

“Dissemination of Education for Knowledge, Science and Culture”

- Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur

(Autonomous)

Department of Physics

ICT based CIE

on

B.Sc. I: Internal Examination of Mechanics

Conducted by

Mr. A. V. Patil

on

Date: 13-08-2021, Time: 11.00 am to 11.30 am

(2020 – 21)

B.Sc. (Part-I) Semester- I, Subject : Physics

Paper No. : I Title: Mechanics

Date: 13-08-2021,

Time: 11.00 am to 11.30 am

Attempt any 20

Total Marks : 40

* Indicates required question

1. Email *

2. Name *

3. PRN No. *

4. Seat No. *

5. *Mark only one oval.*

Option 1

6. 1. The scalar product of a vector with itself is equal to----- *

2 points

Mark only one oval.

- a) Its magnitude
- b) Square of its magnitude
- c) Zero
- d) Infinity

7. 2. The magnitude of the resultant of the two unit vectors i and j is *

2 points

Mark only one oval.

- 0
- $\sqrt{2}$
- 2
- $\sqrt{3}$

8. 3. Velocity (v) is a ----- order derivative position vector of vector (r) with respect to the parameter

* 2 points

Mark only one oval.

- first
- second
- third
- four

9. 4. The number of independent variables in an ordinary differential equation is-----

* 2 points

Mark only one oval.

- a) 1
 b) 2
 c) 3
 d) 4

10. 5. The ordinary differential equation involves----- *

2 points

Mark only one oval.

- a) only dependent variable
 b) only independent variable
 c) total derivatives
 d) partial derivatives

11. Newton's second law of motion is given by *

2 points

Mark only one oval.

- a) $F=mv$
 b) $F=mt$
 c) $F=m/a$
 d) $F=ma$

12. 7. The state of rest is also state of uniform motion with zero ----- * 2 points

Mark only one oval.

- a) acceleration
 b) mass
 c) velocity
 d) momentum

13. 8. Non-inertial frame of reference is -----frame of reference * 2 points

Mark only one oval.

- a) accelerated
 b) un accelerated
 c) inertial
 d) mechanical

14. 9. The whole mass of the body is concentrated at a point called----- * 2 points

Mark only one oval.

- a) Geometric center
 b) Center of gravity
 c) center of mass
 d) center of force

15. 10. Just as force produces linear motion, ----- produces rotational motion * 2 points

Mark only one oval.

- a) torque
- b) moment of inertia
- c) angular momentum
- d) angular acceleration

16. 11. If the total force acting on a system of a particles is zero, then ----- of * 2 points
the particle or system is conserved

Mark only one oval.

- a) linear momentum
- b) angular momentum
- c) kinetic energy
- d) energy

17. 12. If the frame of reference is changed then * 2 points

Mark only one oval.

- a) the value of physical quantity is not changed
- b) the physical laws are changed
- c) the conservative laws are changed
- d) the conservative laws are obeyed

18. 13. The fundamental force which holds the planets in their orbits around the sun is -----force of attraction. * 2 points

Mark only one oval.

- a) Electromagnetic
 b) Nuclear
 c) Electrostatic
 d) Gravitational

19. 14. The weight of an object of mass 10 kg on the earth is ----- * 2 points

Mark only one oval.

- a) 9.8 N
 b) 9.8 kg
 c) 98 N
 d) 98 kg

20. 15. A valid solution of differential equation of S.H.M. is ----- * 2 points

Mark only one oval.

- a) $x = a^2 \sin(\omega t + \alpha)$
 b) $x = a \sin(\omega t + \alpha)$
 c) $x^2 = a \sin(\omega t + \alpha)$
 d) $x^2 = a^2 \sin(\omega t + \alpha)$

21. 16. For over damped oscillatory motion ----- *

2 points

Mark only one oval.

- a) $\mu^2 > \omega^2$
- b) $\mu^2 = \omega^2$
- c) $\mu^2 < \omega^2$
- d) $\mu > \omega$

22. 17. When a beam is fixed at one end and loaded at the other end the middle filament which is neither compressed nor elongated is called ----- *

2 points

Mark only one oval.

- a) Plane of bending
- b) neutral axis
- c) neutral surface
- d) axis of beam

23. 18. The quantity Yak^2 is called ----- *

2 points

Mark only one oval.

