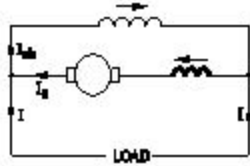


DC Generator

1). What is the name of the D.C generator as shown in the figure?



- (A) Differential long shunt compound
- (B) Differential short shunt compound
- (C) Cumulative long shunt compound
- (D) Cumulative short shunt compound

Correct Answer : A

2). What is the necessity of the residual magnetism in a self excited DC generator?

- (A) Build up the voltage
- (B) Reduce the field current
- (C) Reduce the armature current
- (D) Maintain the constant output voltage

Correct Answer : A

3). Why the DC generators are loosing their residual magnetism?

- (A) Flashing of field
- (B) Running without load continuously
- (C) Continuous running without break
- (D) Change of direction of rotation very often

Correct Answer : D

4). What is the working principle of D.C generator?

- (A) Cork screw rule
- (B) Fleming's left hand rule
- (C) Fleming's right hand rule
- (D) Faradays laws of electromagnetic induction

Correct Answer : D

5). What is the formula for the efficiency of a D.C generator?

- (A) $\frac{\text{Input} + \text{Losses}}{\text{Input}}$
- (B) $\frac{\text{Output}}{\text{Input} - \text{Losses}}$
- (C) $\frac{\text{Output}}{\text{Output} + \text{Losses}}$
- (D) $\frac{\text{Input}}{\text{Output}}$

Correct Answer : C

6). What is the property of wave winding in D.C generator?

- (A) Low current low voltage
- (B) High current low voltage
- (C) Low current high voltage
- (D) High current high voltage

Correct Answer : C

7). Which are the two points that the brush contact resistance measured in D.C machines?

- (A) Resistance between the opposite brushes
- (B) Resistance between the brush and brush holder
- (C) Resistance between the brush and commutator
- (D) Resistance between the brush and armature

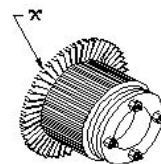
Correct Answer : C

8). Which metal is used to make the pole core of large DC machine?

- (A) Soft iron
- (B) Cast iron
- (C) Cast steel
- (D) Stainless steel

Correct Answer : C

9). What is the name of the part marked 'X' in DC generator as shown in the figure?



- (A) Yoke
- (B) Pole coil

(C) Pole core

(D) Pole shoe

Correct Answer : D

10). What is the name of the part marked as 'X' in DC generator as shown in the figure?

(A) Armature core

(B) Brush

(C) Commutator raiser

(D) Commutator segment

Correct Answer : C

11). What is the formula for shunt field current R_{sh} of a DC shunt generator if V_T Terminal voltage E_g =generated EMF?

(A) $I_{sh} = V_T / R_{sh}$

(B) $I_{sh} = E_g / R_{sh}$

(C) $I_{sh} = V_T * R_{sh}$

(D) $I_{sh} = E_g * R_{sh}$

Correct Answer : A

12). Why the armature resistance of a D.C generator is kept very low?

(A) To reduce the armature current

(B) To reduce the armature voltage drop

(C) Helps to solve Boolean Algebra

(D) To reduce the temperature of armature

Correct Answer : B

13). Which materials are used to make the brushes in generator?

(A) Steel and graphite

(B) Carbon and graphite

(C) Cast iron and graphite

(D) Aluminium and graphite

Correct Answer : B

14). Why solid pole shoes are used in D.C generator?

(A) To reduce the copper loss

(B) To increase the residual magnetism

(C) To decrease the residual magnetism

(D) To reduce the reluctance of magnetic path

Correct Answer : D

15). What is the name of the compound generator, if the shunt field is connected in parallel with armature?

(A) Long shunt compound generator

(B) Shunt generator

(C) Separately excited generator

(D) Short shunt compound generator

Correct Answer : D

16). Why the D.C generator should run in one direction only?

(A) To protect the brushes from damage

(B) To protect the residual magnetism

(C) To avoid short circuit in the armature

(D) To avoid over loading of the generator

Correct Answer : B

17). What is the condition for the maximum efficiency of a DC generator?

(A) Eddy current loss is equal to hysteresis loss

(B) Variable losses is less than constant losses

(C) Variable losses is more than constant losses

(D) Variable losses is equal to constant losses

Correct Answer : D

18). Calculate the emf generated in a 4 pole DC generator with simplex wave wound armature has 1020 conductors and driven at speed of 1500 rpm, the flux / pole is 0.007 webers?

