


RAN-2503000502061007

B.Sc. (NCF - NEP) (Sem. II) Examination April - 2026
Physics - SEC : Electrical Circuit And Network Skill Theory

[Total Marks: 13

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
 Fill up strictly the above details on your answer book.

Seat No.:

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Student's Signature

Q. 1 Write answer of any 13 questions of the following 15 questions:
[Each question carry 1 marks]

1. If the frequency of the AC voltage is increased in the circuit containing a capacitor, then the capacity reactance will _____ (increase, decrease)
2. What is the efficiency of the circuit when maximum power transfer takes place?
3. As sine wave has a frequency of 50 Hz. What is the angular frequency of it? Write the unit of angular frequency.
4. The superposition theorem is applicable to _____ (voltage and power, voltage and current)
5. Delta connection is also known as mesh connection, True or False?
6. What is the current-voltage relation of a capacitor?
7. A $50 \mu F$ capacitor is connected across a 230-V, 50-Hz supply. Calculate the reactance offered by the capacitor.
8. A pure resistance R and a pure inductive coil of inductance L are connected in series. What is the impedance of this circuit?
9. An uncharged capacitor of 0.01F is charged by a current of 5mA for 6 seconds. Find the voltage in it.
10. A resistance R and a $4 \mu F$ capacitor are connected in series across a 200 V. d.c. supply. Across the capacitor is a neon lamp that strikes (glows) at 120 V. Calculate the value of X.
11. What is delay line function in CRO?
12. The distance between two peaks measured on the X-axis is 2cm, at 1 ms/div on CRO. What is the frequency of the signal?
13. What are the parameters that can be measured using CRO?
14. Which component is termed as heart of CRO?
15. What is the deflection sensitivity of CRT?