**RAJ KUMAR GOEL INSTITUTE OF TECHNOLOGY & MANAGEMENT, GZB**

**FIRST SESSIONAL TEST 2017-18 ( Odd Semester)**

**Roll No.:**  **Subject Name: ED**

**Year/Branch/Sec**: **IV/EN/VIISem Subject Code: NEN- 701**

**Max Time: 1.5 hrs Max Marks: 50**

**SECTION-A**

**Q.1 Attempt all parts, each part carries equal marks. (2x5=10)**

**(a)** What do you understand by electric drives ?

**(b)** Write the essential parts of electric drives.

**(c)** Classified electric drives on the basis of applications.

**(d)** Enlist the electrical/electronics components that converts: (i) AC to AC (ii) AC to DC

**(e)** Enlist the electrical/electronics components that converts:(i) DC to AC and (ii) DC to DC.

**SECTION-B**

**Note: Attempt any five questions from this section. (5x5=25)**

**Q.2** Discuss the component of load torque & draw friction torque-angular speed characterstics.

**Q.3** Give the advantages of electric drives and mechanical drives.

**Q.4** What is current status of AC/DC drives.

**Q.5** What do you understand by constant torque drive & constant power drive?

**Q.6** Why current sensing is required in electrical drives? What are the common methods of current sensing?

**Q.7** Explain thermal modal of motor for heating & cooling.

**Q.8** Discuss the Armature resistance control of DC drives.

**Q.9** Discuss the field control control of DC drives.

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**SECTION-C**

**Note: Attempt any two questions from this section. (7.5x2=15)**

**Q.10** Discuss the four quadrant operation of electric drive.

**Q.11** What are the main factors which decide the choice of electrical drive for a given appliction?

**Q.12** Classify the different classes of motor duty in detail.