) Transection of obturator nerve
- (h) Transection of thoracic duct
- (i) Acute intraoperative bleeding

3. Postoperative Complications

The candidate should be able to evaluate and manage the following postoperative complication as:

- (a) Shock
- (b) Atelectasis and other respiratory problems
- (c) Intra-abdominal bleeding
- (d) Anuria or oliguria
- (e) DVT and Pulmonary embolism
- (f) Cardiac problems
- (g) Infections
- (h) Ureterovaginal fistula and ureteric obstruction
- (i) Vesicovaginal fistula
- (j) Bowel fistula
- (k) Ileus
- (l) Bowel obstruction

- (m) Jaundice
- (n) Coagulopathies
- (o) Pyrexia
- (p) Hypertensive crisis
- (q) Respiratory insufficiency including ARDS
- (r) Wound problems including infection, dehiscence and evisceration
- (s) Septic thrombophlebitis
- (t) Bowel obstruction
- (u) Mental state changes
- (v) Metabolic abnormalities including electrolyte imbalance
- (w) Short bowel syndrome
- (x) Hernia
- (y) Acute and chronic pain

XII SURGICAL PROCEDURES

General Aims

The candidate should know in detail the following surgical procedures

Specific Objectives

The candidate should be capable of carrying out the following procedures independently:

1. Primary Therapy(Open / Minimally invasive approach where applicable)
 - (a) Hysterectomy
 - (i) Abdominal
 - (ii) Vaginal
 - (iii) Radical
 - (b) Salpingo-oophorectomy
 - (c) Radical debulking of ovarian malignancy along with omentectomy, diaphragmatic stripping, splenectomy
 - (d) Pelvic lymphadenectomy
 - (e) Para-aortic lymphadenectomy
 - (f) Partial and total vaginectomy
 - (g) Radical vulvectomy
 - (h) Skinning, simple and hemivulvectomy and conservative procedures for vulval carcinoma
 - (i) Inguinal and femoral lymphadenectomy
 - (j) Pelvic exenteration (anterior, posterior and total)
 - (k) LEEP, Cryosurgery, laser and cone biopsy
2. Gastrointestinal procedures
 - (a) Small Intestine
 - (I) Resection
 - (II) Bypass
 - (III) Ileostomy
 - (IV) Mucous fistula formation
 - (V) Fistula repair
 - (VI) Feeding jejunostomy
 - (VII) Ileal conduit

- (VIII) Gastrostomy
- (b) Large Intestine
 - (I) Resection
 - (II) Bypass
 - (III) Colostomy
 - (IV) Mucous fistula formation
 - (V) Fistula repair
 - (VI) Transverse colon conduit
 - (VII) Sigmoid conduit

3. Urinary Tract

- (a) Bladder
 - (I) Partial cystectomy
 - (II) Total cystectomy
 - (III) Cystectomy
 - (IV) Vesicovaginal fistula repair (abdominal and vaginal)
- (b) Ureter
 - (j) Uteroneocystostomy
 - (a) With psoas hitch
 - (b) With bladder flaps
 - (ii) End-to-end anastomosis
 - (iii) Ureter ureterostomy
 - (iv) Small intestinal interposition
 - (v) Cutaneous ureterostomy
 - (vi) Repair of operative injury to ureter
- (c) Urethra
 - (i) Partial resection
 - (ii) Reconstruction
 - (iii) Repair fistula
- (d) Urinary conduit

4. Reconstructive procedures

- (a) Vagina
 - (i) Split thickness skin graft
 - (ii) Pedicle grafts
 - (iii) Myocutaneous grafts
 - (iv) Williams procedure
 - (v) Repair of fistula
- (b) Vulva
 - (i) Rotational flaps
 - (ii) Split thickness skin grafts
 - (iii) Myocutaneous flaps
- (c) Pelvic floor
 - (i) Omental pedicle grafts

(ii) Hernias and prolapse

5. Incision and drainage of Abdominal and Pelvic Abscesses
6. Control of Intraoperative or Postoperative Haemorrhage
7. Miscellaneous
 - a. Be able to carry out placement of Thoracotomy tubes
 - b. Be able to place a temporary or permanent central venous access line
 - c. Be able to carry out Orotracheal or Transtracheal Intubation

XIII RADIATION THERAPY

General Aims

The candidate should be familiar with the principles and practice of radiation therapy, with particular reference to Gynaecologic oncology.

