

## VCRP – 2025

### Aptitude Test Guidelines

Aptitude test will be conducted on Mechanical on **13/3/2025 at 9:00 AM** in college campus Sandipani Technical Campus Faculty of Engineering, Nanded Road, Kolpa, Latur.

### Exam Pattern:

Exam Paper: Branch wise

**Total Marks: 25 (General Aptitude-15, Technical Aptitude- 10)**

**Exam Duration: 30 Mins.**

Note: Kindly bring Receipt, your college ID-Card/any other ID proof

Venue: Computer Labs, Sandipani Technical Campus Faculty of Engineering, Kolpa, Latur.

## Mechanical Engg. Branch Question Bank

### Technical Questions: 10 Marks

Any of the Following 10 Questions will be asked.

1. Which of the following processes is mainly used for making the connecting rods?

- A. Casting
- B. Deep drawing
- C. Rolling
- D. Forging

**Ans: D.**

2. The ratio of maximum displacement deviation to full scale deviation of the instrument is called \_\_\_\_\_

- A. Static sensitivity
- B. Dynamic deviation
- C. Linearity

D. Precision or accuracy

**ANS: C. Linearity**

3. Which of the following forms of iron is least malleable?

- A. Austenitic
- B. Pearlitic
- C. Ferritic
- D. Martensitic

**Answer: A**

4. The purpose of instruments is to \_\_\_\_\_

- A. Allow measurements to be made
- B. Transmit the information
- C. Change signals
- D. Any of the above.

**Answer: A**

5. Which of the following casting techniques is the best technique for casting tubes and hollow pipes?

- A. Die casting
- B. Slush casting
- C. Centrifugal casting
- D. Investment casting

**Answer: C**

6. Electrodes used in spot welding are made up of which material?

- A. Only Copper
- B. Copper and tungsten
- C. Copper and chromium
- D. Copper and aluminium

**Answer: D**

7. Error of Measurement \_\_\_\_\_

- A. measured value - true value
- B. true value - measured value
- C. measured value - precision
- D. precision - true value

**Answer: B**

8. Errors which may be variable both in magnitude and nature (positive or negative) are classified as \_\_\_\_\_

- A. Hysteresis error
- B. Random error
- C. Systematic error
- D. Interaction error

**Answer: B**

9. In a measurement, what is the term used to specify the closeness of two or more measurements?

- A. Accuracy
- B. Precision
- C. Fidelity
- D. Threshold

**Answer: B**

10. In heat treatment of materials, the purpose of annealing is totally opposite to that of hardening.

- A. True
- B. False

**Answer: A**

11. Pressure measurement devices make use of \_\_\_\_\_

- a) Non-elastic member
- b) Elastic member
- c) Bendable member
- d) Non-bendable member

**Answer: b**

12. Output of electrical transducer is \_\_\_\_\_

- A. Inversely proportional to displacement
- B. Proportional to displacement
- C. Proportional to square of displacement
- D. Constant

**Answer: B**

13. Hot wire anemometer can be used to measure \_\_\_\_\_.

- A. Flow rate of non-conducting liquid
- B. Flow rate of conducting liquid
- C. Liquid level measurement
- D. pH of liquid

**Answer: A**

14. By a Rotameter we can measure \_\_\_\_\_

- A. Specific gravity
- B. Viscosity
- C. Flow
- D. Rotation

**ANS: C.**

15. \_\_\_\_\_ can measure pressure directly

- A. Rotameter

- B. Bourden tube
- C. LVDT
- D. Strain gauge

**ANS: B.**

16. Instruments that measure pressure are generally classified as:

- a. nonlinear
- b. linear
- c. free of hysteresis
- d. None of the above

**Answer: b**

17. Full form of LVDT is \_\_\_\_\_

- A. Linear Variable Differential Transducer
- B. Line Voltage Differential Transformer
- C. Linear Variable Differential Transformer
- D. Line Voltage Differential Transducer

**Answer: C**

18. Which of the following is the basic principle of fluid mechanics?

- A. Momentum principle
- B. Energy equation
- C. Continuity equation
- D. All of the mentioned

**ANS: D**

19. Load cells are used for measuring \_\_\_\_\_

- A. Large weights only
- B. Small weights only
- C. Weights moving in high speed
- D. Slowly moving weights

**Answer: D**

20. Which of the following devices can be used for measuring torque?

- a) Helical spring
- b) Flat spiral spring
- c) Bellows
- d) Diaphragm

**Answer: b**

21. When is the fluid called laminar?

- A. Low viscosity
- B. Reynolds number is greater than 2000
- C. Reynolds number is less than 2000
- D. The density of the fluid is low

**Answer: C**

22. Torque can be measured using surface shear strains.

- a) True
- b) False

**Answer: a**

23. Output of a bimetallic element will be \_\_\_\_\_

- a) Strain
- b) Pressure
- c) Displacement
- d) Voltage

**Answer: c**

24. Which of the following can be used for measuring temperature?

- A. Metallic diaphragm
- B. Fluid expansion system
- C. Capsule
- D. Bourdon tube

**Answer: B**

25. The distance measured along the circumference of the pitch circle from a point on one tooth to the same point on the adjacent tooth is called

- A. circular pitch
- B. line of centers
- C. pitch diameter
- D. pitch point

**Answer: A**