



Council for Technical Education and Vocational Training

Office of the Controller of Examinations

Sanothimi, Bhaktapur

Regular/Back/Scholarship Exam – 2081 Chaitra/Baishakh

Program: Engineering All

Full Marks: 60

Year/Part: I/I (2021) © Arjun

Pass Marks: 24

Subject: Engineering Physics I

Time: 3 hrs.

Candidates are required to give their answers in Nepali or English as practicable. The figures in the margin indicate full marks.



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Group 'A'

Attempt any THREE questions.

[3×6=18]

1. State Newton's laws of motion. Explain principle of conservation of linear momentum.
2. What is satellite? Derive an expression for the orbital velocity of artificial satellite also find the expression of its time period.
3. State Boyle's law and Charles's law. Derive ideal gas equation using these laws.
4. What do you mean by power of lens? Derive lens maker's formula for convex lens.

Group 'B'

Attempt any SIX questions.

[6×3=18]

5. Explain triangle law of vector addition.
6. Define simple pendulum. Show that the motion of simple pendulum is simple harmonic motion.
7. Prove that mechanical energy of freely falling body is conserved.
8. Derive relationship between linear expansivity and superficial expansivity of a solid body.
9. Define black body. Explain Stefan's law of black body radiation.
10. What are the differences between real and virtual image?
11. Derive mirror formula for concave mirror.
12. Explain Coulomb's law in magnetism.

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Cont. ....

### Group 'C'

Attempt any SIX questions.

[6×4=24]

13. Find the dimensions of  $K$  in the equation  $F = 6\pi k r v$ , where  $F$  = Force,  $r$  = radius and  $v$  = terminal velocity.
14. An object of mass 20 kg is moving with a velocity  $10 \text{ ms}^{-1}$ . Calculate kinetic energy. If a constant force of 40 N suddenly acts on it, find the time it takes to come to rest.
15. A body of mass 1 kg is revolved around a vertical circle of radius 1 m with a speed of 20 m/s. What is maximum tension (force) towards the Centre of the circle.
16. An iron ball of mass 500 gm is heated from  $20^\circ\text{C}$  to  $150^\circ\text{C}$ . How much heat does it gains? (Specific heat of iron =  $0.1 \text{ cal/gm } ^\circ\text{C}$ )
17. Assuming the density of nitrogen at STP to be  $1.2 \text{ kg m}^{-3}$ , find the root mean square (rms) velocity of nitrogen molecule at  $227^\circ\text{C}$ .
18. Refractive index of diamond is 2.4. What is critical angle for diamond air interface?
19. Angle of minimum deviation in an equilateral triangle prism is  $38^\circ$ . What is the refractive index of material of prism?
20. The horizontal and vertical component of the flux density of earth's magnetic field at a place is  $0.20 \times 10^{-5} \text{ T}$  and  $0.30 \times 10^{-5} \text{ T}$  respectively. Calculate: (a) the angle of dip and (b) earth's total magnetic field at the place.

**Good Luck !**



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AC





**Regular/Back Exam-2080/2081, Chaitra/Baishakh**

**Program: Engineering All**

**Full Marks: 60**

**Year/Part: I/I (2021) © Arjun**

**Pass Marks: 24**

**Subject: Engineering Physics I**

**Time: 3 hrs.**

*Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.*



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**Group 'A'**

**Attempt any THREE questions.**

**[3×6=18]**

1. State triangle law of vector addition. Derive the expression for magnitude and direction of resultant vector.
2. Define collision. Explain how Newton's laws of motion lead to conservation of linear momentum for the system of colliding bodies.
3. Define specific heat capacity. Explain the experiment that determine the specific heat capacity of solid by the method of mixture.
4. What is power of lens? Prove that  $\frac{1}{f} = (\mu - 1) \left( \frac{1}{R_1} + \frac{1}{R_2} \right)$  where the symbol has their usual meaning.

