

17456

21415

3 Hours / 100 Marks

Seat No.

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Instructions : (1) All Questions are *compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-Programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following :

20

- (a) Differentiate between precision and accuracy. Give example of each.
- (b) What is end standard ? What are its advantages ? Give example of end standard.
- (c) Explain the necessity of templates in sheet metal industries with example.
- (d) Explain with sketch use of angle stiffeners in duct work.
- (e) Compare manual and machine straightening method.
- (f) What are composites ? Write the procedure for joining of composites.
- (g) Why surface preparation is important in coating ?
- (h) Define error and state its types.

2. Attempt any TWO :

16

- (a) Enlist the tools used in marking. Explain method of plotting on ellipse using trammels.
- (b) State the instrument required for alignment test. Describe the procedure for alignment test for levelling of Lathe machine.
- (c) State the methods used to test straightness. Explain straight edge method for measuring straightness of any object.

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- 3. Attempt any THREE :** **16**
- (a) (i) Explain the principle of hot straightening for structural 'I' section.
 - (ii) Describe the use of heat strips in straightening.
 - (b) Explain stiffening in corrugated sheet metal compare to a plane sheet metal.
 - (c) State the types of factory layout and discuss the importance of layout in fabrication work with suitable example.
- 4. Attempt any TWO :** **16**
- (a) Classify the composite. What do you mean by composite reinforcement and why it is necessary ?
 - (b) Enlist chemical cleaning process. Explain any one of them.
 - (c) (i) Differentiate thermal method and dry method in surface cleaning.
 - (ii) State the essential factors for workshop layout.
- 5. Attempt any TWO :** **16**
- (a) Explain with sketch the testing of square block by squareness testing method.
 - (b) Describe the procedure with sketch to use template for Hopper Plates.
 - (c) Explain the use of applied stiffness for large panel work.
- 6. Attempt any FOUR :** **16**
- (a) Explain any four factors influencing a factory layout.
 - (b) Why revision in plant layout is necessary ?
 - (c) What are the factors to be consider for cleaning process ?
 - (d) Classify the types of measurement.
 - (e) State the information 'written-up' on template.
 - (f) Write the process for marking a hole in channel section
 - (g) Explain Box Template.
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