

THE HONG KONG POLYTECHNIC UNIVERSITY  
HONG KONG COMMUNITY COLLEGE

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**Subject Title** : Economic and Social Statistics      **Subject Code** : CCN2266

**Session** : Semester Two, 2015/16

**Numerical Answers**

**Question 1**

(b)(i)

Hour	2-hour MA forecast	Forecast error
3 <sup>rd</sup>	734	388
4 <sup>th</sup>	956	611

(b)(ii) 0.369

**Question 2**

$H = 4.857$

**Question 3**

(a)

Day	Naïve forecast	Forecast error	Exponential forecast	Forecast error
2	380	109.00	380.000	109.000
3	489	-64.00	461.750	-36.750
4	425	41.00	434.188	31.813

(b) Theil's U = 0.8981

**Question 4**

(a) 206.8182

(b) 198.399

**Question 5**

$r = 18, s = 36, t = 48$

**Question 6**

(b) 95.7

**Question 7**

- (a)(i) 0.88
- (a)(ii) 235.20
- (b) Scaled seasonal factor for the season 1 = 3.45  
Seasonal factor for the season 1 = 2.76

**Question 8**

- (a)  $P(\text{Yes}) = 0.3 + 0.4p$
- (b)  $\hat{p} = 0.2321$
- (c) estimated variance of  $\hat{p} = 0.010648$

**Question 9**

- (b) 13.67
- (c) 0.73

**Question 10**

- (b) p-value = 0.00002733
- (c) 160