

SUBJECT CODE NO:- P-106
FACULTY OF ENGINEERING AND TECHNOLOGY
S.E.(Mech/Prod) Examination May/June 2017
Production Processes-I
(Revised)

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- i) Q. No.1 and 6 are compulsory.
 - ii) Attempt two questions from the remaining questions from each section A and B.
 - iii) Draw neat labeled sketches whenever necessary and assume suitable data whenever necessary.

Section A

- Q.1 Solve 'any five'. From the following. 10
1. What are the different types of patterns?
 2. What is the function of runners, gate and risers in a sand mould?
 3. What is pressure die casting? Where is it used?
 4. List the inspection methods used in detection of defects in casting.
 5. Classify the hot working and cold working methods used in metals.
 6. What is difference between rolling and wire drawing?
 7. What is the difference between open die and closed die forging?
 8. List the operations carried out in sheet metal working?
 9. What is a press brake? Where is it used?
 10. Differentiate between cold and hot forging in brief.
- Q.2 (a) What are the different types of moulding sands? What are the sand additives? Discuss in details. 07
- (b) Explain with neat sketch an open hearth furnace. Discuss its advantages, disadvantages and applications. 08
- Q.3 (a) With a neat sectional view explain a cope and drag sand mould and explain the procedure for making of sand mould using a split pattern. 08
- (b) With neat sketch explain centrifugal coating in metals. State its application. 07
- Q.4 (a) With neat sketch explain different arrangements in the hot rolling mills. Explain the advantages, disadvantages and applications of hot rolling. 08
- (b) Explain with neat sketch the pipe production process, using roll forming and seam weld. 07
- Q.5 (a) With neat sketch explain the different operations in sheet metal working, giving function of each of them. 07
- (b) What are the different types of pressure used in sheet metal working? Explain in brief with a block diagram a hydraulic press. 08

Section B

- Q.6 Solve 'any five' from the following:- 10
1. What are the different types of plastics? Briefly state their difference.
 2. What is Laminating plastics?
 3. Give the classification of the following processes.
 4. What are fluxes used in welding. Why are they used?
 5. What is the principle of working of the resistance welding process?
 6. Name the different defects in welding.
 7. What is the purpose of surface treatment on the products?
 8. What is anodizing?
 9. What are the special welding processes?
 10. What is the difference between spray painting and powder coating?
- Q.7 (a) With neat sketch explain the construction and working of an injection moulding machine, (Horizontal) 09
Used for mass production.
- (b) What is the difference between blow moulding and vacuum forming? Give examples of each of them. 06
- Q.8 (a) What are the different arc welding processes? Explain with neat sketch, a M.I.G welding process. 08
- (b) What are the destructive and Non-destructive tests carried out on the welded joints? Why are they carried out? 07
- Q.9 (a) With neat sketch explain the thermitt welding process. Give its applications. 08
- (b) Differentiate between:- 07
- (a) Arc welding and Resistance welding processes
- (b) MIG and TIG welding
- Q.10 (a) What are different cleaning processes? Why are they essential for surface treatment? Explain chemical cleaning. 08
- (b) Explain in detail electroplating process. Give examples, advantages and disadvantages. 07