Innovations in Teaching Learning Processes

Name of Method:

Tactical to practical

Description:- It is a real life problem based learning process in which large complex problem is divided into small sections. Initial step will be fetching required data from available parameters. Apply easy to use computer method (**NUMERICAL METHOD**). Develop user friendly solution to problem.

Suggested By :- Prof Suvarna Pawar

Reproduced By:- NMO subject teachers

Implemented From:- AY 2019-20 (Sem-II)

Evidences

1. Problem statement

An Otto cycle engine has a bore of 80 mm and stroke of 85 mm, the clearance volume of engine is 0.06 litres. The actual efficiency of engine is 22%. Assume $\gamma = 1.4$, Determine:

- 1. Compression ratio
- 2. Air standard efficiency Relative efficiency of the engine.

2. Algorithm development

- 1. Uderstanding of the problem.
- * 2. Use of suitable numerical method
 - 3. Development of algorithm
 - 4. Program writing
 - 5. Solution
 - 6. Development of user friendly interface.

3. Solution

Editor - D:\ZU19.ZU\NMC/\Uit.m File Edit Text Go Cell Tools Debug Desktop Window Help %Otto Cycle Efficiency and mean effective pressure G=1.4;3 --Cp=1.005; 4 ---Cv=0.713; r=input('enter the value of compression ratio ='); $E=1-1/(r^{(G-1)});$ fprintf('\nE=%f',E) 3 % Clearance volume and sweept volume 9 -Vc=input('enter value of clearnce volume');
Vs=input('\nenter value of swept volume'); 10 r=(Vc+Vs)/Vc; 12 -E=1-1/(r^(G-1)); fprintf('\nE=%f',E); 13 -%when temperatures are given
T1=input('air inlet temp at start of compression');
T2=input('sir outlet temp at and of compression'); 14 15 -

Outcomes: - Following are the outcomes that make tactical to practical an effective learning method over traditional

1. Increase engagement.2. motivate with no risk 3. Improve performance and knowledge.4. Improve Interaction with the student.

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