Reg. No.										

Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

IV SEMESTER B.TECH (AUTOMOBILE ENGINEERING)

MAKE UP EXAMINATIONS, JULY 2016

SUBJECT: AUTOMOTIVE PRODUCTION TECHNIQUES [AAE 2253]

REVISED CREDIT SYSTEM

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ALL** questions.
- Missing data may suitably assumed.
- Draw sketches in PENCIL only

1 A Classify forging process. Explain impression die forging, process features and applications. **(3)**

1 B What is the principle of material removal in Abrasive Jet Machining process? Discuss the significance of nozzle and mask in the process. **(2)**

1 C What is the need of non-destructive test? Classify non-destructive test. Explain with neat sketch how dye penetrant test is carried out? What are the advantages and limitations of dye penetrant test? **(5)**

2 A Explain how the plaster mold is prepared? What are the precautionary measures to be taken while the preparation of plaster mold? Discuss the limitations of this process. **(3)**

2 B Explain with neat sketch Electro slag welding process, its advantages and risks involved in the process. **(5)**

2 C Compare in tabular form backward extrusion and forward extrusion. **(2)**

3 A What is the principle of material removal in Electron Beam Machining process? Explain EBM process, process features, parameters, advantages and disadvantages. **(4)**

3 B Explain with neat sketch ‘neutral or no slip section’ w.r.t rolling process. **(3)**

3 C Differentiate cold and hot working of metals. What are the significant advantages and disadvantages of cold and hot working? **(3)**

4 A Explain with neat schematic diagram Stereo Lithography process, process features, materials, parameters, advantages and disadvantages. **(5)**

4 B Identify a casting process in which the mold is rotated during casting process. Explain the process, identify the principle used in this process and discuss the advantages and limitations. **(5)**

5 A Explain with block diagram powder metallurgy process. **(3)**

5 B Enumerate extrusion defects. How these defects can be minimized? **(3)**

5 C What is cupola? Explain different zones with its temperature and chemical reaction. **(4)**