Specific Objectives

1. Radiobiology

The candidate should be able to describe Radiation effect on –

- (a) Cell
- (b) Cell cycle
- (c) Cell survival curves
- (d) The Four "R's" of radiation
- (e) Intrinsic radiosensitivity
- (f) Modification of cellular radiosensitivity
 - (i) Oxygen effect
 - (ii) Radio sensitisers
 - (iii) Combined radiation chemotherapy effects
 - (iv) RBE and LET
- (g) Recovery and repair of tissue following radiation
- (h) Protection from radiation effect
- (i) Relative radio sensitivity among different tissue/organ
- (j) Therapeutic ratio
- (k) Long-term effects

2. Principles of radiotherapy

(a) Introductory Radiation Physics

The candidate should be able to:

- (i) Outline atomic and nuclear structure, electromagnetic radiation
- (ii) Define radioactivity, alpha and beta particles and gamma ray
- (iii) Describe the effects of radiation – direct and indirect effect
- (iv) Define an absorbed dose -Gy, rad
- (v) Teletherapy and brachytherapy

(b) External Beam Therapy (teletherapy)

The candidate should be able to describe the following:

- (i) Teletherapy sources of x-rays, gamma ray or electron beams: linear accelerators, cobalt, orthovoltage and superficial therapy units
- (ii) Characteristics of teletherapy beam

- (iii) Techniques of external beam radiation
- (iv) The planning process: immobilisation, simulation, contouring, tumour and normal structure localization; target volume delineation, dose and beam configuration selection; computation of dose distributions; verification; execution
- (v) 3D radiotherapy, IMRT, IGRT

(c) Intracavitary and interstitial irradiation (brachytherapy)

The candidate should be able to describe the following:

- (i) Historical perspectives of brachytherapy
- (ii) Brachytherapy [procedures Intracavitary/intravaginal/trans-perineal/interstitial implants
- (iii) Manual after loading / remote after loading
- (iv) Low and high dose rate equipment; caesium, iridium and cobalt sources
- (v) Post procedural imaging verification
- (vi) Dose and fractionation
- (vii) Combination of brachytherapy and teletherapy treatments

(d) Radiation Protection

The candidate should be able to describe the following:

- (i) Dose equivalent, Sv, rem
- (ii) Radiation protection philosophy of the ICRP
- (iii) Estimation of risk of radiation-induced harm
- (iv) Dose equivalent limits for radiation workers, including pregnant and potentially pregnant women. Dose equipment limits for members of the public.
- (v) Application of ICRP principles to radiation protection of radiotherapy patients
- (vi) Design features of radiotherapy equipment and procedures to prevent malfunctions or errors in dose delivery
- (vii) Dose to foetus of a pregnant radiotherapy patients
- (viii) Sealed sources for brachytherapy; use of time, distance and shielding to minimise staff exposure during handling. The value of manual and remote after loading
- (ix) Departmental surveys, area monitoring and personnel monitoring

3. Clinical Radiotherapy

The candidate should be able to discuss the place of radiotherapy and treatment planning in gynaecological malignancy in the following:

- (a) Cervix
- (b) Endometrium
- (c) Ovary and Fallopian tube and nodal irradiation
- (d) Vagina and vulva
- (e) Complications of radiotherapy – early and late

XIV PAIN RELIEF, PALLIATIVE AND TERMINAL CARE

The candidate should be able to manage a programme of pain-relief and other symptomatic care in a patient with progressive gynaecological cancer

- 1. Pain relief, non-narcotic analgesics; narcotic analgesics, role of anaesthetics
 - (a) Pain clinics
 - (b) Neural blocks

2. Anxiety relief – Sedatives and tranquilisers; counselling (patient and family)
3. Nausea and vomiting relief; antiemetic's; - dietary measures
4. Community support roles; general practitioner; - district nurse – family; - religion – community services
5. Practical exposure to hospice care
6. Psychological state of the cancer patient with progressive disease.
7. Counselling for dying patients and family members

XV DISEASES OF THE BREAST

The candidate should have knowledge about breast diseases and should be able to advice patients with regard to:

- (i) The frequency of breast cancer
- (ii) High risk population
- (iii) Benign breast lesions that predispose to subsequent cancer
- (iv) Mammography and breast self-examination
- (v) Significance of estrogen and progesterone receptors
- (vi) Role of tamoxifen and aromatase inhibitors and their effect on the endometrium

XVI MENTAL HEALTH ASPECTS OF ONCOLOGY CARE

The candidate should be aware of:

1. The psychological aspects of gynaecological oncology care
2. The quality of life aspects of gynaecologic oncology
3. The psychosocial aspects in the "survivor"
4. The Psycho Sexual aspects of Gynaecologic Oncology

XVII IMPLICATIONS IN THE THIRD WORLD SITUATION

The candidate should be aware of the problems of:

1. The concept of delay in gynaecologic oncology
2. Financial implication of therapy
3. Compliance to therapy and follow up

