

Ex 10m

V.P. & R.P.T.P SCIENCE COLLEGE

INTERANAL EXAM

S.Y.B.Sc.(SEM-III) INSTRUMENTATION (VOC.)

SUB: - Electrical instrumentation and power electronics –I (US03CINV21)

DATE:-01/10/2019

TIME: 3:00 pm to 4:15 pm

MARKS-25

Q-1 Choose correct answer [05]

1. The magnitude of the induced emf is equal to the rate of change of \_\_\_\_\_.  
(A) flux (C) hysteresis  
(B) flux linkage (D) None of above
2. \_\_\_\_\_ is to facilitate collection of current from the armature conductor.  
(A) Yoke (C) Slip  
(B) Commutator (D) None of above
3. Motor efficiency is given by the ratio of \_\_\_\_\_ developed by the armature to its input.  
(A) current (C) Critical  
(B) voltage (D) None of above
4. Which of the following losses varies with load in transformer?  
(A) copper loss (C) iron core  
(B) ferrite loss (D) None of above
5. The stator of a 3- phase induction motor has 3 slots per pole per phase and supply frequency is 50 Hz, number of stator poles is \_\_\_\_\_ and total number of slots on stator is \_\_\_\_\_.  
(A) 6,54 (C) 6,60  
(B) 5,26 (D) None of above



Q-2 Explain principle of working transformer and differentiate core type and shell type transformer. [05]

OR

Q-2 Write faraday's laws of induction and explain it in detail. [05]

Q-3 List practical generator and explain any two in detail. [05]

OR

Q-3 Explain simple loop generator with necessary figure. [05]

Q-4 Derive an equation for armature torque  $T_a = 9.55 E_b I_a / N$  Of a motor. [05]

OR

Q-4 Explain speed of DC motor in detail. [05]

Q-5 Explain two phase supply for production of rotating field. [05]

Q-5 Explain Stroboscopic method for measurement of slip [05]