

12/15  
T.E. - VI - Sem - Biomedical  
Biomedical Instrumentation - I

01/12/15

17

QP Code : 5656

TE/V/CBGS/BM/BMI-I  
[Total Marks : 80]

(3 Hours)

- N.B. : (1) Question No. 1 is compulsory.  
(2) Answer any three out of remaining five questions.  
(3) Figures to the right indicate full marks.  
(4) Assume suitable data wherever necessary.

1. (a) Explain the optical ray diagram of spectrophotometer. 5  
(b) Explain the importance of masking in audiometry. 5  
(c) Explain any one pneumotachometer. 5  
(d) Explain principle of reflectance oximetry.
2. (a) Explain the block diagram of a heart lung machine. 10  
(b) Explain evoked response audiometry. 10
3. (a) Explain using a spirogram various lung volumes and capacities. 10  
(b) Draw and explain analytical instrument whose output is 6V, 1A. 10
4. (a) Explain the block diagram of Autoanalyzer. 10  
(b) Explain the modes of ventilators. 10
5. (a) Explain with a neat diagram coulter blood cell counter. 10  
(b) Explain dye dilution method for cardiac output measurement. 10
6. Write short notes on any four— 20  
(a) ELISA  
(b) Electrophoresis  
(c) Chromatography  
(d) Ultrasonic blood flow meter  
(e) Impedance plethysmography.