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Total Number of Pages : 01

B.Tech.
PCAE1208

4th Semester Back Examination 2017-18

PRODUCTION TECHNOLOGY

BRANCH : AERO

Time : 3 Hours

Max Marks : 70

Q.CODE : C889

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

- Q1** Answer the following questions: (2 x 10)
- a) What is the basic difference between fillet and corner radius.
 - b) Write two requirement of an ideal gating system.
 - c) What is the approximate ratio of acetylene to oxygen for a neutral flame in gas welding?
 - d) What are the effects of draw die radius and punch radius in a deep drawing operation?
 - e) Why cold worked metal is annealed?
 - f) Differentiate between brazing and soldering.
 - g) What is a loose piece pattern?
 - h) What is the purpose of a core?
 - i) Why it is difficult to weld aluminium?
 - j) What is centre-line feeding resistance?
- Q2** Show by schematic sketches the process of forward and backward extrusion and mention any three parameters which affect the processes. Show graphically the variation of extrusion pressure with ram travel for them. (10)
- Q3** a) Differentiate between pressurized and un-pressurized gating system. (5)
b) Discuss the principles and types of centrifugal casting processes? (5)
- Q4** a) What are the flames produced in gas welding? Differentiate between oxy acetylene welding and oxygen cutting? (5)
b) Differentiate between hot working process and cold working process. (5)
- Q5** a) What is the difference between USM and conventional grinding process? (5)
b) Explain the working principle of Laser beam machining? Also explain the advantages, application and disadvantages of this process. (5)
- Q6** a) Name the common rolling defects and explain how these can be eliminated? (5)
b) Describe the hydrostatic extrusion process with neat sketches. (5)
- Q7** With neat sketches explain the working of submerged arc welding and its applications. (10)
- Q8** Write short answer on any TWO : (5 x 2)
- a) Electric arc furnace
 - b) Explosive forming
 - c) Die casting
 - d) Quick return mechanism