

TEST

1. Aylanishda chiziqli tezlik v va burchak tezlik ω o'rtasidagi bog'lanish qaysi?

- A) $v = r^2 \cdot \omega$
- B) $v = \omega / r$
- C) $v = \omega \cdot r$
- D) $v = r / \omega$

2. Kuch momenti qanday aniqlanadi?

- A) $M = F / r$
- B) $M = F \cdot r \cdot \sin\theta$
- C) $M = F \cdot \cos\theta$
- D) $M = F^2 \cdot r$

3. Halqa uchun inersiya momenti formulasi qaysi?

- A) $I = 1/2 \cdot m \cdot r^2$
- B) $I = m \cdot r^2$
- C) $I = 2/5 \cdot m \cdot r^2$
- D) $I = 1/12 \cdot m \cdot l^2$

4. Aylanish dinamikasining asosiy tenglamasi?

- A) $F = m \cdot a$
- B) $M = I \cdot \omega$
- C) $M = I \cdot \varepsilon$
- D) $v = \omega \cdot r$

5. Aylanish kinetik energiyasi qanday?

- A) $E = 1/2 \cdot m \cdot v^2$
- B) $E = m \cdot g \cdot h$
- C) $E = 1/2 \cdot I \cdot \omega^2$
- D) $E = I \cdot \omega^2$

6. Tashqi moment bo'lmasa qanday kattalik saqlanadi?

- A) Impuls p
- B) Kuch momenti M
- C) Impuls momenti L
- D) Energiya E

7. Impuls momenti ta'rifi qaysi?

- A) $L = F \cdot r$
- B) $L = m \cdot v$
- C) $L = I \cdot \omega$
- D) $L = 1/2 \cdot I \cdot \omega^2$

8. Sirpanishsiz harakat sharti qaysi?

- A) $\omega = v^2 / r$
- B) $v = \omega \cdot r$
- C) $v = \omega / r$
- D) $a = \omega^2 \cdot r$

9. Bir jinsli disk uchun inersiya momenti?

- A) $I = 1/2 \cdot m \cdot r^2$
- B) $I = m \cdot r^2$
- C) $I = 2/5 \cdot m \cdot r^2$
- D) $I = 1/3 \cdot m \cdot r^2$

10. Burchak tezlanish ε qanday aniqlanadi?

- A) $\varepsilon = a / r$
- B) $\varepsilon = M / I$
- C) $\varepsilon = v / r$
- D) $\varepsilon = \omega / t$

11. G'ildirak radiusi 0,2 m va $\omega = 10 \text{ rad/s}$. v nechaga teng?

- A) 0,5 m/s
- B) 2 m/s
- C) 5 m/s
- D) 20 m/s

12. Massasi m bo'lgan nuqta jism radius r dan aylansa, I nechaga teng?

- A) $I = m \cdot r^2$
- B) $I = 1/2 \cdot m \cdot r^2$
- C) $I = 2/5 \cdot m \cdot r^2$
- D) $I = m/r^2$

13. Agar I kamaygan bo'lsa, ω qanday o'zgaradi?

- A) kamayadi
- B) ortadi

- C) o'zgarmaydi
- D) nolga teng bo'ladi

14. Aylanish impulsining o'zgarishiga nima sabab bo'ladi?

- A) tashqi kuch
- B) tashqi moment
- C) tezlik
- D) radius

15. $m \cdot g$ kuchi qaysi holatda moment hosil qiladi?

- A) kuch radiusga parallel bo'lsa
- B) kuch radiusga tik bo'lsa
- C) kuch yo'nalishi ahamiyatsiz
- D) kuch moment hosil qilmaydi

16. Energiya taqsimoti: halqa sirpanmay aylanganda energiyalar nisbati?

- A) E aylanish = $1/4 \cdot E$ chiziqli
- B) E aylanish = $2 \cdot E$ chiziqli
- C) E aylanish = E chiziqli
- D) E chiziqli = 0

17. Aylanishdagi markazdan qochma tezlanish qanday?

- A) $a = \omega^2 \cdot r$
- B) $a = \varepsilon \cdot r$
- C) $a = v / r$
- D) $a = v^2 \cdot r$

18. Tayoqning markazdan o'tgan o'q atrofidagi inersiya momenti?

- A) $I = 1/3 \cdot m \cdot l^2$
- B) $I = 1/2 \cdot m \cdot l^2$
- C) $I = 1/12 \cdot m \cdot l^2$
- D) $I = m \cdot l^2$

19. Impuls momenti qaysi holatda saqlanadi?

- A) tashqi kuch yo'q bo'lsa
- B) ish bajarilsa
- C) tashqi moment yo'q bo'lsa
- D) har doim

20. Aylanish va sirpanish birgalikda bo'lsa energiya qanday yoziladi?

- A) $E = 1/2 \cdot m \cdot v^2$
- B) $E = 1/2 \cdot I \cdot \omega^2$
- C) $E = 1/2 \cdot m \cdot v^2 + 1/2 \cdot I \cdot \omega^2$
- D) $E = m \cdot g \cdot h$

JAVOBLAR

- 1. C
- 2. B
- 3. B
- 4. C
- 5. C
- 6. C
- 7. C
- 8. B
- 9. A
- 10. B
- 11. C
- 12. A
- 13. B
- 14. B
- 15. B
- 16. C
- 17. A
- 18. C
- 19. C
- 20. C