



# 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?



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2. Why soft iron is used in making the core of a transformer ?



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3. Why is the core of a transformer laminated?  
explain.



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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



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



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



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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 ?



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6. How are the energy losses reduced in a transformer ?



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## Short Answers Type Questions 3 4 Marks

1. Explain principle and theory of Transformer with the help of diagram.



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



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



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



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5. Give the principle of a transformer, construction of a stepdown transformer. Give any two energy losses of a transformer.



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**Long Answers Type Questions 5 6 Marks**



1. What are copper loss, iron loss and hysteresis loss in transformer?



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2. What are copper loss, iron loss and hysteresis loss in transformer?



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**3. What is the principle of a transformer ?**

Explain the theory and its application for long distance transmission of electrical energy.



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



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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.



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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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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. How much current is drawn by the primary coil of a transformer, which steps down 220V to 44V to operate a device with an impedance of  $440\Omega$ ?



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3. How much current is drawn by the primary coil of a transformer, which steps down 220V to 22 V to operate a device with an impedance of 220 ohm?



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**Most Expected Questions 1 Marks**

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



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2. Why the pole pieces of magnet are made cylindrical in an a.c. generator?



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3. Describe briefly, with the help of a labelled 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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4. Mention the two characteristic properties of the material suitable for making core of a transformer.







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5. Why the core of a transformer made of a magnetic material of high permeability?



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6. What do you mean by relaxation time ?



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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?



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



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