

India's Number 1 Education App

## PHYSICS

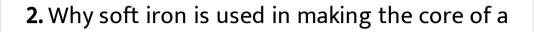
## **BOOKS - BETTER CHOICE PUBLICATION**

# **ELECTRICAL DEVICES**

Very Short Answers Type Questions 1 Marks

1. Why transformer cannot be used the step

up D.C. voltage?



transformer?



### **3.** Why is the core of a transformer laminated?

explain.

**4.** How transformer is helpful in transferring electric power from generating station to consuming station ?

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#### Short Answers Type Questions 2 Mark

1. Core of transformer is made up of

2. Draw a labelled diagram of a.c.generator.

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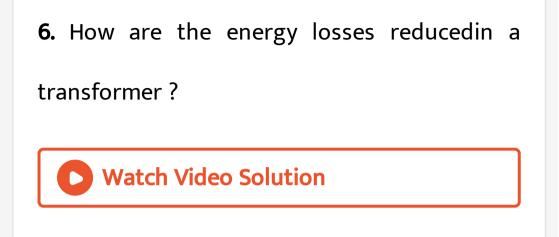
**3.** Draw the labelled diagram of an a.c.generatpr.Write the principle on which it is based.



4. Give two reasons for power loss in a transformer.
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5. What are the factors which reduce the

efficiency of a transformer ?



## Short Answers Type Questions 3 4 Marks

1. Explain principle and theory of Transformer

with the help of diagram.

**2.** With the help of labelled diagram, describe the principle,construction and working of a transformer.



3. What is the principle of working of an A.c

generator?

**4.** Draw a labelled diagram of a.c.generator.



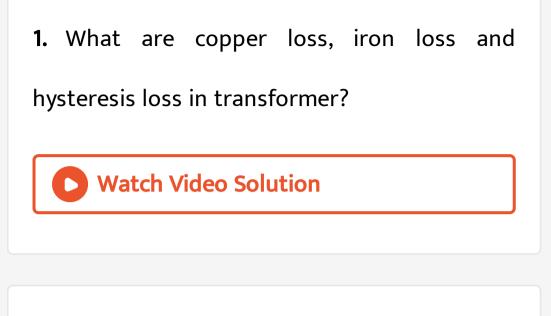
5. Give the principle of a transformer,

construction of a stepdown transformer. Give

any two energy losses of a transformer.



Long Answers Type Questions 5 6 Marks



2. What are copper loss, iron loss and

hysteresis loss in transformer?

**3.** What is the principle of a transformer ? Explain the theory and its application for long distance transmission of electrical energy.



4. With the help of labelled diagram, describe

the principle,construction and working of a

transformer.



**5.** Establish relation between voltage and current in primary and secondary coils of transformer.

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6. Give two reasons for power loss in a

transformer.

7. Give the principle, construction and working

of an a.c. generator.

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**8.** Explain the construction , principle and working of a D.C. motor. Find the expression for its efficiency.

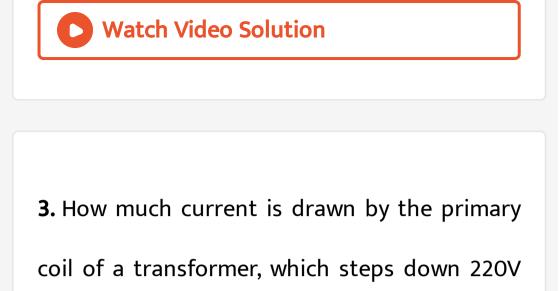
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Numerical Problems

**1.** An electric motor operating on 50 V.D.C supply draws a current of 12 ampere. If the efficiency of motor is 30%, estimate the resistance of the motor.

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2. Howmuch current is drawn by theprimary coil of atransformer, which steps down 220V to 44V to operate a device with an impedance of  $440\Omega$ ?



to 22 V to operate a device with an impedance

of 220 ohm?

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Most Expected Questions 1 Marks

 State the factors on which induced e.m.f. in a coil rotating in a uniform magnetic field depends.



2. Why the pole pieces of magnet are made

cylindrical in an a.c. generator?



**3.** Describe briefly, with the help of a labled diagram, working of a step-up transformer. A step up transformer converts a low voltage in to high voltage. Does it not violate the principle of conservation of energy?

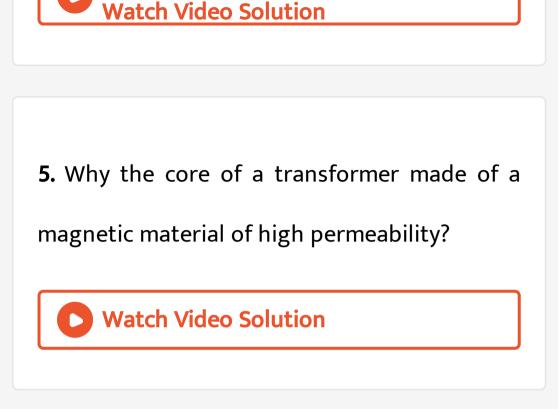
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Mention the two characteristic properties of

the material suitable for making core of a

transformer.





6. What do you mean by relaxation time?

7. How will you convert an a.c. generator into a

d.c.generator?

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Most Expected Questions 2 Mark

1. Why the core of a transformer made of a

magnetic material of high permeability?

2. When a current flows in the coil of a transformer, then why does the core become hot?

