EEE 323 CIRCUIT THEORY TEST QUESTIONS

by ***BIG KOL***

And

MATRYX

1. For RC admittance the residues of the poles must be…….and……

ANSWER: *REAL AND NEGATIVE*

2. The network functions F(s)= (s+2)/(s+1)(s+3) represent an

ANSWER:

3. If a polynomial is either even or odd its root lie on……

ANSWER: *THE IMAGINARY AXIS*

4. The network Z(s) = 3(s+2)(s+4)/s(s+3) is an …….network

ANSWER: *RC*

5. A hurwitz polynomial has

ANSWER: *ALL ROOTS AT THE LEFT HAND OF THE S-PLANE*

6. In an actual filter circuit, inducturs are avoided mainly because they……

ANSWER: *BULKY AND UNSTABLE*

7. The amplitude of the output signal of a filter at the cutoff frequency is ……

ANSWER: *A= 0.707 *A-MAX*

8. In cauer form I the numerator and denominator polynomials are arrange in

ANSWER: *DESCENDING POWER OF S*

9. For RL impedance and RC admittance network the residue of the poles must be

ANSWER: *POSITIVE*

10. In a series RC circuit to obtain a low pass characteristics across which element should the output voltage be taken

ANSWER: *CAPACITOR*

11. A positive filteract has an amplification device

ANSWER: *FALSE*

12. An ideal filter should have

ANSWER: *ZERO ATTENUATION IN THE PASS BAND AND INFINITE ATTENUATION IN THE STOP BAND*

13. The poles at the origin and at infinity are also called external critical frequency

ANSWER: *FALSE*

14. The amplitude of the output at signal of a filter at the cut off frequency is

ANSWER: *REDUCED BY 3 dB (a factor of 0.7)*

15. The quality factor of a band filter has ……. relationship with the band width

ANSWER: *INVERSELY PROPORTIONAL*

16. An RC driving point function has zeros at s= -2 and s= -5 the admissible poles for the functions are

ANSWER: *S= -1 and S= -3*

17. Poles closest to the origin is

ANSWER: *RC*

18. Zero closest to the origin is

ANSWER: *RL*

19. Ks/S+& can be realized using

ANSWER: *SERIES COMBINATIONS OF RC*

20. To obtain a low pass characteristics we use

ANSWER:*CAPACITOR* CAPACITOR

21. To obtain a high pass characteristics we use

ANSWER: *INDUCTOR*

22. For an RC driving point impedance what are the poles and zeros

ANSWER: $s = -1/T \quad and \quad s = 0 \ (or \ infinity)$

23. The polynomial P(s)= (s-1)(s^2+1)(s+2)(s+3) is

ANSWER: *NOT HURWITZ*

24. For a bandpass active filter, the upper cufoff frequency is greater than the lower cutoff frequency

ANSWER: *TRUE*

25. The cauer form I of the network Z(s) = 3(s+2)(s+4)/s(s+3) the second element is

ANSWER: *CAPACITOR OF 1/9F*

26. The function F(S) = s(s^2+4)/(s^2+1)(s^2+3) satisfies the separation property

ANSWER: *FALSE*

27. In causer form of II of Z(s) = s^4+10s+9/s^3+4s the second element is

ANSWER: *AN INDUCTOR OF 31/16 H*

28. The Foster form I of the network F(s)= 3(s+2)(s+4)/s(s+3) has a capacitance value of

ANSWER: *1/8 F*

29. Which of the following is an LC immittance function

ANSWER: *Z(s) = 2(s2+1)(s2+9)/s(s2+4)*

30. An LC circuit cannot produce oscillations when

ANSWER: *RESISTANCE IS LARGE*

31. The Real part of all zeros and poles must be

ANSWER: *NEGATIVE AND ZEROS*

PLEASE NOTE THAT ANSWERS AND QUESTIONS ARE SUBJECTED TO CORRECTIONS

LET DO WELL TO VIGOROUSLY READ OUR HANDOUTS AND ALSO SEEK FOR EXTENSIVE KNOWLEDGE.

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