V.S.B. Engineering College, Karur – 639 111.

Department of Electrical and Electronics Engineering

Academic Year 2017-18 (Even Semester)

Assignment Questions

CLASS: III YEAR/VI SEMESTER

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electrical and Electronics Engineering

Academic Year: 2017-18 (EVEN Semester)

Name of the Subject: Communication Engineering

Class/Sem. : III Year / VI Semester

1. Compare and give brief justification on various types of communication systems.
2. Compare and give brief justification on various digital pulse modulation systems.
3. Analyze the various error control techniques used in communication systems.
4. List out various multiple access techniques and explain any one in detail.
5. Derive the necessary equations for Uplink and Downlink satellite communication.

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electrical and Electronics Engineering

Academic Year: 2017-18 (EVEN Semester)

Assignment Questions

Name of the Course (Subject): EE6601 Solid State Drives
Class / Semester: II Year / VI Semester B.E Electrical and Electronics Engineering

1. Narrate the features of drives employed for Steel Rolling Mills.
2. Summarize thyristorised AC and DC drives.
3. Report about the nature of drives used in Cranes and Hoist drives.
4. Write about drive considerations for Textile mills.
5. How a drive can be controlled by Digital control techniques?
6. Enumerate the characteristics of Coal mine drives.

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electrical and Electronics Engineering

Academic Year: 2017-18 (EVEN Semester)

ASSIGNMENT QUESTIONS

Class: **III Year / VI Semester B.E. EEE**

Name of Subject: **Embedded System**

1. Illustrate with an example the phenomenon of Linear/waterfall model in embedded system design.
2. Develop the hardware/ software design flow in detail highlighting the similarity between the activities followed in each design.
3. Write the fifteen point strategy for synchronization between the processes, ISRs, OS functions and tasks for resource management.
4. (i) What are the major phases, an embedded product undergo? Consider a sample product for design and development and analyze the challenges faced at each phase.
   (ii) Why should the embedded system RTOS be scalable.

5. List various types of memories and the application of each in the following systems: Robot, Digital camera.

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electrical and Electronics Engineering

Academic Year: 2017-18 (EVEN Semester)

Assignment Questions

Name of the Course (Subject): EE6603- Power System Operation and Control
Class / Semester: III Year / VI Semester B.E Electrical and Electronics Engineering

1. Explain in detail about High voltage on lad tap changing transformers.
2. Discuss about the AGC design using kalman methods.
3. Illustrate the short circuit analysis of unbalanced low order systems.
4. Describe the base point and participation factors for the economic operation schedule.
5. Explain about the fuel scheduling by linear programming for electric power generation with limited energy supply.
6. Write short notes on system control used in thermal power plant.

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electrical & Electronics Engineering

Academic Year: 2017-2018 (EVEN Semester)

Assignment Questions

Class: III Year / VI Semester B.E. Electrical and Electronics Engineering
Name of Subject: EE6604-Design of Electrical Machines

1. A 20 HP, 400V, 3-Phase, 50Hz, induction motor has a final steady temperature rise of 40ºC when running at its rated output. Calculate its one hour rating for the same temperature rise, if the heating time constant is 180 minute. The ratio of conductor losses to constant losses may be assumed as 1.25 and the total losses of the machine at full load are 1800 W.

2. Find the main dimension, number of poles and length of air gap of a 1000KW, 500v, 300 rpm dc generator. Assume the specific magnetic loading Bav=0.7 wb/m^2 , ampere conductors per metre =40,000, square pole face, ratio of pole arc to pole pitch is 0.7. Assume efficiency as 92 percent and gap contraction factor as 1.15.

3. Design a 10 H.P, 415 V, 3 –ph, 50Hz, 1440 rpm, squirrel cage induction motor. The machine is to be started by a star-delta starter.

4. A 3 phase, 50Hz, star connected alternator has the following design data: Terminal voltage=6600V, rpm=375, Stator bore diameter, D= 170 cm, core length = 35 cm, stator winding= single layer, stator slot pitch= between 4 to 6 cm, kw =0.955, Bav=0.55T. Estimate: (a) The actual slot pitch (b) Number of slots (c) Number of conductors per slot (d) Minimum width of stator width, if the maximum flux density in the tooth is around 1.8 T. Make usual assumptions.

5. Estimate the stator core dimensions and the total number of stator conductors for a 3 Φ, 100Kw, 3300 V, 50 Hz, 12 pole star connected slip ring induction motor. Assume: average gap density = 0.4 wb/m^2, conductors per metre = 25,000 A/m, efficiency = 0.9, power factor = 0.9 and winding factor =0.96. Choose main dimension to give best power factor.

6. Calculate the main dimension of a 20 HP, 1000 rpm, 400 V, dc motor given that Bav = 0.37 wb/m^2 and ac =16000 amp cond /m. Assume an efficiency of 90%

V.S.B. ENGINEERING COLLEGE, KARUR

Department of Electrical and Electronics Engineering

Academic Year: 2017-2018 (EVEN Semester)

Assignment Questions

Class: III Year / VI Semester B.E. Electrical and Electronics Engineering
Name of Subject: EE 6002-Power System Transients

1. Briefly explain the importance of study of transients in planning.
2. Discuss transient response of systems with series and shunt lumped parameters and distributed lines.
3. Explain the Lightning protection schemes for transmission lines.
4. With neat sketch bring out the role of Bewley's Lattice diagram on power system transients.
5. Design a flow to compute the transient with the help of EMTP.