**Group 'B'**

**Attempt any SIX questions.**

**[6×3=18]**

5. The escape velocity of the body is  $V_e = \sqrt{2gR}$ . Check the correctness of the formula using dimension.
6. Define gravity. How does 'g' vary with depth from the surface of earth?
7. Define torque and angular momentum. Derive the relation between them.
8. Show that the coefficient of cubical expansion of solid is thrice the coefficient of linear expansion.

9. What do you mean by isothermal process? Derive an expression for work done by gas during isothermal process.
10. Define mirror formula. Derive the mirror formula for concave mirror when image formed is real. [www.arjun00.com.np](http://www.arjun00.com.np)
11. State and establish the Coulomb's law of magnetism.
12. Distinguish between diamagnetic, paramagnetic and ferromagnetic material.

### Group 'C'

Attempt any SIX questions.

[6×4=24]

13. A motorcycle rider going with a velocity 60 Km/hr. around a curve with radius of 50 m must lean at an angle to the vertical. Find the angle at which he leans. [ $g=9.8 \text{ m/s}^2$ ]
14. A simple pendulum is oscillating at the rate of 30 times per minute. Find the time period and length of pendulum. [ $g=9.8 \text{ m/s}^2$ ]
15. What is result of mixing of 20 gram of water at  $90^\circ$  with 10 gram of ice at  $-10^\circ\text{C}$ ? [Specific heat of ice =  $2100 \text{ J Kg}^{-1}\text{C}^{-1}$ , Specific heat of water =  $4200 \text{ J Kg}^{-1}\text{C}^{-1}$ , Latent heat of fusion of ice =  $3.36 \times 10^5 \text{ J Kg}^{-1}$ ]
16. Find the rate of heat flow through a glass window of area  $200 \text{ cm}^2$  and thickness 5 mm if the temperature inside room is  $18^\circ\text{C}$  and outside the room is  $40^\circ\text{C}$ . (Thermal conductivity of glass is  $1.38 \text{ Wm}^{-1}\text{K}^{-1}$ ).
17. A convex mirror has radius of curvature 40 cm. An object is placed at 16 cm in front of the mirror. Find the position where image is formed. Also, determine magnification and nature of image.
18. The angle of minimum deviation produced by prism of refractive index 1.33 is  $23.4^\circ$ . Calculate the angle of prism.
19. The horizontal component of earth's magnetic field is  $3.4 \times 10^{-5} \text{ T}$  and angle of true dip is  $30^\circ$ . Find the total magnetic flux density of earth and vertical component of earth's magnetic field.

**Good Luck !**



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**Program: Engineering All**

**Full Marks: 60**

**Year/Part: I/I (2021)**

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**Subject: Engineering Physics I**

**Time: 3 hrs.**

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**Group 'A'**

**Attempt any THREE questions.**

**[3×6=18]**

1. State parallelogram law of vector addition. Derive the expression for magnitude and direction of resultant vector.
2. Define escape velocity. Derive an expression for it.
3. State postulate of kinetic theory of gas. Derive an expression for the pressure exerted by gas according to kinetic theory.
4. Define deviation produced by prism. Derive the relation

$$\mu = \frac{\sin\left(\frac{A + \delta m}{2}\right)}{\sin\left(\frac{A}{2}\right)}, \text{ where the symbols have their usual meaning.}$$

**Group 'B'**

**Attempt any SIX questions.**

**[6×3=18]**

5. Convert 1 Newton into dyne using dimensional method.
6. Define 'g'. How does 'g' vary with depth?
7. Define  $\alpha$  and  $\gamma$ . Derive the relation between them.
8. Explain isothermal process. Derive an expression for work done during isothermal process.
9. Define power of lens. Derive equivalent power when two thin lenses are in contact.
10. Show that when a mirror is rotated by some angle, the reflected ray will rotate double the angle.
11. What is magnetic hysteresis? Explain it with hysteresis curve.
12. State and prove tangent's law in magnetism.

