

Name : _____

TP Number : _____

Intake : _____

Total Marks

/ 20

Duration: 30 minutes**Answer all questions.****QUESTION 1 (10 marks)**

Subscribers to a newspaper were asked whether they regularly, occasionally, or never read the business section, and also whether they had traded common stocks over the last year. The data are shown in the table below:

Traded stocks	Read Business section		
	Regularly	Occasionally	Never
Yes	9	5	2
No	8	16	10

If a customer was selected at random:

- (a) Find the probability that the subscriber had traded stocks. (2 marks)
- (b) Find the probability that the subscriber never read business section and had not traded stocks. (2 marks)
- (c) Find the probability that subscriber regularly read business section given that he/she had traded stocks. (2 marks)
- (d) Find the probability that the subscriber occasionally read business section or never traded stocks. (2 marks)
- (e) Show that the events of read business regularly section and never traded stocks are not statistically independent. (2 marks)

QUESTION 2 (10 marks)

In a first year of college, 37 students joined rugby club, 48 students joined hockey club and 45 students joined tennis club. 15 students joined rugby and hockey club, 13 students joined hockey and tennis club, 7 students joined rugby and tennis club, and 5 students joined all three clubs. There are total of 110 students who had enrolled in first year of the college.

- (a) Represent the above information on a Venn diagram. (4 marks)
- (b) Find the percentage of students who did not joined any of the three clubs. (2 marks)
- (c) Find percentage of students who joined at least one club. (2 marks)
- (d) Find percentage of students who joined only one club. (2 marks)