

# Computer Aided Manufacturing

Q.P. Code : 729301

( 3 Hours)

[ Total Marks :80



- N.B. :** (1) **Question No.1 is compulsory**  
(2) Attempt **any three** questions out of remaining **five** questions.  
(3) Assume any suitable data wherever required and justify the same.

1. Write short note (**any four**): 20  
(a) G codes G 40, G41, G42 and G43  
(b) Probing system in CNC lathe  
(c) ATC  
(d) Different types of conveyors.  
(e) ISO specification for any turning insert.
2. (a) Explain the functions and importance of looping and macro. How to call and return them to main program? Give suitable example. 10  
(b) What is computer aided part programming? With neat diagrams, explain APT commands viz. TO, ON, PAST, FWD, Drive, Part and Check surface. 10
3. (a) With a suitable example explain OD turning cycle and threading cycle in case of CNC lathe programming. 10  
(b) Explain G81, G82, G83, G84, G85 in case of CNC machining center with suitable example. 10
4. (a) Discuss the techniques used in lean manufacturing with a case study. 10  
(c) Explain the various elements of CNC system with a neat block diagram. 10
5. (a) Describe type of adaptive in detail. 10  
(b) Discuss various approaches of computer aided process planning in detail. 10
6. Write short note (**any four**): 20  
(a) Ghost factory  
(b) M Codes M00, M01, M02 and M30  
(c) Advanced tool materials  
(d) CIM cycle  
(e) AS/RS