

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E., /EEE	Year / Semester : II/III	Format No.	NAC/TLP-07a.13
Subject Code :EE8301	Subject Name : Electrical Machines I	Rev. No.	02
Unit No : I	Unit Name : Magnetic Circuits and Magnetic Materials	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	What is a permeable substance? (A) Any good conductor (B) Any bad conductor (C) Any strong magnet (D) Any substance through which the magnetic lines of force can pass easily	L2
2	The electrical equivalent of reluctance is? (A) Resistance (B) Inductance (C) Capacitance (D) Conductance	L2
3	When the length of the material increases, what happens to reluctance? (A) Increase (B) Decrease (C) Constant	L4
4	When the area of cross-section of the material increases, what happens to reluctance? (A) Increase (B) Decrease (C) Constant	L5
5	Unit of reluctance is? (A) A Wb (B) A ² /Wb (C) Wb/A (D) A/Wb	L1
6	Calculate the reluctance (A/Wb) when the magnetomotive force is 10 A-turns and the flux is 5Wb. (A) 0.5 (B) 1 (C) 2 (D) 4	L3

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7	An air gap is usually inserted in a magnetic circuits to A. Increase m.m.f. B. Increase the flux C. Prevent saturation D. None of the above	L2
8	Permeability in a magnetic circuit corresponds toin an electric circuit A. Resistance B. Resistivity C. Conductivity D. Conductance	L2
9	Those magnetic materials are best suited for making armature and transform cores which havepermeability andhysteresis loss A.High, high B. Low, high C. High, low D. Low, low	L2
10	In a magnetic material hysteresis loss takes place primarily due to A. Rapid reversals of its magnetisation B. Flux density lagging behind the magnetising force C. Molecular friction D. It high retentivity	L2
11	The property of a material which opposes the creation of magnetic flux in it is known as A. Reluctivity B. Magnetomotive force C. Permeance D. Reluctance	L2
12	The area of his hysteresis loss is a measure of A. Permittivity B. Permeance C. Energy loss per cycle D. Magnetic flux	L2

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13	In order to minimise hysteresis loss, the magnetic material should have A. High resistivity B. Low hysteresis co-efficient C. Large B - H loop area D. High retentivity	L2
14	Hysteresis loss least depends on A. Volume of material B. Frequency C. Steinmetz co-efficient of material D. Ambient temperature	L2
15	The hysteresis loss is caused by A. Structural non-homogeneity B. Work required for the magnetising the material C. Potential work function D. None of the above	L2
16	According to Steinmetz hysteresis law, hysteresis loss in a material is proportional to A. $B^{3.6}$ B. $B^{1.6}$ C. $B^{1.2}$ D. $B^{2.6}$	L1
17	The unit of magnetic flux is A. Henry B. Weber C. Ampere-turn/weber D. Ampere/meter	L1
18	The unit of reluctance is A. Meter/henry B. Henry/meter C. Henry D. 1/henry	L1
19	Reciprocal of reluctance is A. Reluctivity B. Permeance C. Permiability D. Susceptibility	L2
20	The unit of retentivity is A. Weber	L2

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	<p>B. Weber/sq. meter C. Ampere turn/metre D. Ampere turn</p>	
21	<p>Silicon steel is used in electrical machines because it has A. Low co-ercivity B. Low retentivity C. Low hysteresis loss D. High co-ercivity</p>	L2
22	<p>Conductivity is analogous to A. Retentivity B. Resistivity C. Permeability D. Inductance</p>	L2
23	<p>Conductance is analogous to A. Permeance B. Reluctance C. Flux D. Inductance</p>	L2
24	<p>Material for good magnetic memory should have A. Low hysteresis loss B. High permeability C. Low retentivity D. High retentivity</p>	L2
25	<p>Hard steel is suitable for making permanent magnets because A. It has good residual magnetism B. Its hysteresis loop has large area C. Its mechanical strength is high D. Its mechanical strength is low</p>	L2
26	<p>Permanent magnets are normally made of A. Alnico alloys B. Aluminium C. Cast iron D. Wrought iron</p>	L2