

Jindal Steel And Power Technical Questions

Technical:

Q1. Given an amplitude modulated $x(t) = 20 \sin 100\omega t + 10 \sin 300\omega t - 20 \sin 50\omega t$. Find fm.

Q2. What is the potential difference between electrodes in a cell called?

- a) positive potential
- b) negative
- c) electrode
- d) potential

Q3. For what snubber circuit is used?

- a) increasing dv/dt
- b) decreasing dv/dt
- c) overvoltage protection

Q4. What does hold signal represent in 8085?

Q5. Given a $G(s) = 1/(s-1)(s+2)(s+3)$. How many times will it encircle the origin in a Nyquist plot?

Q6. Find the Z transform of $G(s) = 1/(s+1)^2$

Q7. LVDT is which type of transducer?

- a) inductive
- b) capacitive

Q8. Find the Z transform of an $u(n-5)$.

Q9. What is the instrument used in ECG called?

Q10. What is the instrument used to measure the movement of ear pulses called?

- a) ECG
- b) EOG
- c) EFG

Q11. What are the three inputs of IGBT called?

ANS: emitter, collector and gate.

Q12. If the amplitude of a FM wave is made two times, then what will be its effect on the frequency deviation of the wave?

Q13. What is quantization?

Q14. If the value of ζ (damping ratio) is $0 < \zeta < 1$, then the characteristic of roots can be

- a) imaginary
- b) complex conjugates
- c) real and equal
- d) real and unequal.

Q15. $G(s) = \frac{1}{s^2 + 4s + 25}$. Find the time when the output reaches the maximum for the first time (Peak time).

Q16. What is PUSH related to in 8085?

Q17. Difficulty with servomotor?

- a) dead space
- b) backlash
- c) saturation of core

Q18. Which filter is to be used for finding the o/p between f_1 and f_2 ?

- a) band-pass
- b) low-pass
- c) band-stop
- d) high-pass

Q19. Given a PCM has bit rate as 36000 bits/sec and maximum $f_m = 3.2$ kHz. Find the sampling rate.

Q20. Highest priority in interrupt in 8085 is---

Q21. The coefficient of pd controller is $k =$

- a) $\sin \omega t / \omega a$
- b) $-\sin \omega t / \omega a$
- c) $\cos \omega t / \omega a$
- d) $-\cos \omega t / \omega a$

Q22. Turn on time for a SCR is ----- than turn off time.

Q23. Auto-correlation has which symmetry?

ANS: Even symmetry

Q24. Given a source voltage sinusoidal voltage $v = 200 \sin 314t$, load resistance is 10 ohms and the angle of firing is 90 degree in SCR. Find the current.

Q25. The peak voltage in half wave rectifier is v and power is p . What will be the value of voltage and power in a full wave bridge rectifier, if other conditions unchanged.

- a) V, P
- b) $2V, P$
- c) $2V, 2P$

Q26. In a semi converter, the firing angle is 60 degree. What is the conduction angle for the SCR present?

Q27. Given a rough table with 2 rows as $S_4 \begin{matrix} 1 & 2 & 4 \end{matrix}$, $S_3 \begin{matrix} 10 & 20 \end{matrix}$, then find the number of roots lying in RHS side of x plane.

Q28. In 8085, what is the length of general purpose registers?

Q29. What is cyclo convertor?

ANS: changes higher frequency to lower one and vice-versa in one step.

Q30. What should be the width of PMOS with respect to NMOS, so that current loss is minimum?

ANS: This was based on the fact that NMOS construction requires lesser area than PMOS for the same amount current flowing through it.

Q31. What is the number of overlap SCR conducting in 1 phase full wave rectifier?

Q32. Blind speed can be rectified by

Q33. What type of digital circuits that do not depend on the input from previous states?

ANS: combinational circuits

Q34. Which component of superheterodyne receivers provide image frequency selectivity?

Aptitude:

Q35. Rams salary is 20 % less than Raj salary, Vikrams salary is 55 % more than Rajs salary. If Raj saves 20% of the salary which equal to Rs.2000, what is Vikrams salary?

Q36. A,B,C are three vertices of a triangle and triangle DEF is formed by joining midpoints of the triangle ABC respectively. What is the ratio of the area of triangle DEF to triangle ABC?

Q37. Replace * with +./ with -,+ with *, - with / and solve $24/78+90*87-87/878$.

Q38. Average of a 4 member family 10 years ago is 24. In these 10 years a pair of twins come into the family. But yet after 10 years, the average remains 24. Find the age of the twins.

Q39. Two persons are in election. 55% of the valid votes are with one person and 20% of votes are invalid. Total number of votes is 7500. Find the number of votes with other person.

Q40. A man sells 4 t.v in the cost price of 5 t.v. Find profit %.