Class Test No. 01 Monday 05th August 2019 Duration: 10 Minutes Closed notes

Name: _____ Roll No. _____

Choose only one option which is the most appropriate for questions 1 - 5.

1. In general, choice of a model type depends broadly on

(a) nature of the physical process
(b) available computational resources
(c) availability of full scale test facilities
(d) objective of the exercise

2. Generally, model contains features that are a subset of

(a) all essential process characteristics
(b) incorrectly identified essential characteristics
(c) correctly identified non-essential characteristics
(d) incorrectly identified non-essential characteristics

3. Scaled experimental models are employed to

(a) model the physics better
(b) verify the theory at a lesser cost
(c) simulate non-essential features of the process
(d) understand the data and information flow better

4. Sketches are primarily useful for

(a) driving the manufacturing process
(b) understanding the data and information flow
(c) explaining the concept
(d) feel and topological information

5. Mock-ups are primarily useful for

(a) driving the manufacturing process
(b) understanding the data and information flow
(c) explaining the concept
(d) feel and topological information

Give short (1 - 2 lines) answer to the questions 6-10.

6. When do we create mathematical models from input-output method?

We create mathematical models from input-output method when we have an actual hardware or an analogous model of the system.

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7. What are the main factors influencing the choice of a model between mathematical and experimental?

The main factors are the quality of the theory and resources available for modelling.

8. What is the primary role of idealization?

Primary role of idealization is to capture the essential feature while retaining the simplicity.

9. Why do cut-away models help in re-engineering?

Cut-away models provide a detailed view of the internal parts / sub-assemblies and hence help in re-engineering the product.

10. What is the typical form in which the design data models are described?

The design data models are generally described through data points or tables, including data diagrams.