

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 : IV	Unit Name : DC Generators	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	Which of the following characteristics reveal about the magnetization nature of the machine? a) No-load characteristics b) Load characteristics c) Armature characteristics d) Both no-load and load characteristics	L1
2	Choose the most inappropriate out of the following for the no-load characteristics of the dc generator. a) It is the open circuit characteristic of the machine b) It is magnetization characteristic of the machine c) It is conducted on the unloaded machine d) None of the mentioned	L3
3	The external characteristic is plotted between _____ a) terminal voltage vs armature current at constant excitation b) terminal voltage vs field current at constant armature current c) induced armature emf vs armature current at constant excitation d) none of the mentioned	L2
4	Armature characteristic is also known as _____ a) regulation characteristic b) magnetization characteristic c) external characteristic d) load characteristic	L4
5	The air gap line represents _____ a) magnetic behaviour of the air gap of the dc machine b) magnetic behaviour of the air gap of the induction machine c) magnetic behaviour of the iron core d) all of the mentioned	L2
6	The voltage drop in terminal voltage from no-load to full load in a shunt generator can be compensated using _____ a) aiding series field b) long-shunt, differential field c) aiding shunt field d) any of the measures	L1
7	Why is armature of a dc machine made of silicon steel stampings? a) To reduce hysteresis loss b) To reduce eddy current loss c) For the ease with which slots can be created d) To achieve high permeability	L1

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8	<p>What losses occur in the teeth of dc generator?</p> <p>a) To reduce hysteresis loss</p> <p>b) To reduce eddy current loss</p> <p>c) To reduce eddy current as well as hysteresis losses</p> <p>d) To achieve high permeability</p>	L3
9	<p>For a 220-V level compound generator the terminal voltage at the half load is?</p> <p>a) more than 220-V</p> <p>b) same as no-load voltage</p> <p>c) more than no-load voltage</p> <p>d) lesser than no-load voltage</p>	L2
10	<p><i>In DC machine yoke offers</i></p> <p>(A) mechanical protection to the machine</p> <p>(B) flux path completion</p> <p>(C) produce working flux</p> <p>(D) both A and B</p>	L4
11	<p>In DC generators the residual magnetism is of the order of</p> <p>A. 2.5%</p> <p>B. 20%</p> <p>C. 15%</p> <p>D. 25%</p>	L2
12	<p>In DC generators the pole shoes are fastened to the pole core by</p> <p>A. Rivets</p> <p>B. Counter sunk screw</p> <p>C. Brazing</p> <p>D. Welding</p>	L1
13	<p>The field coils of D.C. generator are usually made of</p> <p>(a) mica</p> <p>(b) copper</p> <p>(c) cast iron</p> <p>(d) carbon</p>	L1
14	<p>In a commutator</p> <p>(a) copper is harder than mica</p> <p>(b) mica and copper are equally hard</p>	L3

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	(c) mica is harder than copper (d) none of the above	
15	The bearings used to support the rotor shafts are generally (a) ball bearings (b) bush bearings (c) magnetic bearings (d) needle bearings	L2
16	In D.C. generators, the cause of rapid brush wear may be (a) severe sparking (b) rough commutator surface (c) imperfect contact (d) any of the above	L4
17	In lap winding, the number of brushes is always (a) double the number of poles (b) same as the number of poles (c) half the number of poles (d) two	L2
18	Equalizer bar is necessary for parallel operation of DCgenerator A. Series B. Shunt C. Over compound D. Series and over compound	L1
19	Consider a DC generator running at the rated speed of 2000 rpm, suddenly there is an insulator falls on the field circuit and breaks it. Then _____ a) the motor stops in a few rounds b) it continues to run but as dc motor c) it continues to run as a motor d) none of the mentioned	L1
20	If a self excited DC generator is failed to run, this refers to _____ a) zero residual voltage b) field MMF, that it is not cumulative c) resistance is greater than critical resistance d) any of the mentioned	L3
21	The self-excited dc generator with gradual build up of residual voltage and EMF corresponds to _____ a) positive feedback b) negative feedback c) saturation d) any of the mentioned	L2
22	The critical resistance refers to _____ a) the resistance above which machine does not excite	L4

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	b) the resistance below which machine does not excite c) the resistance at which machine does not excite d) any of the mentioned	
23	If a DC shunt generator fails to start, the most primitive action would be _____ a) reversing field connection to armature b) reversing direction of rotation c) any of the mentioned applicable ways d) none of the mentioned	L2
24	A series generator, having external characteristics which is a straight line through 0 to 50 V at 200 A is connected as a booster, between a station bus-bar and feeders of 0.5 ohm resistors. The voltage at the far end of feeder at current of 50 A is? a) 25 V b) 17 V c) 8 V d) 50 V	L1
25	The number of parallel paths in the armature is increased by _____ a) increasing number of magnetic poles b) decreasing number of magnetic poles c) lap number of magnetic poles d) using more brushes	L1
26	A dc series generator as armature and field connections are reversed, the generator _____ a) stops b) opposite direction c) same direction d) none of the mentioned	L3
27	_____ is responsible for mechanical power output of a DC motor. a) Electrical input power b) Any of the mentioned c) Air-gap flux d) Armature emf	L2
28	Separately excited dc generators are used in _____ a) Ward leonard system of speed control b) Hopkinson's testing c) Voltage control d) None of the mentioned	L4
29	Maximum torque in dc series motor is limited by _____ a) commutation b) heating c) field control d) all of the mentioned	L2
30	Centrifugal pumps, fans-blowers use _____ a) shunt as well as induction motor b) only shunt motors c) only induction motor d) none of the mentioned	L1

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