GRT INSTITUTE OF ENGINEERING AND TECHNOLOGY, Tiruttani.

(Approved by AICTE, New Delhi Affiliated to Anna University, Chennai.)

Department of Electronics & Communication Engineering

III Year - VIth Semester

WIRELESS COMMUNICATION MCQ

REGULATION – 2017

EC8652 WIRELESS COMMUNICATION

Total points 45/45 MCQ ❓

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0 of 0 points

NAME OF THE STUDENT *

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REGISTER NUMBER *

1

YEAR *

◉ III

PART-A(30*1=30 MARKS)   29 of 29 points

✓ 1.Why neighboring stations are assigned different group of channels in cellular system? *   1/1

◉ a) To minimize interference   ✓

◯ b) To minimize area

◯ c) To maximize throughput

◯ d) To maximize capacity of each cell

✓ 2.Direct sequence spread spectrum demodulation uses *   1/1

◯ a. DPSK

◯ b. FSK

◯ c. ASK

◉ d. QPSK   ✓

✓ 3.The digital modulation technique used in frequency selective channels is *   1/1

◯ a. FSK

◯ b. ASK

◉ c. BPSK   ✓

◯ d. QPSK

✓ 4.OFDM is a technique of 1. Encoding digital data 2. Multiple carrier frequencies 3. Wide band digital communication 4. 4G mobile communication *   1/1

○ a. 1, 2 and 3 are correct

○ b. 2 and 3 are correct

○ c. 1, 2 and 4 are correct

◉ d. All the four are correct   ✓

✓ 5.Advantages of using OFDM include 1. Avoids complex equalizers 2. Low 1/1 symbol rate and guard interval 3. Avoids ISI 4. Multiple users at same frequency *

○ a. 1, 2 and 3 are correct

○ b. 2 and 3 are correct

○ c. 1, 2 and 4 are correct

◉ d. All the four are correct   ✓

✓ 6.The guard interval is provided in OFDM *   1/1

○ a. To eliminate the need of pulse shaping filter

○ b. To eliminate ISI

○ c. High symbol rate

◉ d. Both a and b   ✓

✓ 7.The performance of modulation scheme is not measured in terms of   1/1
_____ *

○ a) Power efficiency

○ b) Bandwidth efficiency

○ c) Cost and complexity

◉ d) Transmitted power   ✓

✓ 8.In digital communication system, in order to increase noise immunity, it 1/1
is necessary to increase_____ *

◉ a) Signal power   ✓

○ b) Signal amplitude

○ c) Signal frequency

○ d) Signal magnitude

✓ 9.Which of the following is the ratio of signal energy per bit to noise   1/1
power spectral density? *

○ a) Bandwidth efficiency

○ b) Spectral density

◉ c) Power efficiency   ✓

○ d) Power density

✓ 10.A desirable modulation scheme provides_____bit error rates at   1/1
_____ received signal to noise ratios. *

⊙ a) Low, low   ✓

◯ b) Low, high

◯ c) High, high

◯ d) High, low

✓ 11.Minimum shift keying is similar to *   1/1

⊙ a) Continuous phase frequency shift keying   ✓

◯ b) Binary phase shift keying

◯ c) Binary frequency shift keying

◯ d) QPSK

✓ 12.In MSK, the difference between the higher and lower frequency is *   1/1

◯ a) Same as the bit rate

⊙ b) Half of the bit rate   ✓

◯ c) Twice of the bit rate

◯ d) Four time the bit rate

✓ 13.The technique that may be used to reduce the side band power is * 1/1

○ a) MSK

○ b) BPSK

◉ c) Gaussian minimum shift keying ✓

○ d) BFSK

✓ 14.The bandwidth of BFSK is_____than BPSK. * 1/1

○ a) Lower

○ b) Same

◉ c) Higher ✓

○ d) Not predictable

✓ 15.In Binary FSK, mark and space respectively represent * 1/1

◉ a) 1 and 0 ✓

○ b) 0 and 1

○ c) 11 and 00

○ d) 00 and 11

✓ 16.In Binary Phase Shift Keying system, the binary symbols 1 and 0 are   1/1
represented by carrier with phase shift of *

○ a) Π/2   ✓

○ b) Π

○ c) 2Π

○ d) 0

✓ 17.The data rate of QPSK is_____of BPSK. *   1/1

○ a) Thrice

○ b) Four times

● c) Twice   ✓

○ d) same

✓ 18.QPSK is a modulation scheme where each symbol consists of *   1/1

○ a) 4 bits

● b) 2 bits   ✓

○ c) 1 bit

○ d) M number of bits, depending upon the requirement

✓ 19.If the maximum instantaneous phase transition of a digital modulation 1/1
techniques kept at 90°, the modulation will be organized as *

○ a)DPSK

◉ b)QPSK   ✓

○ c)OQPSK

○ d)BPSK

✓ 20.If the baud rate is 400 for a QPSK signal, the rate is *   1/1

○ a)200

○ b)400

◉ c)800   ✓

○ d)1600

✓ 21.Which of the following gives the least probability of error? *   1/1

○ a) In Amplitude Shift Keying

○ b) In Frequency Shift Keying

◉ c) In Phase Shift Keying   ✓

○ d) In Differential Phase Shift Keying

✓ 22.Which gives maximum probability of error? *   1/1

⦿ a)ASK   ✓

◯ b)BFSK

◯ c)BPSK

◯ d)DBPSK

✓ 23.The bit rate of digital communication system is 34 M bits/sec. The   1/1
Baud rate will be in QPSK modulation techniques *