XVIII MISCELLANEOUS

- a) The candidate should:
 - Understand the principles of informed consent, quality of life issues
- b) The candidate should
 - Understand the need for the spirit and need for continuing medical education and develop the skills for self-directed learning
- c) The candidate should
 - Be able to select and use appropriate learning resources and teaching techniques applicable for health education of the public, undergraduate students, postgraduate students, nursing students and paramedical students
 - Preferably attend PG Medical Technology course and be trained in evaluation and preparation of blue print for question papers
 - Be able to incorporate Problem based learning in the teaching schedule
 -

d) Administrative Experience

Objective:

The candidate should be given some administrative responsibility which will allow the development of skills relevant to the future provision and organisation of clinical services.

e) Ethical and Legal Aspects

The candidate should be able to discuss the ethical and legal aspects of the clinical practice of Gynaecological Oncology and carry out professional responsibilities ethically

f) Implication of the National Health Policy

The candidate should be able to assess the implications of health policy on prevention and treatment of Gynaecologic Malignancies

4. Concepts of research

General Aims

The candidate should be able to:

1. Evaluate the design and findings of research reports and scientific articles, critically
2. Design and carry out research studies or clinical investigations, analyse the data and report the results, independently
3. Understand the basis of quantitative approaches to diagnosis, prognosis and medical decision-making

Specific Objectives:

1. Variation

The candidate should be able to:

(a) Discuss the following sources of variation in clinical investigations:

- (i) Biological
- (ii) Measurement
- (iii) Selection
- (iv) Due to a real difference
- (v) Probability concept (Gaussian Curve)

(b) Discuss the role of the following in control of variation in clinical investigation:

- (i) Experimental design
- (ii) Sample selection

2. Descriptive Statistics

The candidate should be able to calculate the following statistics and to explain what they describe

- (a) Mean
- (b) Standard deviation
- (c) Median
- (d) Mode

3. Study Design

- (a) Experimental
 - Randomised clinical trials
 - Difference between phase I, II, III and IV trials
 - Design of noninferiority trials
 - (b) Observational (prospective and retrospective cohorts, case-control)
 - (c) Appropriate conduct of a study and the considerations required for the same
4. Statistical Testing
- The candidate should be able to:
- (a) Formulate testable hypotheses for a clinical investigation
 - (b) Select and apply appropriate statistical tests (Chi-square, 't', Mann-Whitney etc) to clinical data in order to test hypotheses
 - (c) Apply and Interpret
 - (i) Correlation and regression
 - (ii) Analysis of Variance
5. Diagnosis
- The candidate should be able to:
- (a) Calculate the sensitivity and specificity of a screening test or clinical investigation and explain its clinical significance
 - (b) Calculate the predictive value of a positive result of an investigation and explain its clinical significance.
6. Prognosis
- The candidate should be able to:
- (a) Analyse the relative importance to prognosis of separate clinical and pathological variable using the Cox model
 - (b) Use the life table method
 - (c) Compare different life tables
7. Medical Decision Analysis
- Apply maximum expected utility method of Medical Decision Analysis to patient management decisions
8. Clinical Trials
- The candidate should be able to develop prospective comparative double blind studies
9. Inferences
- The candidate should be able to:
- (a) Analyse the significance of the results
 - (b) Discuss the limitations of the investigation
 - (c) Draw the appropriate inferences
 - (d) Arrive at valid conclusions
10. Statistical Terminology
- The candidate should be able to understand the meaning of:
- (a) Randomisation
 - (b) Normal distribution

- (c) Type I error & Type II error
- (d) Significance and confidence interval

11. Data management and Report writing

The candidate should be familiar with:

- (a) Data Collection, Storage, Statistical Analysis and interpretation of research data
- (b) Scientific writing

The candidate should be able to participate fully in the theoretical and technical aspects of clinical and/or basic science research projects.

Enabling Objectives:

The candidate should write a thesis which is a scholarly publication and be able to defend it according to the following outline:

1. Hypothesis
 - a) What are the study objectives?
 - b) What is the population to be studied?
 - c) What is the population to which the investigators intend to apply their findings?
2. Design of the Investigation
 - a) Was the study an experiment, case control study, randomized clinical trial, planned observations, or a retrospective analysis of records?
 - b) Are there possible sources of sample selection bias?
 - c) How comparable is the control group?
 - d) What is the statistical (study) power?
3. Observations
 - a) Are there clear definitions of the terms used? (i.e., diagnostic criteria, inclusion criteria, measurements made and outcome variable)
 - b) Are the observations reliable and reproducible?
 - c) What is the sensitivity, specificity and predictive values of the methods?
4. Presentation of findings
 - a) Are the findings presented clearly, objectively, and in sufficient detail?
 - b) Are the findings internally consistent? (i.e., do the numbers add up properly and can the different tables be reconciled, etc.)
5. Analysis of the Results
 - a) Are the data worthy of statistical analysis? If so, are the methods of analysis appropriate to the source and nature of the data?
 - b) Is the analysis correctly performed and interpreted?
 - c) Is there sufficient analysis to determine whether "significant differences may in fact, be due to a lack of comparability of the groups? (i.e., age, sex, clinical characteristics, or in other relevant variables)
 - d) Is design of the study appropriate for solving the states problems?
 - e) Is there an improper use of statistical techniques?
 - f) Is there mention of the type of test used or the significance level?
 - g) Is there use of measured sensitivity without specificity?

