

## Business Decision Making Sample Exam Paper Set 3 (Final Answers)

1. a. (i) Inferential  
(ii) Descriptive  
(iii) Descriptive  
(iv) Inferential  
(v) Ratio  
(vi) Nominal  
(vii) Ordinal  
(viii) Interval
- b. (i) 7.25 hours  
(ii) 7 – 9 hours  
(iii) 10.023  
(iv) 3.17 hours
2. a. (i) \$44.80  
(ii)  $\$43.15 < \mu < \$46.52$   
(iii) We are 95% confident that the population mean amount of money spent on doctor's visit is between \$43.15 and \$46.52.
- b. (i) 5  
(ii)

Class Limit	Class Boundaries	Frequency	Mid-points
40 - 44	39.5 – 44.5	5	42
45 – 49	44.5 – 49.5	6	47
50 - 54	49.5 – 54.5	9	52
55 – 59	54.5 – 59.5	12	57
60 – 64	59.5 – 64.5	5	62
65 – 69	64.5 – 69.5	3	67
Total		40	

3. a. 5.3, 5, 5, 12
- b. (i) 0.5  
(ii) 0.412  
(iii) 0.25  
(iv) 0.643  
(v) Not mutually exclusive.

4. a. (i) 0.0563  
(ii) 0.1460  
(iii) 0.5256
- b. (i)  $77.03 < \mu < 86.97$   
(ii)  $\$38.78 < \mu < \$46.32$
5. a. (i) 0.0307  
(ii) 15  
(iii) 0.0001
- b.  $H_1: \neq 29$   
CV:  $t = \pm 2.064$   
Test Value:  $t = 4.35$   
Decision: Reject  $H_0$
6. a. (i) 0.0095  
(ii) 0.0228
- b. (i)  $r = -0.981$   
very strong, negative, linear  
(ii) Line of best fit :  $y' = 96.784 - 2.668x$
7. a. (i) an increase in variable  $x$  is associated with a decrease in variable  $y$ .  
(ii) +0.92: very strong, positive, linear  
-0.11: very weak, negative, linear  
(iii)  $r^2 = 0.0121$
- b.  $H_1$  : The way people obtain information is dependent on their educational background.  
CV:  $\chi^2 = 5.991$   
Test Value:  $\chi^2 = 21.347$   
Decision: Reject  $H_0$