- a) Geometrical M.I.
- b) flexural rigidity
- c) bending moment
- d) inertia

24. 19. The special theory of relativity was developed by ----- *

2 points

Mark only one oval.

- a) Einstein
- b) Newton
- c) Galileo
- d) Lorentz

25. 20. According to Einstein, the velocity of light in free space is ----- *

2 points

Mark only one oval.

- a) dependent
- b) variable
- c) constant
- d) infinite

26. 21. Who did give the helio-centric theory? ----- *

2 points

Mark only one oval.

- a) Copernicus
- b) Tycho-brahe
- c) Kepler
- d) Galileo

27. 22. In the forced vibratory motion the frequency of vibration of body should be * 2 points

Mark only one oval.

- a) Greater than the frequency of external force
- b) Less than the frequency of external force
- c) Equal to the frequency of external force
- d) Half the frequency of external force

28. 23. Mass increases with velocity by relation ----- * 2 points

Mark only one oval.

- a) $m = m_0 / \sqrt{(1-v^2/c^2)}$
- b) $m = m_0 \sqrt{(1-v^2/c^2)}$
- c) $m = m_0 / [(1-v^2/c^2)]$
- d) $m = m_0 / \sqrt{(1-v/c)}$

29. 24. The term (C/θ) is called as ----- * 2 points

Mark only one oval.

- a) twist per unit torque
- b) couple per unit twist
- c) force per unit twist
- d) force per unit torque

30. 25. When wire is twisted ----- is set up in the wire *

2 points

Mark only one oval.

- a) restoring couple
- b) defecting couple
- c) restoring force
- d) deflecting force

This content is neither created nor endorsed by Google.

Google Forms

B.Sc. (Part-I) Semester- I, Subject : Physics

50 responses

[Publish analytics](#)



Name

50 responses

Prem Kumar

Aniket patil

XYZ

Sahil

SWAGAT DADASO SUTAR

SOURABH KRISHNAT NERLEKAR

Swapnil sanjay khot

Sumit Rajendra Navale

Mitali Vijay naik

Abhilasha Avinash Yadav

Sakshi Bajirao Patil

Avdhoot Laxman Patil

Kallesh chandrakant khekare

Shridhar Balu Kamble

Dayasagar awale

Aditya Kumar bagade

Prashant Vishal Powar

Pratap Arjun Chaluche

Atul Dhondiram Powar

Manoj Sanjay Kamble



Swapnil Arjun chaluche

ऋषिकेश रामराव पाटिल

Pavan Dhanaji Patil

Pratik Pradip Chavan

Yogiraj shivaji shevale

rajvardhan satappa magdum

Nayan Harishchandra Shinde

Vishwajeet sutar

Prathamesh sunil tashildar

Sohan Patil

Harshwardhan Diliprao Deshmukh

Sammed Rajgonda Patil

Fadtare Sourabh Pratap

Digvijay Satappa Pankar

Niranjan Annasaheb Patil

Ankita

Digvijay

Dhanashree Anand Raval

komal laxman kharat

SHUBHAM ANANT SHIVATANKAR

Saiprasad Shrinivas Yadav

Sushant dhokare



Rohan tanaji lohar

Gaurav Vishnu Gumane

Ashlesha ramesh kamble

Pratiksha Ananda Kamble

Bhushan Rajaram Patil

Arbaz

Swaraj shivaji patil

Asifa Ramjan Mujawar



PRN No.

50 responses

3355

2019137100

20190355

2019041402

2019037165

2019037124

2019037217

2019037232

2019037122

2019037393

2019037394

2019037135

2019037028

2019037209

2019037170

2019037171

2018037872

2019037177

2019

201920037207



2019037178

2019137144

2019037392

2019037302

201920037263

2019037291

2019037265

2018037878

2019037327

2018037919

2019037184

2018037868

2019137092

2019037125

2019037139

2019037101

2019037095

2019037158

2019037288

2019037267

2018037879

2019037090



2018037643

2019037396

201903

2018037531

2018037567

2019037230

8668613379

2019037228



Seat No.

