

**SURGICAL ONCOLOGY**

**PAPER- I**

**Time : 3 hours**

**SURG. ONCO /D/11/47/I**

**Max. Marks : 100**

**Attempt all questions in order.  
Each question carries 10 marks.**

1. a. What is a predictive factor? 2+2+3+3  
b. Enumerate various prognostic and predictive factors for breast cancer.  
c. What are the molecular sub-types of breast cancer?  
d. How is gene expression profiling used for breast cancer?
2. a. What are cyclin dependent kinases? 5+5  
b. What are different modes of cyclin dependent kinase regulation?
3. a. Define pharmacogenomics and predictive molecular markers of Response and Survival. 6+4  
b. Discuss in brief their significance in the management and outcome of cancers.
4. a. What are ITC (Isolated Tumor Cells) and micro-metastasis? 5+5  
b. What is their clinical and therapeutic significance?
5. a. Define cancer screening. 2+3+5  
b. What are the principles of screening?  
c. Highlight the trials indicating outcome benefits and limitations of breast cancer screening.
6. a. What are cancer stem cells? 2+4+4  
b. What is the origin and significance of these cells in solid tumors?  
c. Discuss their significance as targets of therapy.
7. a. What are mTOR inhibitors and their mechanism of action? 5+5  
b. Enumerate some common mTOR inhibitors and their utility in different cancers.
8. a. Define "Apoptosis". 2+3+5  
b. Describe briefly various markers of apoptosis.  
c. Describe briefly the molecular pathways of apoptosis.

**P.T.O.**

9. a. What is Chemo-prevention? 3+5+2  
b. Describe role of chemo-prevention in various cancers.  
c. Highlight the limitations of chemo-prevention.
10. a. Describe the surgical anatomy of mesorectum. 3+2+5  
b. Describe briefly the Total Mesorectal Excision (TME).  
c. Discuss briefly the advantages and disadvantages (citing evidence) of pre and post-operative radiotherapy in rectal cancer.

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PAPER- II

Time : 3 hours  
Max. Marks : 100

SURG. ONCO/D/11/47/II

Attempt all questions in order.  
Each question carries 10 marks.

1. a. Significance of MammaPrint and oncotype diagnosis in the management of breast cancer. 5+5  
b. Outcome related issues in triple negative breast cancer.
2. a. What is MRS (Magnetic Resonance Spectroscopy)? 5+3+2  
b. How does it differ from radio-tracer techniques?  
c. What is hyper-polarized <sup>13</sup>C MRS?
3. a. What are the pitfalls and diagnostic dilemmas in soft tissue sarcomas? 3+5+2  
b. Describe the optimum management of a 7cm X 10 cm soft tissue sarcoma in the right anterior thigh of a 60 years old lady.  
c. Discuss briefly the absolute contraindications to limb preservation in soft tissue sarcomas.
4. a. What is interval cytoreductive surgery for ovarian cancers? 4+2+4  
b. What is its role in the management of epithelial ovarian cancer?  
c. Discuss briefly the management of platinum resistant, recurrent ovarian cancer in a 40years old lady.
5. a. Discuss briefly the significance of Human Papilloma Virus (HPV) in head and neck cancers. 5+5  
b. Discuss briefly the difference in the management and outcome of HPV related squamous cell carcinomas of the Head and Neck (HNSCC) as compared to the non-HPV-HNSCC.
6. a. What is the significance of CME (Cervical Mediastinoscopy Examination) in the optimum management of lung cancer? 5+2+3  
b. Describe the role of FDG PET imaging in the staging of lung cancers.  
c. Discuss briefly the role of EGFR inhibitors in advanced non-small cell lung cancer (NSCLC)?
7. a. What is Buschke Lowenstein tumor? 3+7  
b. Describe the management of a clinically node negative (N<sub>0</sub>) groin in a 35 years old gentleman with carcinoma penis (moderately well differentiated).

P.T.O.

8. a. What are the selective bladder preserving approaches for carcinoma urinary bladder? 4+4+2  
b. What is the present evidence based guidelines for radio-chemotherapy in this cancer?  
c. What would be the optimum management of muscularis propria invading bladder cancer in a 34 years old gentleman?
9. a. What are the prognostic factors in Gastro-intestinal Stromal Tumors (GIST)? 5+5  
b. What are the strategies in the management of primarily unresectable GIST?
10. a. What is incidental gall bladder cancer? 5+5  
b. Describe the management of incidental gall bladder cancer following laparoscopic cholecystectomy in a 35 years old lady.

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**SURGICAL ONCOLOGY**

**PAPER- III**

**Time : 3 hours**  
**Max. Marks : 100**

**SURG. ONCO /D/11/47/III**

**Attempt all questions in order.**  
**Each question carries 10 marks.**

1. a. What is the role of surgery in cancer prevention? 4+4+2  
b. Discuss briefly the risk assessment and patient stratification for prophylactic surgery.  
c. Limitation and disadvantages of prophylactic surgery.
2. a. Describe the familial syndromes associated with Medullary Thyroid Cancer (MTC). 4+3+3  
b. Discuss briefly the significance of PET and RET in MTC.  
c. Describe the management of MTC (2X2 cm) involving the left lobe of thyroid in a 32 years old lady.
3. a. What are the various recommended approaches to esophageal resection for cancer esophagus? 5+5  
b. Discuss (trials & evidence based) and compare the outcomes following various approaches.
4. a. Describe the optimum management of renal cell carcinoma in the upper pole of solitary kidney of a 32 years old gentleman. 5+5  
b. What are the contraindications and complications to nephron sparing surgery?
5. a. What are k -ras mutations? 5+5  
b. Describe their utility in clinical practice.
6. a. What is the classical presentation of cancers of hypopharynx? 2+4+4  
b. Discuss briefly the management of a T<sub>4</sub>N<sub>1</sub>M<sub>0</sub> tumor involving hypopharynx in a 40 years old smoker.  
c. Discuss briefly the selective neck dissections.
7. a. What is anterior skull base? 4+3+3  
b. Discuss briefly the recent advances in skull base surgery?  
c. Discuss the complications of skull base surgery.
8. a. What is the role of intra-peritoneal chemotherapy in the management of various cancers? 4+3+3  
b. Describe the newer and emerging evidence regarding its therapeutic indications?  
c. What is HIPEC?

**P.T.O.**

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PAPER - III

FINAL EXAM  
DECEMBER 2011

NATIONAL BOARD OF EXAMINATIONS

Max Marks : 100

9. a. What is APBI and its role in early breast cancer? 4+3+3  
b. Oncoplastic techniques for central quadrant lesions in breast.  
c. Various techniques and pitfalls of chemo-port placement.
10. a. What are "Thyroid Incidentalomas"? 5+5  
b. Discuss briefly the evidence based management of an incidentaloma in the right lobe of thyroid of a 40 years old gentleman.

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