

THE HONG KONG POLYTECHNIC UNIVERSITY
HONG KONG COMMUNITY COLLEGE

Subject Title : Computer Networking

Subject Code : CCN2238

Session : Semester Two, 2017/18

Numerical Answers

Question B1

- (b) 20 kHz
- (c) 50k Hz

Question B3

- (a) ONCE
- (b) p1: 2:12 pm
r1 : 2:06 pm
q2 : 2:45 pm
r2 : 2:35 pm

Question B4

- (c)(i) 30.92
- (c)(ii) 308.2 Mbps

Question B5

- (a) 54448.
- (b) 115.
- (c) 168 bytes.
- (d) 160 bytes.

Question B6

- (a)(i) class B
- (a)(ii) 255.255.0.0
- (a)(iii) 158.218.0.0
- (a)(iv) 158.218.255.255
- (b) 195.234.132.32
195.234.132.47

Question C1

- (a)(i) Message sent: 1011 0110 1110 1000.
- (a)(ii) It is not an error-free message.
- (a)(iii) 2.625 V

Question C2

- (a) 24s
- (b) Total Duration = $36 + 61.5 = 97.5$ s

Question C3

- (a)(i) 28 bytes.
- (a)(ii) There are options
- (a)(iii) 1175 bytes of data.
- (a)(v) 11.
- (a)(vi) $(4D91)_{16}$ or 19857
- (b)(i) Class B
- (b)(ii) 162.76.13.3
- (b)(iii) Network mask is 255.255.0.0 and network address is 162.76.0.0