50 responses

09566

7100

5

4545

7165

7124

7217

7232

A7122

7393

7394

7135

7028

A7209

7071

7171

7872

7177

7156

7207



7178

7144

7392

7302

7263

7291

7265

R7878

A7327

7919

7184

7868

A7092

7125

7139

7101

7095

7158

7288

7267

R7879

7090



R7643

7396

7020

7531

7567

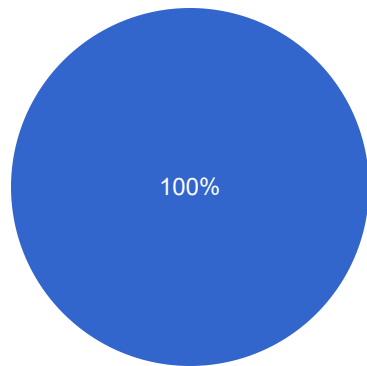
7230

7247

7228

12 responses

 Copy

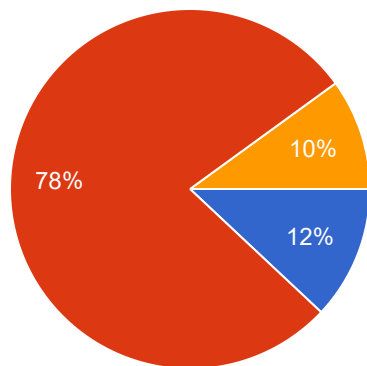


● Option 1

1. The scalar product of a vector with itself is equal to-----

 Copy

50 responses



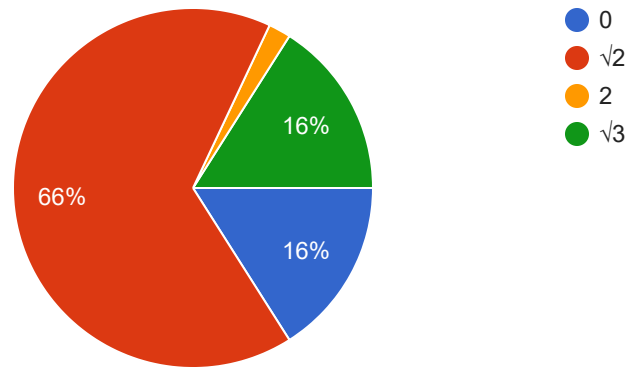
- a) Its magnitude
- b) Square of its magnitude
- c) Zero
- d) Infinity



