MANIPAL INSTITUTE OF TECHNOLOGY

A Constituent Institute of Manipal University, Manipal

VII SEMESTER B.TECH (I & P ENGG.)

END SEMSETER MAKEUP EXAMINATIONS DEC 2016/JAN 2017

SUBJECT: FLEXIBLE MANUFACTURING SYSTEMS [MME 467]

REVISED CREDIT SYSTEM

(06/01/2017)

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ANY FIVE FULL** questions.
❖ Missing data may be suitably assumed.

1A.	What is adaptive control? Explain the working of adaptive control with an example	**04**
1B.	With a neat sketch explain the XYZ type of industrial robot	**03**
1C.	Enumerate the guidelines for design of assembly, disassembly and service	**03**
2A.	Explain with an example, the parts classification method developed by the University of Aachen in Germany	**04**
2B.	Discuss with neat sketches the various FMS layouts.	**04**
2C.	Write short note on AGVs	**02**
3A.	Explain Visual Management and Standardized Work Procedure in regard with JIT	**05**
3B.	Explain the role of Kaizen in JIT	**03**
3C.	Explain the role of Jidoka in Toyota Production System	**02**
4A.	Explain the functioning of system diagnostics and maintenance module in FMS	**04**
4B.	Explain the hierarchy of computer control of FMS	**03**
4C.	Discuss various FMS software implementation issues	**03**
5A.	List and explain in detail the benefits of FMS.	**05**
5B.	Explain the steps involved in Production Flow analysis	**03**
5C.	Can NC machines completely replace the conventional machining system? Justify your answer with a suitable reason.	**02**
6A.	Write Short Notes on i) Pokayoke ii) Kanban	**05**
6B.	Explain how setup time reduction is playing major role in JIT	**05**