S. B. Roll. No.....

ELECTRICAL MACHINES
3rd Exam/ECE/6189/Nov'24
(For 2018 Batch Onwards)

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. Do as directed. **15x1=15**

a. Transformer core is laminated to reduce Eddy current losses. (T/F)
b. The ratio of KW to KVA is known as_____.
c. In Delta connections, Line Voltage = _____.
d. What is Voltage Regulation?
e. What is the function of Starter in motor?
f. Wattmeter is an instrument which measure_____.
g. In three phase Star connected system I_{PH} = _____I_L.
h. DC_____ motors are best suited for electric traction service.
i. The frame of a D.C motor is made of _____.
j. Transformer can work on AC as well DC. (T/F)
k. A transformer has no rotary losses. (T/F)
l. Transformer works on the principle of_____.
m. The brushes for commutator are made up of_____.
n. Only _____motor is capable of running on ac as well as dc supply.
o. As number of poles increases, speed of induction motor _____.

SECTION-B

Q2. Attempt any six questions. **6x5=30**

i. What are advantages of 3 phase system over single-phase system?
ii. Explain the working principle of an auto transformer.
iii. Explain faraday's laws of electromagnetic induction.
iv. Discuss the construction and working of Transformer.
v. Discuss various losses in the transformer.
vi. Write various methods of speed control of dc motors. Explain anyone.
vii. What are applications of synchronous machines?

SECTION-C

Q3. Attempt any three questions. **3x10=30**

a. Explain the principle and construction of D.C motor?
b. Explain with the help of neat diagram the working of a star delta starter for starting 3 phase induction motor?
c. Explain the construction and working Synchronous motor.
d. Explain the working of DOL starter for starting 3 phase squirrel cage induction motor with the help of neat sketch.
e. Explain 2 wattmeter method of power measurement.