TE-VII | PROD/VII/CBGS/PE&T | 16-05-2017

Process Engg & Tooling

Q.P. Code :13768

Marks-80 Time -3Hrs

Note - Question 1 is compulsory
Attempt any 3 out of remaining 5
Assume suitable data wherever necessary.

1. Answer Any four :- (20)
   a) Who is authorised to generate ECN? State reason to prepare and issue the document
   b) Explain "Alternate Location Theory".
   c) Convert the given dimensions into equal bi-lateral tolerances

   i) $75.0^{-0.4}$ ii) $60.2^{+0.03}_{-0.09}$

   d) How are functional important surface on the work piece generally identified?
   e) What do you understand by collet as a Workholder? State Advantages and Limitations

2. a) The part shown below (Matt En 1A, Bright Bar) in *Fig No 1* is to be produced on TRAUB Automat (V=70m/min).
   i) Draw the tool layouts (04)
   ii) Prepare the tabulated results (04)
   iii) Calculate output per hour and piece rate (03)
   iv) Draw the set of cams (05)

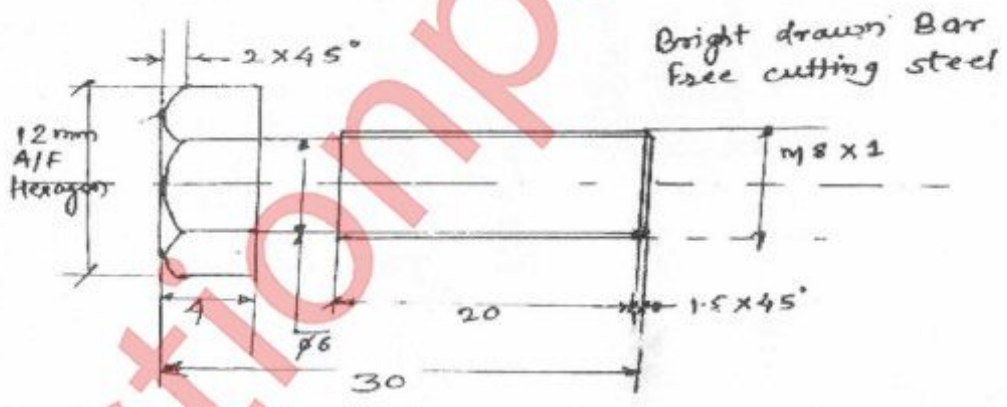

Fig. No. 1

   b) "Process engineer is called as Hub of an organisation" Explain. (04)

3. Write a short note on (20)
   a) Process Picture
   b) ERP
   c) Operation Routing
   d) CAPP
   e) Transfer Line Machining

4. a) Justify need of Tolerances in manufacturing? (05)
   b) Prepare the tolerance chart for the given component shown in given *Fig No2* (15)

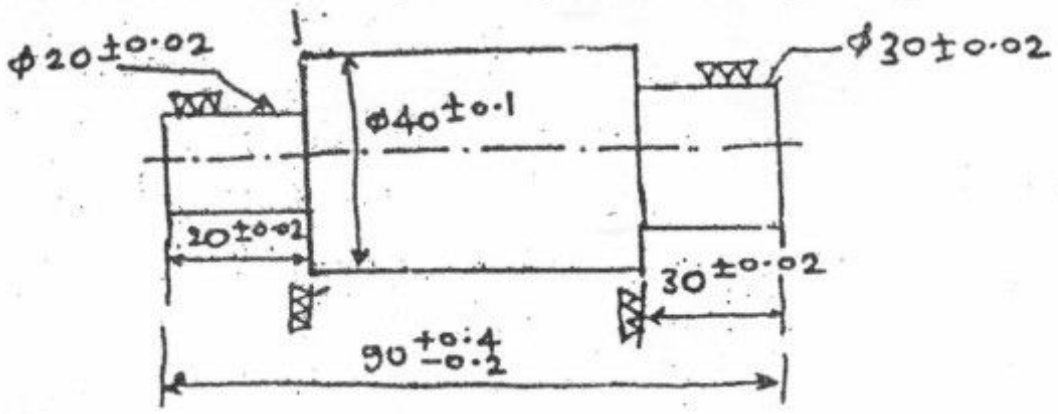

Fig. No. 2

5. a) Discuss part print analysis for the component Swing Arm Drive Shaft ***(Fig No 3)*** (15)
   b) "Normalising as Heat Treatment" - Explain (05)