2. The magnitude of the resultant of the two unit vectors i and j is

 Copy

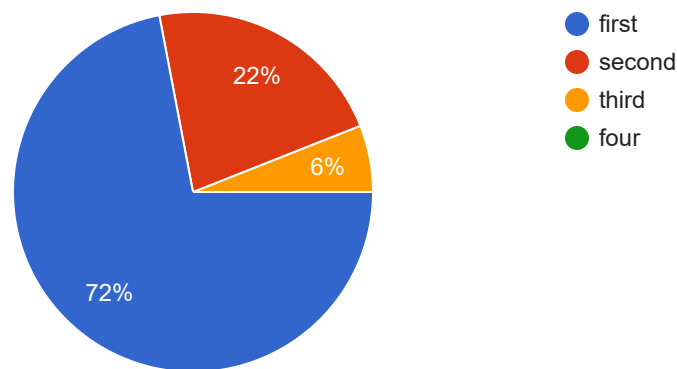
50 responses



3. Velocity (v) is a ---- order derivative position vector of vector (r) with respect to the parameter

 Copy

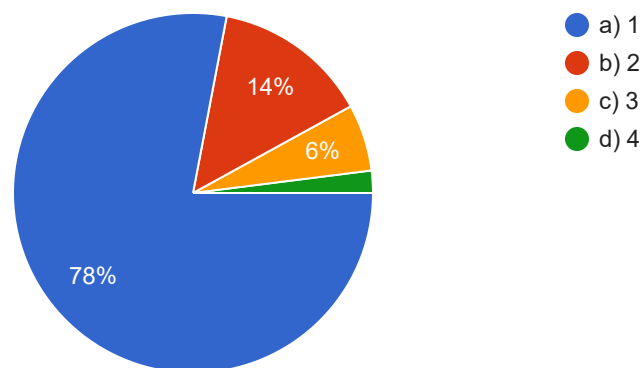
50 responses



4. The number of independent variables in an ordinary differential equation is-----

 Copy

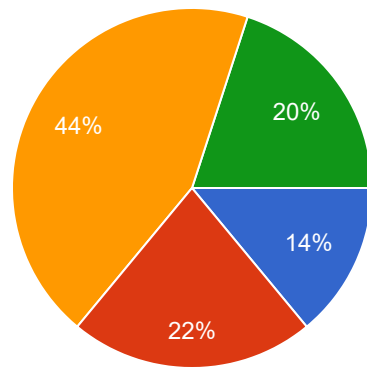
50 responses



5. The ordinary differential equation involves-----

 Copy

50 responses

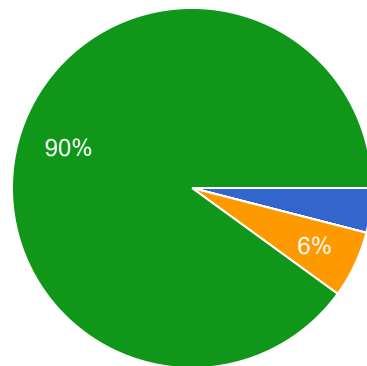


- a) only dependent variable
- b) only independent variable
- c) total derivatives
- d) partial derivatives

Newton's second law of motion is given by

 Copy

50 responses

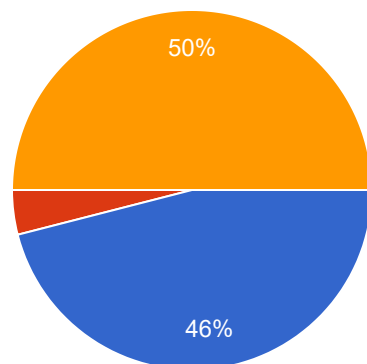


- a) $F=mv$
- b) $F=mt$
- c) $F=m/a$
- d) $F=ma$

7. The state of rest is also state of uniform motion with zero -----

 Copy

50 responses



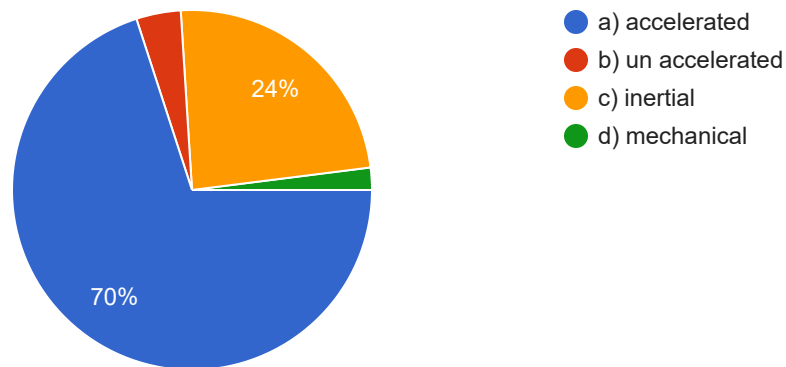
- a) acceleration
- b) mass
- c) velocity
- d) momentum