6. Conclusions or Summary
 - a) Which conclusions are justified by the findings?
 - b) Are the conclusions relevant to the hypothesis?

7. Redesign the Study - If the study could be improved the candidate should suggest a revised experimental design that would provide reliable and valid information relevant to the questions under study

8. Breadth and Depth of Subject Matter - Is the candidate knowledgeable about the reference or cited material?

Scheme of examination:

A. Theory: 400 marks

There will be four papers each of three hours duration based on the theoretical and practical basis of gynaecologic Oncology given above

Each paper will have 12 questions each of 10 marks and the candidate will have to choose 10 questions.

Paper I: Screening and Basic Sciences pertaining to Gynaecologic Oncology

Broad guidelines for this paper will be as follows:

1. Aetiology of Cancer
2. Pathogenesis of Cancer
3. Comparative neoplasia
4. Experimental Oncology
5. Tumour Immunology
6. Tumour Biology
7. Principles of Cytogenetics and Molecular Biology
8. Host effects of Cancer
9. Cancer Epidemiology
10. Haematological complications of cancer
11. Disseminated intravascular coagulation
12. Development of new drugs
13. Infections in patients with cancer
14. Cancer Detection and Prevention
15. Diagnostic Radiology
16. Principles of Patient Management
17. Principles of Nuclear Medicine
18. Experimental design of clinical trials
19. Principles of Cancer Surgery
20. Principles of Radiation therapy
21. Principles of cancer Chemotherapy
22. Chemotherapeutic agents
23. Principles of Endocrine therapy

24. Principles of staging of cancer and the International Classification of Disease Oncology

Paper II : Core Gynaecologic Oncology

Paper III: Allied Specialities of Gynaecologic Oncology

The main allied specialities of Gynaecologic Oncology are Radiation Oncology, Medical Oncology, Radiology & Imaging and Pathology.

The syllabus for these two papers are already indicated in 3. Outline of the course contents given above.

Paper IV: Recent Advances in Gynaecologic Oncology

However recent Advances in Gynaecologic Oncology may be asked in any paper. Overlapping of topics is inevitable.

B. Clinicals: 200 marks

The clinical examination will consist of one long case and two short cases.

C. Viva Voce: 100 marks

The following components will encompass the viva voce—

Instruments, imaging, specimen / photographs, videos, slide, operative procedures, recent advances,

Recommended Textbooks

Gynaecological Oncology

- Berek & Hacker's, Gynecologic Oncology
- Principles and practice of Gynecologic Oncology, Richard R. Barakat, Andrew Berchuk, Maurie Markman and Marcus E. Randal
- Clinical Gynecologic Oncology, Di Saia, Creasman, Mannel, Mc Meekin, Mutch D
- Gynecological Oncology; Guide to clinical management., Blake Peter et al.
- Gynecological Oncology: (Fundamental and principles & clinical practice) Coppleson, M
- New Developments in Cervical Cancer Screening and Prevention. Franco. E & Monsonco. J
- Gynecologic Oncology: evidence based pre-operative and Supportive care, Vasilev, S.A
- Principles and Practice of Gynecologic Oncology, Hoskins, WJ et al
- Hand Book of Colposcopy, Luesely. D et al.
- Cancer and pre-Cancers of the Cervix, Luesley. D.M & Barrass. R
- Gynecologic Cancer Surgery, Morrow. C P et al
- Synopsis of Gynecologic Oncology, Morrow C.P & Curtis J.P
- Multimodal Therapy in Gynecologic Oncology, Sevin, B.U et al
- Ovarian Cancer. Sharp F et al
- Cancer of Cervix. Shingleton H. M & Orr J.W
- Ovarian Cancer: Controversies in Management., Gershenson D.M. & Mcquire W.P

