30/05/17

Sem III / CBSGS / mech-AUTO / PP-I / M-J-17

Q.P. Code : 555101

(3 Hours) **[Total Marks : 80**

N.B. : (1) Question no. **1** is **compulsory.**
(2) Attempt any **three** questions out of remaining **five** questions
(3) Figures to right indicate full marks
(4) Assume suitable data if necessary

1. Write short note on any **four** of the following **20**
   (a) Rolling defects
   (b) friction welding
   (c) Blow moulding process.
   (d) Tube drawing operation
   (e) Pattern allowances

2. (a) With a neat sketch explain the principle and working of electroslag welding process. Also discuss its advantages ,limitations, and applications. **8**
   (b) Differentiate soldering and brazing. **6**
   (c) Describe the common types of forging hammers **6**

3. (a) Write in brief the basic steps of powder metallurgy process. **8**
   (b) With a neat sketch explain Termit welding operation. **6**
   (c) Write short note on microstructure of welds. **6**

4. (a) What is NDT. List various methods of NDT. Explain Die- penetrant method of crack detection. **8**
   (b) With a neat sketch explain the working principle of plastic injection mounding process. **6**
   (c) Write applications of powder metallurgy. **6**

5. (a) Define weldability. Differentiate between TIG and MIG welding process. **10**
   (b) Describe ten types of casting defects with their remedies **10**

6. (a) With the help of diagrams discuss the various type of cores used in sand mounding process. **8**
   (b) Write short note on application of plastics in industries. **6**
   (c) Explain vacuum forming process of polymers. **6**