◯ 8.5 M bits/sec

⦿ 17   M   bits/sec   ✓

◯ 32 M bits/sec

◯ 64 M bits/sec

✓ 24.Equalization techniques can be categorised into_____and_____   1/1
techniques. *

⦿ a) Linear, non linear   ✓

◯ b) Active, passive

◯ c) Direct, indirect

◯ d) Slow, fast

✓ 25.Which of the following is not an advantage of lattice equalizer? *   1/1

⊙ a) Simple structure   ✓

○ b) Numerical stability

○ c) Faster convergence

○ d) Dynamic assignment

✓ 26.In the context of equalizers, LTE stands for_____ *   1/1

○ a) Long transversal equalizer

○ b) Least time-varying equalizer

⊙ c) Linear transversal equalizer   ✓

○ d) Linear time-varying equalizer

✓ 27. Which of the following is not a non-linear equalization technique? *   1/1

○ a) Decision feedback equalization

○ b) Maximum likelihood symbol detection

⊙ c) Minimum square error detection   ✓

○ d) Maximum likelihood sequence detection

✓ 29.Space diversity s also known as_____ *   1/1

⦿ a) Antenna diversity   ✓

◯ b) Time diversity

◯ c) Frequency diversity

◯ d) Polarization diversity

✓ 28.Diversity decisions are made by_____ *

⦿ a) Receiver   ✓

◯ b) Transmitter

◯ c) Channel

◯ d) Adaptive algorithms

PART-B (15*2=30 MARKS)   29 of 29 points

✓ 31.Interleaving is used to obtain_____diversity. * 2/2

○ a) Time ✓

○ b) Frequency

○ c) Polarization

○ d) Antenna

✓ 32.Equalizer is usually implemented in_____ * 2/2

○ a) Transmitter

● b) Baseband or at IF in a receiver ✓

○ c) Radio channel

○ d) Modulator stage

✓ 33.What is the time duration of a bit if data is transmitted at 270.833 kbps 1/1
in the channel? *

○ a) 270.833 s

○ b) 3 μs

● c) 3.692 μs ✓

○ d) 3.692 s

✓ 34.In a micro cell zone concept, when a mobile travels from one zone to   2/2
another within the cell, it retains the same_____ *

○ a) Power level

○ b) Base station

● c) Channel   ✓

○ d) Receiver

✓ 35.What was the typical handoff time in first generation analog cellular   2/2
systems? *

○ a) 1 second

● b) 10 seconds   ✓

○ c) 1 minute

○ d) 10 milliseconds

✓ 36.How much time it takes for handoff in digital cellular systems like   2/2
GSM? *

● a) 1 second   ✓

○ b) 10 seconds

○ c) 1 minute

○ d) 10 milliseconds

✓ 37.Frequency diversity uses_____as a diversity element. * 2/2

○ a) Correlation coefficient

○ b) Coherence time

⦿ c) Coherence bandwidth ✓

○ d) SNR

✓ 38._____of TDMA system is a measure of the percentage of 2/2
transmitted data that contains information as opposed to providing
overhead for the access scheme. *

⦿ a) Efficiency ✓

○ b) Figure of merit

○ c) Signal to noise ratio

○ d) Mean

✓ 39._____synchronization overhead is required in TDMA due to 2/2
_____ transmission. *

⦿ a) High, burst ✓

○ b) High, continuous

○ c) Low, burst

○ d) No, burst

✓ 40. Traffic intensity offered by each user is the product of_____ *   2/2

   ○ a) Set up time and holding time

   ● b) Call request rate and holding time   ✓

   ○ c) Load and holding time

   ○ d) Call request rate and set up time

✓ 41. Which of the following is not an advantage of digital modulation? *   2/2

   ○ a) Greater noise immunity

   ○ b) Greater security

   ○ c) Easier multiplexing

   ● d) Less bandwidth requirement   ✓

✓ 42. Choice of equalizer structure and its algorithm is not dependent on _____ *   2/2

   ○ a) Cost of computing platform

   ○ b) Power budget

   ○ c) Radio propagation characteristics

   ● d) Statistical distribution of transmitted power   ✓

✓ 43.Which of the following is not an algorithm for equalizer? *   2/2

○ a) Zero forcing algorithm

○ b) Least mean square algorithm

○ c) Recursive least square algorithm

◉ d) Mean square error algorithm   ✓

✓ 44.RAKE receiver uses separate_____to provide the time shifted   2/2
version of the signal. *

○ a) IF receiver

○ b) Equalizer

◉ c) Correlation receiver   ✓

○ d) Channel

✓ 45.The time requires to allocate a trunked radio channel to a requesting   2/2
user is called_____ *

○ a) Dwell time

○ b) Holding time

○ c) Run time

◉ d) Set up Time   ✓

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