- Essentials of Gynecological Cancers. Lakton F et al
- Epithelial Cancers of Ovary, Lawton, Frank G et al
- Gynecologic Oncology Lentz (Scott E)
- Textbook of Gynaecologic Oncology A.Ayhan, M.Gultekin, P. Durson
- Gynecologic Oncology Karlan (Beth Y)
- Atlas of Gynecologic Oncology Investigation and Surgery Smith (Richard .J)
- Gynecologic Tumor Board Dizon (Don .S)
- Radical and Reconstructive Gynaecologic Cancer Surgery Bristow (Robert E)
- Principles and Practice of Fertility Preservation Donnez (Jacques)
- Cytology and Surgical Pathology of Gynecologic Neoplasms Chieng (David)
- Atlas of Gynecologic Oncology Imaging Akin (Oguz)
- Precancerous Lesions of the Gynecologic Tract Fadare (Oluwole)
- Radiation Medicine Rounds: Gynecologic Cancer, Vol.2 Mundt (Arno .J)
- Noninvasive Molecular Markers in Gynecologic Cancers Barh (Debmalya)
- Gynecologic Cancers: A Multidisciplinary Approach to Diagnosis and Management Odunsi (Kunle)
- Surgery for ovarian cancer Bristow (Robert E)
- Cervical cancer Contemporary Management Rajaram (Shalini)

Gynaecology Books

- Operative Gynaecology, Te Linde's, Rock & Jones
- Operative Laparoscopy & Hysterectomy, Cohen
- Gynaecologic Endoscopic Surgeries: Current Concepts: Desai & Joseph
- Controversies in Laparoscopic Surgeries, Assalia, Gagner, Schein
- Textbook & Atlas: Modern Colposcopy, Mayeaux, Jr., J.Thomas Cox
- Reconstructive and Reproductive Surgeries in Gynaecology, Gomel & Brill
- Current Progress in Obstetrics and Gynaecology Studd (John)
- Atlas of Gynaecologic Surgery Wallwiener (Diethelm)
- Colposcopy Atlas Vesna Kesic
- Cytology and Colposcopy in Gynecological Practice Saraiya (Usha B)
- Burghardt's Colposcopy and Cervical Pathology: Textbook and Atlas Girardi (Frank)
- A Manual of Minimally Invasive Gynecological Surgery Agarwal (Meenu)
- Gynecologic Ultrasound: A Problem Based Approach Benacerraf (Beryl .R)
- Colposcopy of the Cervix, Vagina, and Vulva Baggish (Michael .S)
- Colposcopy Principle and Practice Apgar (Barbara S.)
- Recent Advances in Obstetrics and Gynaecology

Allied Speciality Books

- Cancer, Principles and Practice of Oncology, DeVita, Hellman and Rosenberg's,
- CT and MRI of the Abdomen and Pelvis, Ros, P.R & Morteale, K.L
- Ultrasonography in Obstetrics and Gynecology, Benson, C.B & Bluth, E.I
- PET-CT and PET-MRI in Oncology, Peller, P. et al
- Walter & Miller's Text Book of radiotherapy, Symonds Paul et al.

- Medical Biostatistics, IndrayanAbhaya
- Robbins Basic Pathology, Kumar, Abbas, Aster
- Atlas of Anatomy, Gilroy, A.M
- Text Book of Palliative Medicine and Supportive Care, Bruera, E. et al.
- Basic Methods of Medical Research, Indrayan, A
- Gynaecologic Radiation Therapy: Novel Approaches to Image Guidance and management, Vishwanathan, A.N et al
- Principles and Practice of Surgical Oncology. Howard Silberman, Allan W. Silberman
- Cancer Chemotherapy, Drug Manual, Jones& Bartlett learning.
- Hand Book of Cancer Chemotherapy, Skeel&Khleif
- Symptom Management in Advanced Cancers, Twycross
- Statistics Leblace (David)
- Medical Statistics from scratch Bowers (David)
- Statistics A Tool for Social Research Healey (Joseph F)
- Oral Morphine in Advanced Cancer Twycross (Robert)
- Cancer Pain Relief and Palliative Care Who
- Care of The Patient with Advanced Cancer Twycross (Robert)
- Symptom Control in Terminal Cancer: Lecture Notes Twycross (Robert)
- Cancer Pain Relief: A Guide to Opioid Availability Who
- Multiple Primary Cancers Neugut (Alfred. I)
- Cancer Pain: Assessment, Diagnosis, And Management Fitzgibbon (Dermot. R)
- Handbook of Cancer Chemotherapy Skeel (Roland)
- Harrisons Pulmonary and Critical Care Medicine Loscalzo (Joseph)
- The MD Anderson Manual of Medical Oncology Kantarjian (Hagop .M)
- Oxford Textbook of Oncology Kerr (David. J)
- Targeted Therapies in Oncology Giaccone (Giuseppe)
- Treatment of Cancer Price (Pat)

