

《数据通信与网络》期中测验题参考答案

一、单项选择题

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|------------|--------|--------|--------|--------|
| 1. (1) C | (2) B | (3) B | (4) D | (5) C |
| 2. (6) B | (7) B | (8) A | (9) C | (10) D |
| 3. (11) B | (12) D | (13) C | (14) A | (15) B |
| 4. (16) B | (17) C | (18) B | (19) B | (20) C |
| 5. (21) A | (22) B | (23) A | (24) D | (25) B |
| 6. (26) B | (27) D | (28) B | (29) D | (30) B |
| 7. (31) D | (32) A | (33) B | (34) B | (35) A |
| 8. (36) C | (37) B | (38) B | (39) B | (40) C |
| 9. (41) A | (42) C | (43) D | (44) C | (45) B |
| 10. (46) B | (47) C | (48) A | (49) D | (50) A |
| 11. (51) C | (52) C | (53) B | (54) B | (55) A |
| 12. (56) C | (57) C | (58) A | (59) C | (60) C |

一、应用计算题（只写计算式）

1. $N_h/(M+N_h)$
2. $v=18\text{km/hr}=5\text{m/s}$, $7 \times 10^9 \times 8 \times 3 \text{ bit} / (s/v) = 155\text{Mbps}$, $s = 5.4\text{km}$
3. $\because \text{SNR}_{\text{dB}}=35\text{dB} \therefore \text{SNR}=3162$ $C=B\log_2(1+\text{SNR})=3000\log_2(1+3162)=34860\text{bps}$
4. $3\text{bit} \times 16/\text{s} = 48\text{bps}$
5. $\{[(1000+6) \times 8] \times (10000/1000)\} \text{bit} / 9600\text{bps} = 8.38\text{s}$
6. $\because 10\lg(P_o/P_i)=10\lg(P_o/5)=-10\text{dB} \therefore P_o=0.5\text{W}$
7. $\because \lambda=2.5 \times 10^{-3} \times 2=5 \times 10^{-3}\text{m} \therefore f=c/\lambda=3 \times 10^8/5 \times 10^{-3}=6 \times 10^{10}\text{Hz}$ (60GHz)
8. $D=R/\log_2 L=2400/\log_2 4=1200 \text{ baud}$