## **PARHOZONE.COM**



(a) Dissipaters

(b) Generators

Name:

Test Type

Chapter

MCQs, Short & Long question

15 AC Generator to end



Roll No.

Class

Unit

(For information O3335126161 parhozone@gmail.com)

12

15

Subject

Date

Time

(d) Loads

**Physics** 

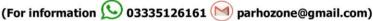
Q. No. 1 Tick the best option 22									
1.	A device which converts mechanical energy into electrical energy is called:								
	(a) Generator (b) I	Motor	(c) Converter	(d) Oscillator					
2.	Emf produced by A.C generator depends upon:								
	(a) Magnetic field strength (b) Number of turns in the coil								
	(c) Frequency of rotation		(d) All of these	of these					
3.	The principle of electric gene	erator is based on:							
	(a) Faradays law (b) I	Lenz's law	(c) Ampere's law	(d) None of above					
4.	The only difference between	construction of D.C	generator and A.C gen	erator is that of:					
	(a) Coil (b) (	Carbon brushes	(c) Magnetic field	(d) Commutator					
5.	The Alternating generator us	e:							
	(a) Coiled rings (b) S	Split rings	(c) Slip rings	(d) Loop rings					
6.	The generator running in rev	erse direction may b	be called as:						
	(a) D.C generator (b) M	Motor	(c) Commutator	(d) A.C generator					
7.	In a step-up transformer, vol	tage in the secondar	y increases and current:						
	(a) Decreases (b) I	ncreases	(c) Remains same	(d) None of these					
8.	When motor is just started, b	ack emf is almost:							
	(a) Maximum (b) M	Minimum	(c) Zero	(d) Infinite					
9.	If the back emf in a motor de	crease, then it will	draw:						
	(a) Zero current (b) N	More current	(c) Steady current	(d) Small current					
10.	The core of the transformer l	aminated to reduce:							
	(a) Magnetic loss (b) I	Hysteresis loss	(c) Eddy current loss	(d) Electric loss					
11.	In A.C generator, when plane of the coil perpendicular to the magnetic field, then output of generator is:								
	(a) $N\omega AB$ (b) 2	$2\pi f$	(c) Maximum	(d) Zero					
12.	A step-down transformer:								
	CARSES AND DECEMBER FOR SEC. SEC. SEC.	and the second control of the second	) Current remains consta	ant (d) Current becomes infinite					
13.	One of the source of A.C voltage is:								
		Battery	(c) Solar cell	(d) UPS					
14.	If the angular frequency of A								
		Four times	(c) One-fourth	(d) Half					
15.			3.3	oil, voltage in secondary coil will be					
		140 V	(c) 4.4 V	(d) 11000 V					
16.	The jerk in D.C motor are cre	francisco de la constantina del constantina della constantina dell	HART	OPIC					
		Slip ring	(c) Commutator	(d) Source of emf					
17.	If Ns < Np then such a transf		73.21.1.1	45 P. 4 . 6 P					
		Step-down	(c) Single phase	(d) Both A & B					
18.	Who invented commutator?								
10		Michael faraday	(c) Oersted	(d) William sturgeon					
19.	The amount of torque in D.C.			(D.F.					
20		Resistance	(c) Electric field	(d) Force					
20.		The best material for the core of a transformer is:							
21		Mild steel	(c) Hard steel	(d) Soft iron					
21.	Which of the following quan		.7	(A) Nama					
22		Voltage	(c) Frequency	(d) None					
22.	Devices in the circuit that co	Camanatana	gy are carred:	(4) I 4-					

(c) Motors









Name:		Roll No.		Subject	Physics
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## Q. No. 2 Write the short answer of these following question

 $8 \times 2 = 16$ 

- 1) What is back emf effect in D.C motor?
- 2) How power losses can be minimized in a transformer?
- 3) Four unmarked wires emerge from a transformer. What steps would you take to determine the turn's ratio?
- 4) A suspended magnet is oscillating freely in a horizontal plane? The oscillations are strongly damped when a metal plate is placed under the magnet. Explain why this occurs.
- 5) Can an electric motor be used to drive an electric generator with the output from the generator being used to operate the motor?
- 6) Can a D.C motor be turned into a D.C generator? What changes are required to be done?
- 7) Show that  $\varepsilon \& \Delta\Phi/\Delta t$  have same units?
- 8) When an electric motor, such as an electric drill, is being used, does it also act as a generator? If so, what is the consequence of this?

## Q. No. 3 Long question

- A. What is A.C generator? Describe its principle, construction and working. Derive and expression for induced emf and induced current.
- B. An ideal step-down transformer is connected to main supply of 240V. It is desired to operate a 12 V, 30 W lamps. Find the current in the primary and the transformation ratio?