Journals of Gynaecology

- International journal of Gynaecology and Obstetrics
- Journal of Obstetrics and Gynaecology of India
- Journal of Obstetrics and Gynaecology and Research
- British Journal of Obstetrics and Gynaecology
- Journal of Minimally Invasive Surgeries
- Indian Journal of Obstetrics and Gynaecology
- American Journal of Obstetrics and Gynaecology
- Journal of Midlife Health
- Clinical Obstetrics and Gynaecology
- Obs& Gynae Today
- Obstetrical and Gynaecological Survey
- Obstetrics and Gynaecology Clinics of North America
- Journal of the Lower Genital Tract Disease

Journals of Gynaecologic Oncology

- International Journal of Gynaecological Cancer
- Gynaecologic Oncology
- Indian Journal of Gynaecological Cancer
- Journal of Gynaecologic Oncology

Allied Cancer journals

- Lancet Oncology
- Journal of Clinical Oncology
- Cancer
- Indian Journal of Surgical Oncology
- International Journal of Surgical Oncology
- International Journal of Cancer
- European Journal of Obstetrics and Gynecology
- Indian Journal of Cancer
- South Asian Journal of Cancer
- Seminars in Oncology
- International Journal of Radiation Oncology
- Journal of Medical Imaging and Radiation Oncology
- Indian Journal of Palliative Care
- International Journal of Radiation Oncology Biology Physics
- Indian Journal of Medical and Paediatric Oncology
- Surgical Oncology Clinics of North America
- Journal of Surgical Oncology
- CA- A Cancer Journal for Clinicians
- Asian journal of Oncology

Allied Journals

- American Journal of Gastroenterology
- Indian Journal of Gastroenterology
- The Journal of Urology
- Indian Journal of Urology
- Radiology
- European Journal of radiology
- Journal of Clinical Pathology
- The American Journal of Pathology
- Journal of Clinical Pathology
- Seminars in Ultrasound, CT & MRI
- Indian Journal of Medical Research
- Indian Journal of Medical Ethics
- Ecancermedicalsciences
- Scientific World Journal
- New England Journal of Medicine

- British Medical Journal
- Lancet
- Perspectives in Clinical Research
- The National Medical Journal of India
- Journal of Cytology
- International Journal of Epidemiology
- JAMA
- The American Journal of Surgical Pathology
- Acta Cytologica

Additional Reading

1. Compendium of recommendations of various committees on Health and Development (1943 – 1975). DGHS, 1985 Central Bureau of Health Intelligence, Directorate general of Health services, Ministry of Health and Family welfare, Govt. of India, NirmanBhawan, New Delhi. P-335.
2. National Health Policy, Ministry of Health and Family welfare, NirmanBhawan, New Delhi. 1983.
3. Santhosh Kumar, The elements of Research writing and editing, 1994, Dept of Urology, JIPMER, Pondicherry.
4. Srinivasa DK, et al, Medical Education Principles and Practice, 1995, National Teacher training Centre, JIPMER, Pondicherry
5. Indian Council of Medical Research, "Policy statement of Ethical considerations involved in Research on Human Subjects", 1982, I.C.M.R., New Delhi.
6. Code of Medical Ethics framed under section 33 of the Indian Medical Council Act, 1956. Medical Council of India, Kotla Road, New Delhi.
7. Francis CM, Medical Ethics, JP Publications, Bangalore, 1993.
8. Indian National Science Academy, Guidelines for care and use of animals in Scientific Research, New Delhi, 1994.
9. Indian National Committee of Medical Journal Editors, Uniform requirements for manuscripts submitted to biomedical journals, N Engl J Med 1991:424-8
10. Kirkwood BR. Essential of Medical Statistics, 1st edition, Oxford: Blackwell Scientific Publications, 1988
11. Mahajan BK, Methods in Biostatistics for Medical Students, 5th edition, New Delhi, Jaypee Brothers Medical Publishers, 1989.
12. Raveendran, B Gitanjali. A Practical approach to PG dissertation, New Delhi, J P Publications, 1998.

Monitoring Learning Progress

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only also helps teachers to evaluate students, but also students to evaluate themselves. The monitoring be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects. Model Checklists are given in this Chapter, which may be copied and used.

The learning out comes to be assessed should include: (i) Personal Attitudes
(ii) Acquisition of Knowledge
(iii) Clinical and operative skills
(iv) Teaching skills.

i) Personal Attitudes. The essential items are:

- Caring attitudes
- Initiative
- Organisational ability
- Potential to cope with stressful situations and undertake responsibility
- Trust worthiness and reliability
- To understand and communicate intelligibly with patients and others
- To behave in a manner which establishes professional relationships with patients and colleagues
- Ability to work in team
- A critical enquiring approach to the acquisition of knowledge

The methods used mainly consist of observation. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors and peers.

ii) Acquisition of Knowledge: The methods used comprise of 'Log Book' which records participation in various teaching / learning activities by the students. The number of activities attended and the number in which presentations are made are to be recorded. The log book should periodically be validated by the supervisors. Some of the activities are listed. The list is not complete. Institutions may include additional activities, if so, desired.

