



AFTER TEST ANALYSIS

FLT – 1

Hello aspirants,

Since the day we started Exergic, we have always wanted to create a value and not just follow the trend. We intend to make our courses effective and useful, rather than just making them for the sake of it. The Test Series that we make is also an example of this. Without proper analysis of your attempt, any test series is of no use. No other test series will help you until you analyse your weakness/strength after attempting the test. But analyzing test is not easy for everyone. So, we made it easier by helping you by including different analysis within our Test Series:

- After Test Analysis
- General Analysis
- Personal Analysis

We also have a rich software generated analysis, which will help you dive in more into how you performed. I will highly recommend doing that as well.

Make sure to attempt all the tests to get the Personal Analysis, which can change the game for you!

We made this test just 'slightly' above GATE Level. Since you are just starting to give mocks, so whether you got good marks or bad, you must not start judging yourself from your marks. Though we had to keep the questions GATE Level, still we managed some very good questions which will not only test you but also have a high probability of being asked in GATE 2019.

Review Q.9:

Casting is a topic from which many innovative questions are possible since you can apply the concept of Fluid Mechanics as well. It is a concept which is not known to

many. Though we are aware of the concept that effective head at sprue base is the difference of two heads, but generally we expect the question to give us both heads. The variation of head on the casting side can be considered to be linear and thus mean value of head (= mould height / 2) can be taken.

Review Q. 17:

Again a question by combining thermal stress with columns. We just love asking such questions which crosses the border of units and subjects!

There are many variations possible in this question which will make this question difficult. But our intension here was just to make you remind of the concept. 😊

Review Q. 21:

Extremely good question. It tests you whether you learned about gage representation right or not. Though we have given a very detailed explanation (especially for those who are not aware of concepts), but it can be done in 2 steps if you are well-practiced.

Review Q. 25:

GATE has started asking such composition-based questions recently. If you are not aware of this concept, then please go through the required theory to understand this. Probable!

Review Q. 31:

This question precisely tells you that how to relate air, fuel and gas with each other. Even though if you understand SFEE well but you fail to understand this, you may end up wasting some time in GATE.

There is one more learning here (mainly for those who are attempting GATE for 1st time): In SFEE, whenever you are using values in kilo-Joules, divide the kinetic energy factor by 1000. Directly using $V^2/2$ is wrong since that is in joules.

Review Q. 32:

If you are solving such question for the first time, then it might seem like a good question to you. But it is a very fundamental question and this is the standard process to do the calculations involving heat and enthalpy for saturation dome questions. Make a note!

Review Q. 34:

Ultimate tip to avoid any confusion regarding characteristic length in Reynold number:

For external flow over a surface,

$L =$ Major dimension along the flow

For inter flow inside a pipe,

$L =$ Hydraulic diameter

$= 4 \cdot \text{cross sectional area} / \text{perimeter}$

Simple!

Review Q. 51:

We asked this question so that we can explain you how you can solve some simple questions without even making the tables from analytical method. And even if you solve by tabular, a quick revision of analytical method will not harm.

But always remember that do not try to solve any question by the method in which you are not comfortable in GATE. This is the time when you can practice and experiment, but not in GATE.

Review Q. 54:

Not many of us know this. Velocity of chip is given relative to tool. But when question mentions it relative to work piece, then it is nothing but Shear Velocity. How? Just observe the velocity diagram and you will get it.

Review Q. 55:

Very good question to develop the understanding of Tool Economics. This is such a topic which may confuse you and develop a wrong understanding if you are NOT reading it from the right source.

All the best! 😊

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