(A) 178 V

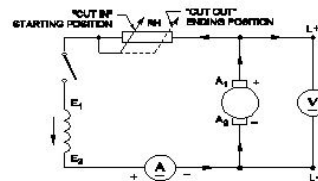
(B) 243 V

(C) 357 V

(D) 428 V

Correct Answer : C

19). How many parallel paths in duplex lap winding of a 4 pole DC generator?



(A) 4

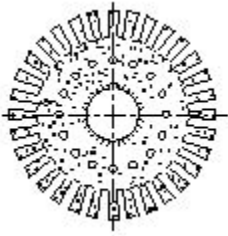
(B) 6

(C) 8

(D) 12

Correct Answer : C

20). What is the name of the generator as shown in the circuit?



- (A) DC shunt generator
- (B) DC compound generator
- (C) DC series generator
- (D) Separately excited DC generator

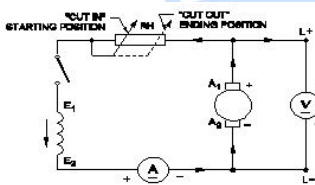
Correct Answer : A

21). What is the purpose of pole shoe in DC generator?

- (A) Increase the air gap
- (B) Increase the field strength
- (C) Minimize the magnetic losses
- (D) Spread out flux uniformly in the air gap

Correct Answer : D

22). What is the name of the part of DC generator as shown in the figure?



- (A) Side end plates
- (B) Pole shoe lamination
- (C) Commutator segment
- (D) Armature core lamination

Correct Answer : D

23). Which method is used to improve the insulation resistance in DC generator?

- (A) Replacing the brushes frequently
- (B) Keeping the machine in idle
- (C) Running the machine with over load
- (D) Blowing hot air into the machine

Correct Answer : D

24). What is the reason for the DC generator fails to build up voltage?

- (A) Field resistance is below the critical resistance
- (B) Armature resistance is less
- (C) Field resistance is above the critical resistance
- (D) Prime mover is running at above rated speed

Correct Answer : C

25). What is the name of generator, if its field is connected in parallel with armature?

- (A) Shunt generator
- (B) Series generator
- (C) Long shunt compound generator
- (D) Separately excited generator

Correct Answer : A

26). Which type of DC generator is used for electroplating process?

- (A) Shunt generator
- (B) Series generator
- (C) Differential compound generator
- (D) Over Compounded Cumulative generator

Correct Answer : A

27). What is the effect in D.C generator, if it is kept ideal for long time?

- (A) Field coil resistance increases
- (B) Armature resistance increases
- (C) Armature reaction increases
- (D) Loses its residual magnetism

Correct Answer : D

28). How the effect of armature reaction can be neutralized in large DC generators?

- (A) By providing compensating winding
- (B) By providing additional turns in the shunt field
- (C) By increasing brush contact resistance
- (D) By adding additional resistance with winding

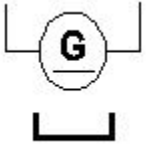
Correct Answer : A

29). Which energy is converted into electrical energy by the generator?

- (A) Heat
- (B) Kinetic
- (C) Chemical
- (D) Mechanical

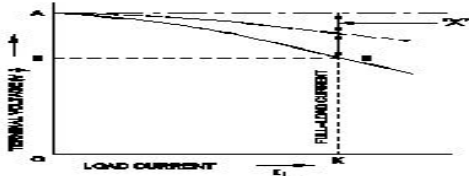
Correct Answer : D

30). What is the name of the D.C generator according to the field as shown in the figure?



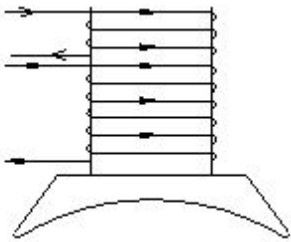
- (A) Series generator
 - (B) Shunt generator
 - (C) Differential compound generator
 - (D) Cumulative compound generator
- Correct Answer : D

31). What is the name of the symbol as shown in figure?



- (A) DC 2 wire permanent magnet generator
 - (B) DC 2 wire series generator
 - (C) DC 2 wire electro magnet generator
 - (D) DC 2 wire compound generator
- Correct Answer : A

32). Which voltage drop is indicated in the portion marked as 'X' as shown in the figure?

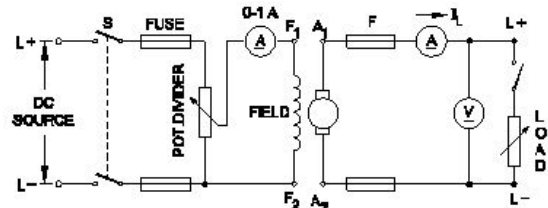


- (A) Series field voltage drop
 - (B) Armature voltage drop
 - (C) Armature reaction drop
 - (D) Shunt field voltage drop
- Correct Answer : C

33). What is the effect if the shunt field resistance is above critical resistance value in a D.C generator?