8. Non-inertial frame of reference is -----frame of reference

 Copy

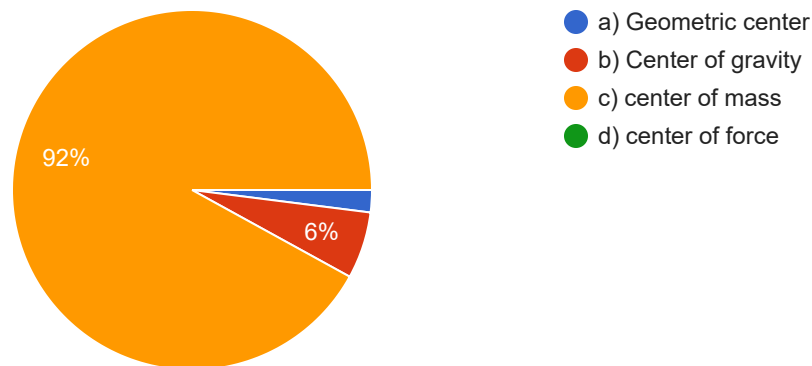
50 responses



9. The whole mass of the body is concentrated at a point called-----

 Copy

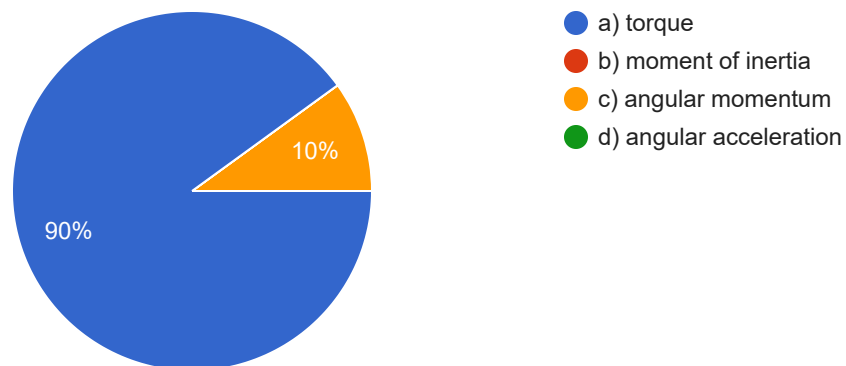
50 responses



10. Just as force produces linear motion, ----- produces rotational motion

 Copy

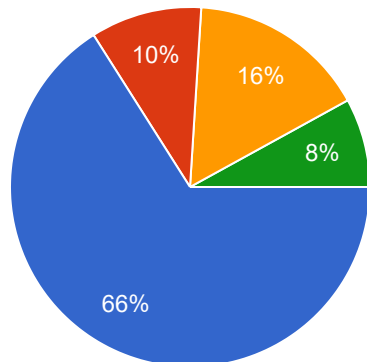
50 responses



11. If the total force acting on a system of a particles is zero, then ----- of the particle or system is conserved



50 responses

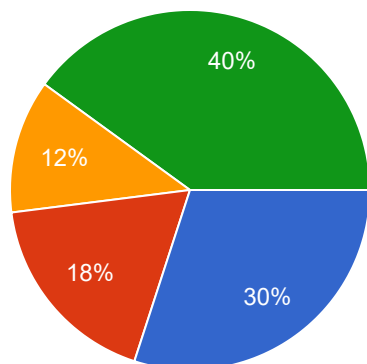


- a) linear momentum
- b) angular momentum
- c) kinetic energy
- d) energy

12. If the frame of reference is changed then



50 responses

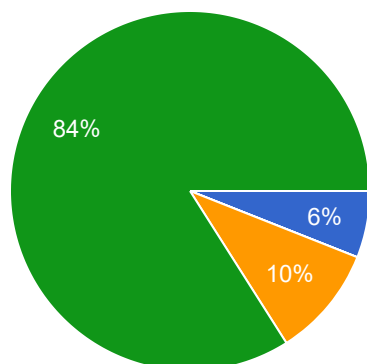


- a) the value of physical quantity is not changed
- b) the physical laws are changed
- c) the conservative laws are changed
- d) the conservative laws are obeyed

13. The fundamental force which holds the planets in their orbits around the sun is -----force of attraction.



50 responses



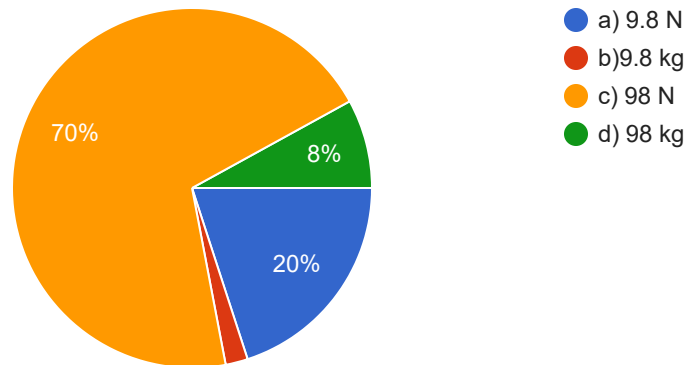
- a) Electromagnetic
- b) Nuclear
- c) Electrostatic
- d) Gravitational



