

CUET PG 2026 Mechanical Engineering Question Paper

Time Allowed :1 Hour 30 Minutes	Maximum Marks :300	Total Questions :75
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General Instructions

Read the following instructions very carefully and strictly follow them:

- The Question Paper consists of 75 Multiple Choice Questions (MCQs).
- Total marks for the exam is 300.
- The total duration is 90 minutes; a timer on the screen will display the remaining time, and the exam will automatically submit when the time reaches zero.
- For every correct answer, 4 marks (+4) will be awarded to the candidate, and a 1 mark (-1) will be deducted for every incorrect answer.
- Question papers are available in both English and Hindi.

1. Which of the following is a coarse crusher used in mechanical operations?

- (A) Ball Mill
- (B) Jaw Crusher
- (C) Hammer Mill
- (D) Fluid Energy Mill

2. Forces whose line of action passes through a common point are known as what?

- (A) Parallel Forces
- (B) Coplanar Forces
- (C) Concurrent Forces
- (D) Collinear Forces

3. For a DC power source for arc welding with characteristics $3V + I = 240$, what voltage V yields maximum power?

- (A) 20 V
- (B) 30 V
- (C) 40 V
- (D) 60 V

4. The polar section modulus for a circular shaft of diameter d is given by which formula?

- (A) $\frac{\pi d^3}{16}$
 - (B) $\frac{\pi d^3}{32}$
 - (C) $\frac{\pi d^4}{32}$
 - (D) $\frac{\pi d^4}{16}$
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5. What is the natural frequency of a free vibration system defined by the equation $\ddot{X} + 36\pi^2 X = 0$?

- (A) 3 Hz
 - (B) 6 Hz
 - (C) 12 Hz
 - (D) 18 Hz
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6. Which translatory joint in a robot configuration is known as a sliding joint?

- (A) Revolute Joint
 - (B) Prismatic Joint
 - (C) Cylindrical Joint
 - (D) Spherical Joint
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7. A ball is thrown vertically upward with a velocity of 5 m/s; if it takes 10 sec for the upward journey, how long does the downward journey take?

- (A) 5 s
 - (B) 10 s
 - (C) 15 s
 - (D) 20 s
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8. What is the stress developed when a steel rod of radius 10 mm is stretched by a 100 kN force?

- (A) 159 MPa
 - (B) 318 MPa
 - (C) 100 MPa
 - (D) 200 MPa
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9. Which mechanical drive is specifically used to impart a reciprocating or oscillatory motion to another body in contact?

- (A) Gear Drive
 - (B) Belt Drive
 - (C) Cam and Follower
 - (D) Chain Drive
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10. When a ball mill rotates at a speed higher than the critical speed, what happens to its efficiency?

- (A) It increases continuously
 - (B) It remains constant
 - (C) It decreases
 - (D) It becomes maximum
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