**Cont. ....**

### Group 'C'

Attempt any SIX questions. [www.arjun00.com.np](http://www.arjun00.com.np) [6×4=24]

13. A bullet of mass 300 g is fired with velocity  $720 \text{ km hr}^{-1}$  by making  $60^\circ$  to the vertical. Find (a) maximum horizontal range  
(b) maximum height attained (c) time to reach maximum height.
14. A motor cycle rider going with a velocity of 60 km/hr. around a curve with a radius 50 m must lean at angle to the vertical. Find the angle at which he lean.
15. A simple pendulum has period of 4.2 s. When the pendulum is shortened by 1 m, the period is 3.7 s. Calculate the acceleration due to gravity and original length of pendulum.
16. A copper ball of weight 400 gm is transferred from furnace to 1000 gm of water at  $20^\circ\text{C}$ . The temperature of water rises to  $50^\circ\text{C}$ . What is the original temperature of ball?
17. A Carnot engine absorbs 1000 J of heat from a reservoir at  $127^\circ\text{C}$  and rejects 600 J of heat during each cycle. Calculate the temperature of sink.
18. What is the apparent position of an object below a rectangular block of glass 4 cm thick if a layer of water 3 cm thick is on the top of the glass? (Refractive indices of glass and water are  $3/2$  and  $4/3$  respectively).
19. A concave mirror produces a real image 3 times as big as the object placed on its principle axis. If the distance between the object and image is 16 cm, what is the focal length of the mirror?
20. The horizontal component of earth's magnetic field at a place is 0.3 gauss and angle of dip is  $30^\circ$ . Find the vertical component and total intensity of earth's magnetic field in tesla.

**Good Luck !**



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AC



**Regular/Back/Scholarship Exam-2080, Baishakh / Jestha**

**Program: Diploma in Engineering All**

**Full Marks: 60**

**Year/Part: I/I (Old + Very Old) © Arjun**

**Pass Marks: 24**

**Subject: Engineering Physics I**

**Time: 3 hrs.**

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**Attempt All questions.**

**Group 'A'**

**[3×6=18]**

1. State and explain principle of conservation of linear momentum.

**OR**

What is satellite? Derive the expression for orbital velocity and show that square of time period for satellite is proportional to cube of distance between satellite and earth.

2. Stating the postulates of kinetic theory of gas, derive an expression for the pressure exerted by a gas in a container.
3. Define minimum deviation. What are the conditions for minimum deviation? Derive an expression for refractive index for prism in terms of angle of angle of prism and minimum deviation.

**Group 'B'**

**Attempt Any Six questions.**

**[6×3=18]**

4. Differentiate between scalar multiplication and vector multiplication of two vectors with examples.
5. Define simple pendulum. Show that motion of simple pendulum is simple harmonic motion.
6. What is moment of inertia of a rigid body? Deduce its relation with rotational kinetic energy of the body. [www.arjun00.com.np](http://www.arjun00.com.np)
7. Define cubical expansivity. Derive the relation  $\gamma=3\alpha$  where symbols have their usual meaning.

**Cont.....**

8. State and explain Stefan's law of black body radiation.
9. What is total internal reflection? Show that  $\sin C = \frac{1}{\mu}$  where, C is critical angle and  $\mu$  is refractive index. [www.arjun00.com.np](http://www.arjun00.com.np)
10. State and derive tangent law in magnetism.

### Group'C'

[6×4=24]

