Write short notes on:

1. a) What is gene signature and define its role in cancer management?  
b) Types and role of gene signatures in the management of breast cancer.  
   5+5

2. a) Good Clinical Practice (GCP) guidelines.  
b) Rationale and planning of phase-III clinical trial.  
   5+5

3. a) What is Biobanking? Mention its advantages.  
b) Components of Biobanking.  
   6+4

4. a) Enumerate the process and components of informed consent.  
b) What are WHO surgical safety guidelines?  
   5+5

5. a) Patient selection criteria for metastasectomy.  
b) Role of metastasectomy in colo-rectal cancer management.  
   5+5

6. a) Principles and rationale behind screening for cancer.  
   4+(2+2+2)

7. a) What is a Cancer Registry and discuss various types of Cancer Registries?  
b) Global epidemiological trends of lung and breast cancer.  
   6+(2+2)

8. a) Define surgical palliation with clinical examples.  
b) Quality of life assessment tools.  
   5+5

9. a) Define Precision Medicine with rationale and advantages.  
b) Tyrosine kinase pathway.  
c) Indications, dose and duration of imatinib in GIST patients.  
   4+3+3

10. a) Role of human papilloma virus (HPV) in head and neck cancers.  
b) Cervical cancer vaccine.  
    5+5