14. The weight of an object of mass 10 kg on the earth is -----

 Copy

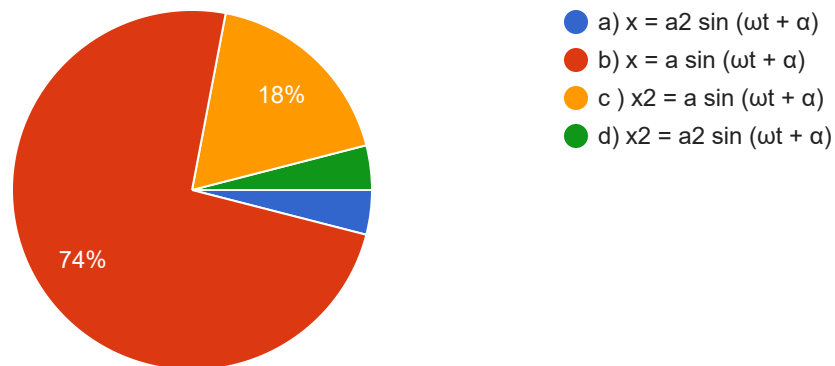
50 responses



15. A valid solution of differential equation of S.H.M. is -----

 Copy

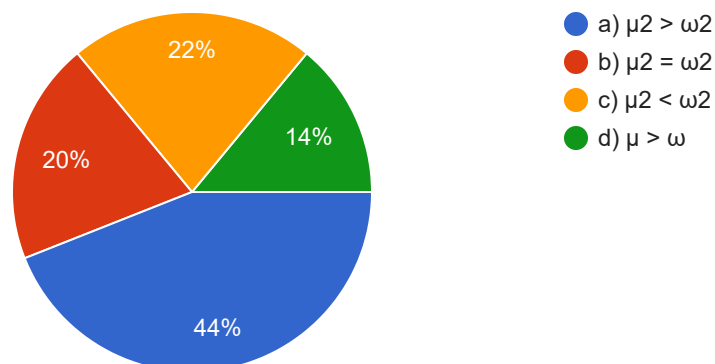
50 responses



16. For over damped oscillatory motion -----

 Copy

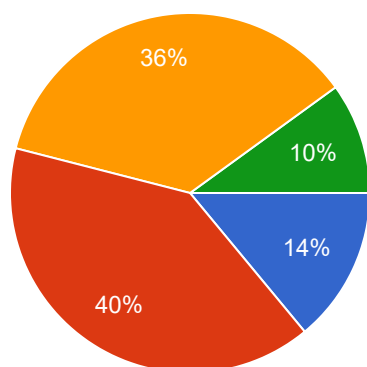
50 responses



17. When a beam is fixed at one end and loaded at the other end the middle filament which is neither compressed nor elongated is called -----

 Copy

50 responses

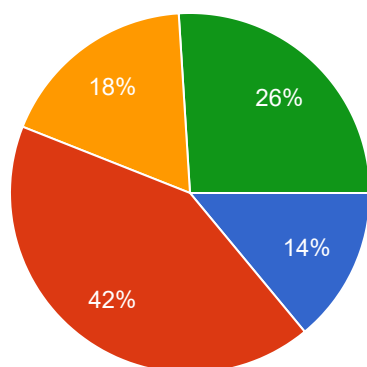


- a) Plane of bending
- b) neutral axis
- c) neutral surface
- d) axis of beam

18. The quantity Yak^2 is called -----

 Copy

50 responses

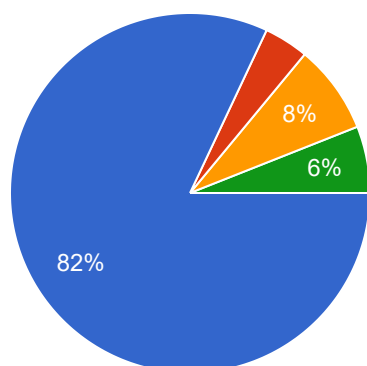


- a) Geometrical M.I.
- b) flexural rigidity
- c) bending moment
- d) inertia

19. The special theory of relativity was developed by -----

 Copy

50 responses



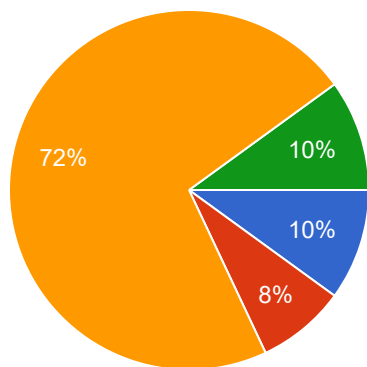
- a) Einstein
- b) Newton
- c) Galileo
- d) Lorentz