Journal Review Meeting (Journal Club): The ability to do literature search, in depth study, presentation skills, and use of audio- visual aids are to be assessed. The assessment is made by faculty members and peers attending the meeting using a checklist (Model Checklist - I)

Seminars / Symposia: The topics should be assigned to the student well in advance to facilitate in depth study. The ability to do literature search, in depth study, presentation skills and use of audio- visual aids are to be assessed.

Clinico-pathological conferences: This should be a multidisciplinary case study of an interesting case to train the candidate to solve diagnostic and therapeutic problems by using an analytical approach. The presenter(s) are to be assessed using a checklist similar to that used for seminar.

Medical Audit: Periodic morbidity and mortality meeting be held. Attendance and participation in these must be insisted upon. This may not be included in assessment.

iii) Clinical skills

Day-to-Day work: Skills in outpatient and ward work should be assessed periodically. The assessment should include the candidates' sincerity and punctuality, analytical ability and communication skills

Clinical meetings: Candidates should periodically present cases to his peers and faculty members. This should be assessed using a checklist (Model checklist - II).

Clinical and Procedural skills: The candidate should be given graded responsibility to enable learning by apprenticeship. The performance is assessed by the guide by direct observation. Particulars are recorded by the student in the logbook. (Table No.3)

Teaching skills: Candidates should be encouraged to teach undergraduate medical students and paramedical students, if any. This performance should be based on assessment by the faculty members of the department and from feedback from the undergraduate students

Periodic tests: Three tests may be conducted, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce.

Work diary / Log Book- Every candidate shall maintain a work diary and record his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. Special mention may be made of the presentations by the candidate as well as details of clinical or laboratory procedures, if any conducted by the candidate.

The logbook is a record of the important activities of the candidates during his training. Internal assessment should be based on the evaluation of the log book. Collectively, log books are a tool for the evaluation of the training programme of the institution by external agencies. The record includes academic activities as well as the presentations and procedures carried out by the candidate.

Format for the logbook for the different activities is given in Tables 1, 2 and 3. Copies may be made and used by the institutions.

Assessment of the Dissertation may be done using Model Checklists III and IV

Records: Records, log books and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University or MCI. Table 4 is a suggested format for as Overall Assessment Sheet

Procedure for defaulters: Every department should have a committee to review such situations. The defaulting candidate is counselled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfil the requirements in spite of being given adequate chances to set himself or herself right.

Format of Model Check Lists

Model Check List -I.

MODEL CHECK-LIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Name of the Student: Name of the Faculty/Observer: Date:

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Article chosen was					
2.	Extent of understanding of scope & objectives of the paper by the candidate					
3.	Whether cross references have been consulted					
4.	Whether other relevant publications consulted					
5.	Ability to respond to questions on the paper / subject					
6.	Audio-Visual aids used					
7.	Ability to discuss the paper					
8.	Clarity of presentation					
9.	Any other observation					
	Total Score					

Model Check List – II

EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the Student: Name of the Faculty: Date:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Above Average 3	Very Good 4
1.	Completeness of history					
2.	Whether all relevant points elicited					
3.	Clarity of Presentation					
4.	Logical order					
5.	Mentioned all positive and negative points of importance					
6.	Accuracy of general physical examination					
7.	Whether all physical signs elicited correctly					
8.	Whether any major signs missed or misinterpreted					
9.	Diagnosis: Whether it follows logically from history and findings					
10	Investigations required					
	<input checked="" type="checkbox"/> Complete list					
	<input checked="" type="checkbox"/> Relevant order					
	<input checked="" type="checkbox"/> Interpretation of investigations					
1.	Ability to react to questioning Whether it follows logically from history and findings					
2.	Ability to defend diagnosis					
3.	Ability to justify differential diagnosis					
4.	Others					
	Grand Total					

Model Checklist III

CHECK LIST FOR DISSERTATION PRESENTATION

Name:

Faculty/Observer:

Date:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Interest shown in selecting a topic					
2.	Appropriate review of literature					
3.	Discussion with guide & other faculty					
4.	Quality of protocol					
5.	Preparation of proforma					

Model Checklist-IV

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

Name of the Student:

Name of the Faculty/Observer:

Date:

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Periodic consultation with guide/co-guide					
2.	Regular collection of case material					
3.	Depth of analysis / discussion					
4.	Departmental presentation of findings					
5.	Quality of final output					
6.	Others					
	Total Score					