#### Solve Any Six Problems.

11. A car mass moves 100kg moves up an inclination of  $30^\circ$  at constant speed of 20m/s, calculate the power developed by the engine if the co-efficient of friction is 0.2 ( $g=10\text{m/s}^2$ ).
12. A motor cycle rider going  $90\text{Kmhr}^{-1}$  around a curve path with a radius of 100m must lean at an angle to the vertical. Find the angle at which he leans.
13. A metal of mass 100gm at  $100^\circ\text{C}$  is dropped into 80gm of water at  $20^\circ\text{C}$  contained in a calorimeter of mass 120gm. The final temperature of the calorimeter and its contents rises to  $30^\circ\text{C}$ . Determine the specific heat capacity of the metal, specific heat capacity of copper  $0.0094\text{ cal/gm}^\circ\text{C}$ , specific heat of water  $=1\text{ cal/gm}^\circ\text{C}$ .
14. Find the temperature at which the r.m.s. velocity of a gas is half of its value at  $0^\circ\text{C}$ .
15. The image obtained by concave mirror is erect and three times the size of the object. The focal length of mirror is 20cm. calculate the object and image distance.
16. What is the apparent position of an object below a rectangular block of glass 6cm thick if a layer of water 4cm is on top of the glass?  
Refractive index of glass = 1.5  
Refractive index of water = 1.33
17. Calculate the horizontal component of earth magnetic field if the earth's magnetic field at a place where the dip angle is  $60^\circ$  and the vertical component is  $3.464 \times 10^{-5}\text{ T}$ .

**Good Luck!**



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Program: Engineering All

Full Marks: 60

Year/Part: I/I (2021) © Arjun

Pass Marks: 24

Subject: Engineering Physics I

Time: 3 hrs.

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.



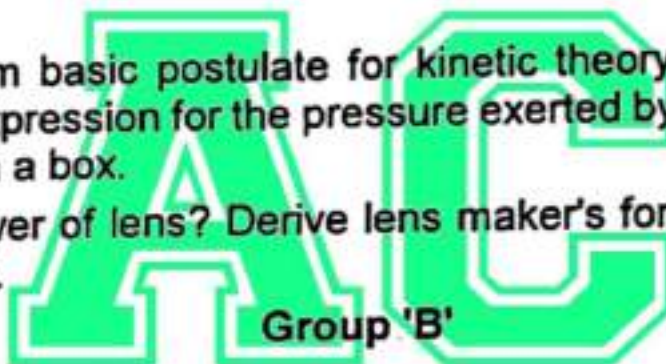
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Group 'A'

Attempt any THREE questions.

[3×6=18]

1. State the principle of conservation of linear momentum. Show that principle follows Newton's laws of motion.
2. What is satellite? Derive an expression for the orbital velocity of artificial satellite and hence derive its time period.
3. Starting from basic postulate for kinetic theory of gas, derive an expression for the pressure exerted by the gas contained in a box.
4. What is power of lens? Derive lens maker's formula for convex lens.



Group 'B'

Attempt any SIX questions.

[6×3=18]

5. Write the differences between scalar and vector product.
6. State principle of conservation of angular momentum. How momentum related to torque acting on a body?
7. Derive the relation between coefficient of linear and superficial expansion of solid.
8. What is black body? Explain Stefan's law of black body radiation.
9. What is critical angle? Show that  $\sin C = \frac{1}{\mu}$  where, C is the critical angle and  $\mu$  is the refractive index of medium.
10. Derive the mirror formula  $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$  for concave mirror, where symbols have their usual meanings.

11. State and derive tangent law in magnetism.
12. Explain the domain theory of ferromagnetism.

**Group 'C'**

Attempt any SIX questions. [www.arjun00.com.np](http://www.arjun00.com.np) [6×4=24]

13. A slab of mass 10 kg is lying on a plane inclined at  $30^\circ$  to the horizontal. Find the least force which will pull the slab upward. Given coefficient of friction is 0.2 and  $g=9.8 \text{ ms}^{-2}$ .
14. An object moving with S.H.M. has amplitude of 0.02 m and frequency of 20 Hz. Calculate (a) the period of oscillation (b) the velocity and acceleration at mean position and extreme position.
15. A glass flask of volume  $400 \text{ cm}^3$  is just filled with mercury at  $0^\circ\text{C}$ . How much does the mercury will overflow when the temperature of the system raised to  $80^\circ\text{C}$ ? Given: Coefficient of cubical expansion of glass is  $1.2 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$  and that of mercury is  $1.8 \times 10^{-5} \text{ }^\circ\text{C}^{-1}$ .
16. How much heat is required to convert 10 g of ice at  $-10^\circ\text{C}$  into steam at  $100^\circ\text{C}$ ? (Specific heat capacity of ice is  $0.5 \text{ Cal g}^{-1} \text{ }^\circ\text{C}^{-1}$ ).
17. The refractive index of glass and water are  $3/2$  and  $4/3$  respectively. Calculate the critical angle in glass water interface.
18. A prism of angle  $60^\circ$  is made of glass of refractive index 1.5. Calculate the angle of minimum deviation.
19. A bar magnet 6 cm long is kept its north pole pointing north. A neutral point is found at a distance of 25 cm from each pole. Calculate pole strength of the magnet.