20. According to Einstein, the velocity of light in free space is -----



50 responses

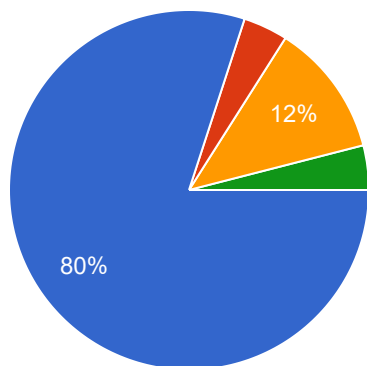


- a) dependent
- b) variable
- c) constant
- d) infinite

21. Who did give the helio-centric theory? -----



50 responses

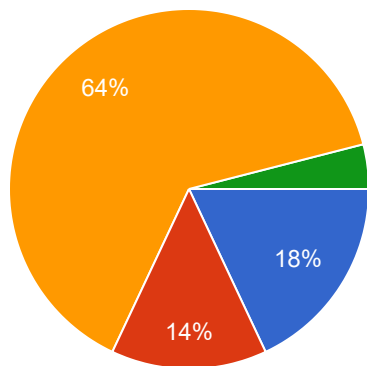


- a) Copernicus
- b) Tycho-brahe
- c) Kepler
- d) Galileo

22. In the forced vibratory motion the frequency of vibration of body should be



50 responses



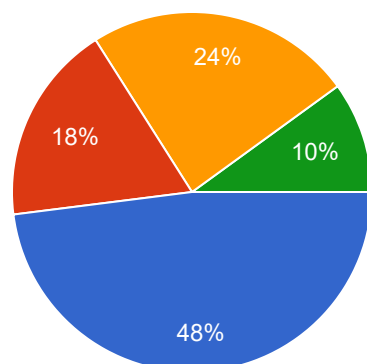
- a) Greater than the frequency of external force
- b) Less than the frequency of external force
- c) Equal to the frequency of external force
- d) Half the frequency of external force



23. Mass increases with velocity by relation -----

 Copy

50 responses

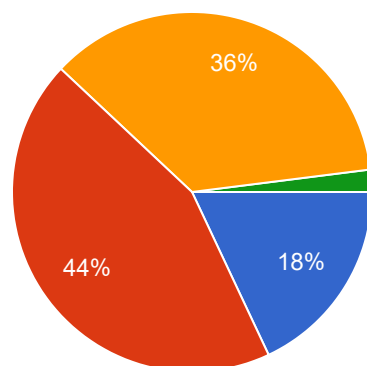


- a) $m = m_0 / [\sqrt{1-v^2/c^2}]$
- b) $m = m_0 [\sqrt{1-v^2/c^2}]$
- c) $m = m_0 / [(1-v^2/c^2)]$
- d) $m = m_0 / [\sqrt{1-v/c}]$

24. The term (C/θ) is called as -----

 Copy

50 responses

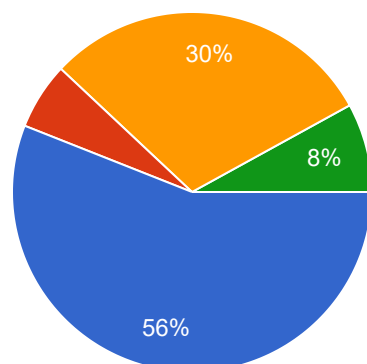


- a) twist per unit torque
- b) couple per unit twist
- c) force per unit twist
- d) force per unit torque

25. When wire is twisted ----- is set up in the wire

 Copy

50 responses



- a) restoring couple
- b) defecting couple
- c) restoring force
- d) deflecting force

This content is neither created nor endorsed by Google. [Report Abuse](#) - [Terms of Service](#) - [Privacy Policy](#)

Google Forms