6. The component Swing Arm Drive Shaft is to be manufactured at an annual rate of 1,00,000 Qty/ year. (***Fig No 3***)

   a) Develop the basic component drawing with appropriate machining allowance and achievable tolerance in basic process you have selected. (04)
   b) In standard format prepare detailed process sheet. The process sheet should indicate operation number, machine, operation description, machining parameters. (12)
   c) Draw the process picture for any one major operation (04)

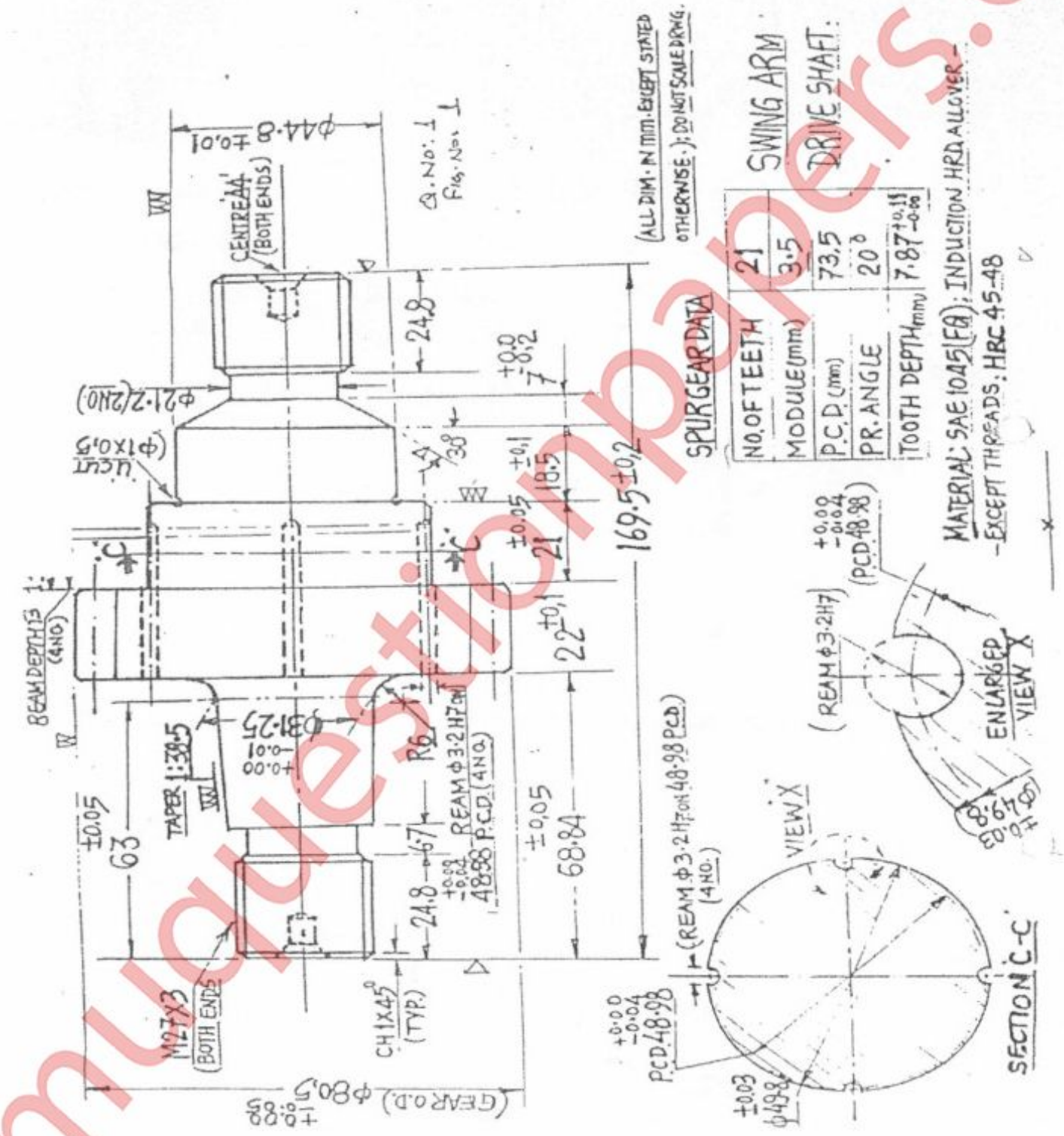

Fig. No. 3