

BALASORE SCHOOL OF ENGINEERING, BALASORE

MODEL QUESTION

SUB:- ENERGY CONVERSION –II

FULL MARK – 80

BRANCH-ELECTRICAL

TIME- 3 HR

SEM- 5TH

Answer any five question including Q. no. 1 & 2
Figure in the right hand margin indicate marks

1. Answer all questions

(2*10=20)

- (i) What is load angle?
- (ii) What is pony motor?
- (iii) Which type of rotor is used in turbo alternator?
- (iv) Write any two applications of synchronous motor.
- (v) What is slip? Write its maximum & minimum value.
- (vi) Draw the power angle characteristics of 3-phase synchronous motor.
- (vii) What do you mean by hunting?
- (viii) What is damper winding?
- (ix) What is concentrated & distributed winding?
- (x) What do you mean by short pitch & full pitch?

2. Answer any six questions.

(5*6=30)

- (i) Describe the construction & working principle of universal motor.
- (ii) How rotating magnetic field is produced in a 3-phase induction motor? Describe it.
- (iii) Draw the phasor diagram of different load in a 3-phase alternator & derive their voltage equation.
- (iv) Derive the distribution factor in 3-phase alternator.
- (v) Write the short notes on hybrid stepper motor.
- (vi) What is induction generator? Explain it.
- (vii) What is repulsion motor? Explain the induction start repulsion motor.

3. Describe the double revolving field theory of single phase induction motor.

(10)

4. Write the construction & working principle of capacitor start capacitor run induction motor with its characteristics & application.

(10)

5. Explain the shaded pole induction motor with proper diagram.

(10)

6. Explain the 3-phase transformer groupings.

(10)

7. Derive the condition of maximum torque produced in a 3-phase induction motor

(10)

NOTE:- The answer of above question answer is available in your college web site.