**ATC – 2009 TEST.**

Total 100 Qns. Around 50 technical . Only 28 of the technical is added here. Some of the questions are not complete.

1. Which of the following schemes have the best error performance with the same energy per bit?
   1. 16QAM      b.  16PSK   c.  QPSK
2. Same Antenna is used for Tx and Rx. Radar range related to Antenna gain as
   1. Directly prop. To G
   2. Direc. Prop. To sq. root of G
   3. Inversely prop to G
3. Thermal Noise in conductor related to B
   1. B
   2. 1/B
   3. B2
   4. Square root of B
4. A control system with feedback gains 0.1 and forward gains 10. What is the sensitivity of the system w.r.t the feedback system?
5. The value of  ‘k’ for the system to be stable is. ( 6th degree Characteristic Eqn given)
6. Which of the following system is stable?
   1. As2 + Bs +C
   2. As2 - Bs +C
   3. As4 + B s3 +Cs+D
   4. -As2 - Bs -C
7. Linux OS based on which architecture
8. Comparison betweeb Macro and Subroutine
   1. Macro better that Sub Rtne with respect to storage time and execution time
   2. Vice versa
   3. Macro better that Sub Rtne with respect to execution time only
   4. Vice versa
9. Which of the following is a privileged instruction?
   1. MOV A B
   2. INT 21
   3. ADD A B
   4. IN 08
10. Which of the following instruction is not converted to binary by an Assebly Language Program?
    1. TRAP
    2. Interrupt
    3. Privilige instruction
    4. Sorry don’t remember
11. In which type of machine can multiple tasks be done
    1. Virtual Machine
    2. Sorry don’t remember
12. Which of the following has the highest distortion?
    1. A
    2. B
    3. AB
    4. C
13. Which of the following distortions occur in Class B push pull amplifier?
    1. Harmonic
    2. Intermodulation
    3. Phase
    4. Sorry don’t remember
14. Ө(s)/T(s) of a rotational system (J,B,k regular notaions)
15. Schmitt Trigger with 3V & 1V UTP and LTP respectively. A sinusoidal input with 10V peak is fed as the input. The output swings between
16. Op-amp circuit given. Identify the circuit (Ans: Peak detector)
17. 6 bit binary ladder with 101001 as input ( 0= 0V , 1 = 10V). Output voltage is ------
18. Doppler Radar of 1125 MHz. Frequency of received echo is 125  MHz. The conclusion is
    1. Target also has a radar
    2. Target moving away
    3. Target approaching
19. Microprocessor cycles between
    1. Fetch and Execution operations.
    2. Fetch and Halt
20. Modulation index of an FM system with 2.5V, 500 Hz input and 5KHz deviation is
21. Routh’s Criterion gives
    1. Number of roots on the LHS of S plane
    2. Number of roots on the RHS of S plane
22. For the system to be stable, the roots of the characteristic Equation must lie
    1. Left side of the S plane
    2. Right side of s plane
23. Impulse response h(t) of a system is
    1. Inverse Laplace transform of Transfer Function
24. The output of a LTI system with Guassian process input is
    1. Gaussian
    2. Poisson
25. Spectral Density and Auto-Correlation are
    1. Laplace Transform pair
    2. Fourier Transform Pair.
26. A flex Klystron is a
    1. Microwave amp
    2. Microwave Oscillator
    3. Both amp and Oscillator
    4. High cavity tube
27. S Matrix related question.
28. Block diagram given

Oscillator(1MHz)  à  Divider (/ 10^6)  à Schmitt Trigger  à   Flip Flop  à.  Output is

* 1. Pulse Train of width 1 sec
  2. Pulse Train of width 2 sec
  3. Pulse Train of width 0.5 sec