Table 3

LOG BOOK

Diagnostic and Operative procedures performed

Name: Admission Year:

College:

Date	Name	ID No.	Procedure	Category O, A, PA, PI*

* Key: O - Washed up and observed

A - Assisted a more senior Surgeon

PA - Performed procedure under the direct supervision of a senior surgeon

PI - performed independently

Table 4

Model Overall Assessment Sheet

Name of the College: _____ Academic Year: _____

Sl. No	Particulars	Name of Student* and Mean Score									
		A*	B*	C*	D*	E*	F*	G*	H*	I*	J*
1	Journal Review Presentations										
2	Seminars										
3	Clinical work in wards										
4	Clinical presentation										
5	Teaching skill practice										
Total Score											

Note: Use separate sheet for each year.

Signature of HOD _____ Signature of Principal _____

The above overall assessment sheet used along with the logbook should form the basis for certifying satisfactory completion of course of study, in addition to the attendance requirement.

KEY:

Mean score: Is the sum of all the scores of checklists 1 to 7.

A, B,.....: Name of the trainees.

Medical Ethics Sensitisation and Practice

Introduction There is now a shift from the traditional individual patient, doctor relationship, and medical care. With the advances in science and technology and the needs of patient, their families and the community, there is an increased concern with the health of society. There is a shift to greater accountability to the society. Doctors and health professionals are confronted with many ethical problems. It is, therefore necessary to be prepared to deal with these problems. To accomplish the Goal (i), General Objective (ii) stated in Chapter II, and develop human values, it is urged that ethical sensitisation be achieved by lectures or discussion on ethical issues, clinical case discussion of cases with an important ethical component and by including ethical aspects in discussion in all case presentation, bedside rounds and academic postgraduate programmes.

Course Contents

1. Introduction to Medical Ethics
 - What is Ethics
 - What are values and norms
 - Relationship between being ethical and human fulfilment.
 - How to form a value system in one's personal and professional life
 - Heteronomous Ethics and Autonomous Ethics
 - Freedom and personal Responsibility
2. Definition of Medical Ethics
 - Difference between medical ethics and bio-ethics
 - Major Principles of Medical Ethics
 - a. Beneficence
 - b. Justice = fraternity
 - c. Self-determination (autonomy) = equality
 - = liberty
3. Perspective of Medical Ethics
 - The Hippocratic oath, The Declaration of Helsinki, The WHO Declaration of Geneva
 - International code of Medical Ethics (1993)
 - Medical Council of India Code of Ethics
4. Ethics of the Individual
 - The patient as a person, The Right to be respected, Truth and Confidentiality
 - The autonomy of decision, The concept of disease, health and healing
 - The Right to health
 - Ethics of Behaviour modification
 - The Physician – Patient relationship
 - Organ donation
5. The Ethics of Human life

What is human life
Criteria for distinguishing the human and the non-human
Reasons for respecting human life
The beginning of human life
Conception, contraception, Abortion
Prenatal sex-determination In vitro fertilization (IVF),
Artificial Insemination by Husband (AIH)
Artificial Insemination by Donor (AID),
Surrogate motherhood, Semen Intrafallopian Transfer (SIFT)
Gamete Intrafallopian Transfer (GIFT),
Zygote Intrafallopian Transfer (ZIFT),
Genetic Engineering

6. The Family and Society in Medical Ethics
The Ethics of human sexuality
Family Planning perspectives
Prolongation of life Advanced life directives – The Living Will
Euthanasia
Cancer and Terminal Care

7. Profession Ethics
Code of conduct
Contract and confidentiality
Charging of fees,
Fee-splitting
Prescription of drugs
Over-investigating the patient
Low – Cost drugs, vitamins and tonics
Allocation of resources in health cares
Malpractice and Negligence

8. Research Ethics
Animal and experimental research / humanness
Human experimentation
Human volunteer research – Informed Consent
Drug trials

9. Ethical workshop of cases
Gathering all scientific factors
Gathering all human factors
Gathering all value factors
Identifying areas of value – conflict, Setting of priorities,
Working out criteria towards decisions

10. Law & Medicine

- Medical Council Act
- Consumer Protection Act
- Statutory Laws
 - a). Article 21 of the Constitution – Right to life
 - b). 304 IPC (Indian Penal Code)
 - c). Drug Act

Recommended Reading

1. Francis C.M., Medical Ethics, 11 Ed, 2004, Jaypee Brothers, New Delhi, Rs. 150/-
2. Ethical Guidelines for Biomedical Research on Human Subjects, Indian Council of Medical Research (ICMR), New Delhi, 2000.
3. ICMR Guidelines on Animal Use, 2001, ICMR, New Delhi **ANALYSIS OF CLINICAL**

Neel

Rafner

