

CIT:134 Electronics-1(Paper B)

Model Paper-1

Objective

Time:30 Min

Marks:15

Q. Encircle the correct answer.

1. Transformer working depends on  
(a)self-inductance, (b)magnetic flux (c)mutual inductance (d)any of these
2. Step up transformer steps up  
(a)Voltage, (b)current (c)power (d)capacitance
- 3.----- cannot be increased by transformer  
(a)current, (b)power, (c)resistance (d)inductance
4. Transformer coils are coupled  
(a)Electrically, (b)magnetically (c)horizontally (d)vertically
5. the purpose of laminating is to-----  
(a)decrease resistance (b)increase resistance (c)decrease Eddy current loss  
(d)increase power
6. In a series LC circuit at resonant frequency the ----  
(a)current is minimum (b)impedance is maximum (c)voltage across C is minimum  
(d)current is maximum
7. at resonance the phase angle equals ----  
(a)0 (b)90. (c)180. (d)270
8. in parallel resonance, the line current is----- at resonant frequency  
(a)maximum, (b)minimum (c)complete (d)often
9. Higher the Q factor of a circuit----- its bandwidth  
(a)Expansion, (b)narrower, (c)increase, (d)widen
10. A filter separates high and low-----  
(a)Voltages, (b)amplitudes, (c)frequencies (d)all of these
11. A -----pass filter provides output for the lower frequency  
(a)high, (b)low, (c)bandstop (d)band pass
- 12 in-----pass filter capacitors is in series with the load  
(a)high, (b)low (c)band (d)all of these
- 13 resonant circuits are generally used for band----- and band stop filtering  
(a)pass, (b)prevent, (c)block (d)any of these
14. Decimal equivalent of (1101) is  
(a)23 (b)16 (c)13 (d)17
15. A gate which results a high output for one high input is  
(a)ORgate (b)NOTgate (c)AND gate (d)NOR gate

(44)

**DAE 1<sup>st</sup> YEAR COMPUTER INFORMATION TECHNOLOGY**

**CIT:134 Electronics-1(Paper B)**

**Model Paper-1**

**Subjective**

**Time: 2:30 Min**

**Marks:60**

**Section. I**

**Q.1 Write short answer to any 18 of the following questions**

**18 X 2 =36**

1. Define transformer
2. Define mutual inductance
3. Describe turn ratio of transformer
4. In list the types of transformers
5. Describe autotransformer.
6. Explain resonance
7. Define resonant circuit
8. Describe Q of a circuit
9. Define bandwidth.
10. Describe filter
11. Describe the purpose of filter
12. Define low pass filter
13. Describe high pass filter
14. Explain band stop filter
15. Define band pass filter
16. Describe the purpose of coupling
17. Define coefficient of coupling
18. Define semiconductor name semiconductor materials
19. Define the term doping
20. Why pentavalent impurities called donor impurities
21. Name pentavalent and trivalent elements
22. Define PN junction
23. How a diode is forward bias
24. Define the term rectification
25. Convert the binary number (11001101) to decimal number
26. Draw the symbol and Boolean expression of AND gate
27. what is an exclusive OR gate?

**Section. II**

**Attempt any three (3) questions**

**3 X 8 = 24**

- Q.2 Explain the series resonant circuit with diagram in detail
- Q.3 In list transformer losses and describe each
- Q.4 Describe RC and LC low pass filter in detail
- Q.5 Convert the following hexadecimal number to binary number
1.  $(10A4)_{16}$       2.  $(CF8E)_{16}$
- Q.6 How NOR gate is used as universal gate explain.