

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

M.D. Branch VIII Examination – 2012 (April)

PAPER – I

1. a) Describe the process of selection of study design for epidemiological studies giving suitable examples. 17
- b) Define Systematic Review and meta-analysis. Why is it required? Explain the steps for carrying out a Systematic Review 17
2. Write notes on (Any Four) 32
- (a) Hierarchical pyramid of evidence (with diagram)
- (b) Characteristics of a good data table
- (c) Application of Multiple linear Regression
- (d) Importance of confidence interval
- (e) Framing a research question or study hypothesis
3. a) A matched pairs case control study was conducted of colon cancer risk and eating high fat foods. 200 colon cancer cases and 200 control individually pair matched by Age (+/- 2 years) was identified. Of the study participants: 30 colon cancer cases and their matched controls ate high fat foods every day; 85 colon cancer cases and their matched controls ate high fat foods less than every day; 60 colon cancer cases ate high fat foods daily & their control ate them less often; 25 colon cancer cases ate high fat foods less than every day & their control ate high fat foods every day. Calculate a 2* 2 table and calculate the matched pair's odds ratio for this study and Apply appropriate statistical test to see the effect of high fat diet on colon cancer. 17
- b) The systolic Blood Pressure (mm of Hg) of 10 patients with a specified illness is compared with the values observed in 12 comparable normal persons. 17
Test whether the systolic Blood pressure of patients and normal persons differ significantly at 5% level of significance

Patients Blood Pressure (mm of Hg)									
123	132	160	125	128	135	153	147	118	139
Normal Persons Blood Pressure (mm of Hg)									
110	125	124	104	130	115	136	106	138	122
120	110								