

SURGICAL ONCOLOGY**PAPER-I**Time: 3 hours
Max. Marks:100

SURGONCO/D/19/47/I

Important Instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

- a) How does radiotherapy kills cancer cells? 3+3+4
 - b) Enumerate fundamental principles of radiobiology.
 - c) Discuss principles behind various fractionation schedules.
- a) What are the principles of cancer susceptibility at the genetic level? 3+3+4
 - b) Enumerate few cancer susceptibility syndromes and genetic changes causing them.
 - c) Describe genetic basis, mechanism of carcinogenesis and clinical features of any two cancer susceptibility syndromes.
- a) What are the cancers associated with infectious agents? 2+4+4
 - b) Elaborate the epidemiology (incidence and prevalence) and mechanism of viral carcinogenesis in carcinoma cervix?
 - c) How cervical cancers can be prevented by vaccine?
- a) What are the common epidemiological study designs? 3+5+2
 - b) Describe "analytical studies".
 - c) What is clinical trial registry?
- a) Enumerate the cancer sites caused by use of tobacco. 2+3+5
 - b) Describe the National Cancer Control Programme.
 - c) Describe the major pathway of carcinogenesis of tobacco.
- a) What are the types of Polymerase Chain Reaction? 3+5+2
 - b) Describe Reverse Transcriptase - Polymerase Chain Reaction.
 - c) What are the uses of Reverse Transcriptase Polymerase Chain Reaction in solid tumours?
- a) Describe the demographic factors that affect the risk of developing cancer. 5+5
 - b) Describe the global temporal trends in the occurrence of Breast cancer and Gastric cancer.

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8. a) Describe the role of Surgery in cancer prevention. 5+5
b) Describe the role of risk reducing surgery in breast cancer.
9. a) Describe the surgical segments of liver with the help of a diagram. 3+3+4
b) Describe in details how do you calculate the residual liver remnant and decide on the extent of liver resection using triple phase CT scans and liver function tests in a patient presenting with HCC.
c) Briefly describe the Barcelona Clinic Liver Cancer Staging System.
10. a) Describe the hallmarks of cancer. 5+5
b) Describe the therapeutic targeting of the hallmarks of cancer.
