Registration no: | | | | | | | | | | |

Total Number of Pages: 02 **M.TECH**
PDPC102

1st Sem M.Tech Regular/ Back Examination – 2015-16
PRODUCTION TECHNOLOGY
BRANCH: MECHANICAL ENGINEERING
Time: 3 Hours
Max marks: 70
Q.CODE:T1260

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions: (2 x 10)
a) What are the factors effecting fluidity?
b) What are different types of gates in sand moulding process?
c) What are the forging defects?
d) What do you mean by camber in rolling?
e) What is the need of micro-electro-mechanical systems?
f) What do you mean by spinning?
g) What is direction solidification in casting?
h) Give advantages of different pattern materials.
i) Describe extrusion defects and their suitable remedies?
j) What are the various ways in which presses can be classified?

Q2 a) What are the advantages of casting process over other production processes? (5)
b) Give advantages of different pattern materials. (5)

Q3 a) Sketch and explain various welding positions? Give their applications. (5)
b) What are the different zones of HAZ and how it affects the strength of weld? (5)

Q4 Explain the IC fabrication processes used for MEMS. (10)

Q5 a) Distinguish between hot rolling and cold rolling. (5)
b) What are the various parameters those influence the rolling load? Explain. (5)

Q6 a) What makes hydrostatic extrusion better than the conventional extrusion process? (5)

b) Why does forging impart greater strength to such parts as crankshafts and gears that could be obtained by casting or welding of alloys of the same composition? (5)

Q7 a) What is the difference between open die forging and impression die forging? (5)

b) Explain shearing action in press working. (5)

Q8 Write any two Questions

a) Explain Stretch forming operation with neat sketch. (5x2)

b) Give a short note on nano-technology.

c) What is deep drawing? Give its applications.

d) Give a short note on friction welding.