Electrical Engineering Quiz 002 (Mixed)

Quiz Instructions

- Before attempting, carefully read the question text.
- Then choose the correct answer.
- Click on **"Submit"** to confirm your answer.
- Use the **Question List** in the upper left corner to jump to a certain question.

1. Determine the maximum flux density (in T) of a material having eddy current coefficient of 2, thickness of 4 mm, volume of 20 cu. meter, which is supplied by a frequency of 50 Hz when the material has eddy current loss of 6 W.

A) 2.24

B) 3.34

C) 1.94

D) 1.21

2. What will be the value of current (in A) in a 50cm long air-core solenoid, if the value of magnetic field at the center of the solenoid is 5 mT and the solenoid has 300 turns?

A) 6.63

B) 5.63

C) 4.36

D) 8.25

3. Determine the value of produced mmf (in Amp-turns) in a coil if the coil has 120 turns and carrying a current of 0.1 A.

A) 12

B) 14

C) 16

D) 18

4. What is the magnitude of reactive power (in kVAR) of a balanced 3-phase delta connected system having a line voltage of 400 V and a line current of 50 A and the phase difference between the voltage and current is 53.13 degrees?

A) 0.2771

B) 2.771

C) 27.71

D) 277.1

5. Determine the magnitude of EMF (in V) induced between the axis of rotation and the rim of the disc, when the disc of radius 10 cm rotates with an angular velocity of 60 revolution per second and placed in a magnetic field of 3 T acting parallel to the rotation of the disc.

A) 6.69

B) 4.64

C) 6.67

D) 5.65

6. Which one of the following is the S.I. unit of magnetic field strength?

A) Weber

B) Tesla

C) Ampere-meter

D) Ampere/meter

7. What is the bandwidth (in kHz) of a series RLC circuit having resistance, inductance and capacitance of 80 Ohms, 2 mH and 0.01 mF respectively?

A) 10

B) 20

C) 40

D) 80

8. If the magnetic susceptibility of any material is less than zero then the material is.....

A) paramagnetic

B) ferromagnetic

C) diamagnetic

D) ferrimagnetic

9. A 3-phase star connected system is supplied by a line voltage of 440 V. The value of phase current is 50 A. What is the power (in kW) consumed by the system, if the current lags the voltage by 45 degrees?

A) 8.95

B) 24

C) 26.94

D) 47

10. Determine the reluctance (in Amp-turns/Wb) of a coil, when the flux through the coil is 15 Wb and the produced mmf is 30 Amp-turns.

A) 4

B) 2

C) 1

D) 3

Answer Keys

Question	Answer
1	C
2	A
3	A
4	C
5	D

Question	Answer
6	B
7	C
8	C
9	C
10	B