- (A) Output voltage is pulsating
 - (B) Output voltage is above normal
 - (C) Generator fails to build up voltage
 - (D) Generator builds up voltage normally
- Correct Answer : C

34). Why the pole core is laminated in DC generator?



(A) To

- reduce the friction loss
 - (B) To reduce the windage loss
 - (C) To reduce the hysteresis loss
 - (D) To reduce the eddy current loss
- Correct Answer : D

35). Why the armature core of a DC generator is laminated?

- (A) To reduce the copper loss
 - (B) To reduce the friction loss
 - (C) To reduce the hysteresis loss
 - (D) To reduce the eddy current loss
- Correct Answer : D

36). What is the name of the D.C generator as shown in the circuit?

- (A) Shunt generator
 - (B) Series generator
 - (C) Compound generator
 - (D) Separately excited generator
- Correct Answer : D

37). Which rule is used to find direction of magnetic field of the solenoid?

- (A) Cork screw rule
 - (B) Right hand palm rule
 - (C) Fleming's left hand rule
 - (D) Fleming's right hand rule
- Correct Answer : B

38). Why the compensating winding is provided in the large DC generators?

- (A) To neutralize the cross-magnetizing effect of armature reaction
 - (B) To reduce the commutation effect
 - (C) To neutralize the demagnetizing effect of armature reaction
 - (D) To decrease the efficiency of generator
- Correct Answer : C

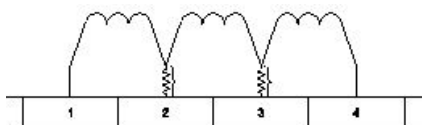
- 39). What is the name of the generator as shown in the circuit?
- (A) DC shunt generator
 - (B) DC series generator
 - (C) Short shunt compound Generator
 - (D) Long shunt compound Generator
- Correct Answer : D

- 40). What is the function of split rings in DC generator?
- (A) Maintain constant voltage
 - (B) Collects the current unidirectionally
 - (C) Reduces the voltage drop at brushes
 - (D) Increases the terminal voltage than rated
- Correct Answer : B

- 41). What is the effect on induced emf if the main field flux get distorted in DC generator?
- (A) Induced emf increases
 - (B) Induced emf decreases
 - (C) No change in induced emf
 - (D) Induced emf becomes zero
- Correct Answer : B

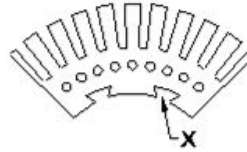
- 42). How the interpoles are connected in a DC generator?
- (A) In series with armature
 - (B) In parallel with armature
 - (C) In series with shunt field
 - (D) In parallel with shunt field
- Correct Answer : A

- 43). Which formula is used to calculate the generated emf in D.C generator?



- (A) Generated emf = $\phi ZN/60$ Volt
 - (B) Generated emf = $\phi ZN/60 * A/P$ Volt
 - (C) Generated emf = $\phi ZN/60 * P/A$ Volt
 - (D) Generated emf = $ZN/60 * \phi * P/A$ Volt
- Correct Answer : C

- 44). What is the purpose of using resistance wire used in the commutator in D.C generator as shown in the figure?



- (A) To maintain constant stage
 - (B) To reduce the voltage drop
 - (C) To increase the statically induced emf
 - (D) For smooth reversal of current direction
- Correct Answer : D

- 45). What is the purpose of slot marked as 'X' as shown in the figure?
- (A) To fix the key way
 - (B) To make air circulation
 - (C) For lubrication purpose
 - (D) For easy removal from shaft
- Correct Answer : A

- 46). Which metal is used to make the pole core of large DC machine?
- (A) Soft iron
 - (B) Cast iron
 - (C) Cast steel
 - (D) Stainless steel
- Correct Answer : C

- 47). Which energy is converted into electrical energy by the generator?
- (A) Heat
 - (B) Kinetic
 - (C) Chemical
 - (D) Mechanical
- Correct Answer : D

- 48). What is the property of wave winding in D.C generator?

- (A) Low current low voltage
- (B) High current low voltage
- (C) Low current high voltage
- (D) High current high voltage

Correct Answer : C

49). Why the DC generators are losing their residual magnetism?

- (A) Flashing of field
- (B) Running without load continuously
- (C) Continuous running without break
- (D) Change of direction of rotation very often

Correct Answer : D

50). What is the formula for dynamically induced emf?

- (A) BLV volts
- (B) $BL \sin\theta$ volts
- (C) $BLV \sin\theta$ volts
- (D) $BLV \cos\theta$ volts

Correct Answer : C