**Good Luck !**



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**AC**





Program: Diploma in Engineering All

Year/Part: I/I (New + Old) © Arjun

Subject: Engineering Physics I

Full Marks: 60

Pass Marks: 24

Time: 3 hrs

Candidates are required to give their answers in their own words as far as practicable.  
The figures in the margin indicate full marks



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**Group 'A'**

**[3x6=18]**

**Attempt All questions.**

- 1 State parallelogram law of vector addition. Derive the expression for magnitude and direction of resultant vector [6]

**OR**

What is simple harmonic motion? Show that motion of a simple pendulum is simple harmonic in nature. Derive the expression for its time period.

2. Stating the postulate of kinetic theory of gas, derive the relation  $p = \frac{1}{3}\rho c^2$ , where the symbols have their usual meanings. [6]
3. Define magnetic field intensity. Derive magnetic field intensity of bar magnet at a point on equatorial line. [6]

**Group 'B'**

**[6x3=18]**

**Attempt Any Six questions.**

- 4 Define g. How does g vary with depth?
5. Define moment of inertia. Obtain the expression for rotational kinetic energy of a rigid body.
- 6 What is thermal conductivity? Derive formula for thermal conductivity.
- 7 Prove that,  $C_p - C_v = R$  where symbols have their usual meanings.
- 8 Derive the mirror formula  $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$  for convex mirror, where symbols have their usual meanings.

**Cont.....**

9. State and explain coulomb's law in magnetism.
10. What is magnetic hysteresis? Explain it with hysteresis curve.

Group 'C'

[6x4=24]

Attempt Any Six questions.

11. An iron block of mass 10kg. rests on a wooden plane at  $40^\circ$  to the horizontal. It is found that the least force parallel to the plane which causes the block to slide up is 100N, calculate the co-efficient of sliding friction between wood and iron. ( $g = 10ms^{-2}$ )
12. A motorcycle rider going with a velocity of 60 km/hr around a curve with radius of 50m must lean at an angle to the vertical, find the angle at which he leans.
13. Calculate the amount of heat required to convert 1 kg of ice at  $-5^\circ C$  to water at  $100^\circ C$ . Given, specific heat capacity of ice = 2100 J/kg K, specific heat capacity of water = 4200 J/kg K and specific latent heat of fusion of ice =  $3.34 \times 10^5$  J/kg.
14. A glass flask of volume  $800cm^3$  is just filled with mercury at  $10^\circ C$ . How much mercury will overflow when the temperature of system is raised to  $80^\circ C$ ? (The coefficient of linear expansion of glass is  $4 \times 10^{-6} \text{ } ^\circ C^{-1}$  and coefficient of cubical expansion of mercury is  $1.8 \times 10^{-5} \text{ } ^\circ C^{-1}$ ).
15. The refractive index of diamond is 2.47. Calculate the speed of light in diamond.
16. Find the angle of prism if angle of minimum deviation is  $38^\circ$  and refractive index is 1.6.
17. A bar magnet of magnetic length 10cm has a magnetic moment of  $1.2 Am^2$ . Calculate the magnetic intensity at a point 20cm from each pole. ( $\mu_0 = 4\pi \times 10^{-7} TmA^{-1}$ )
18. The horizontal component of earth's magnetic field is  $3.4 \times 10^{-5} T$  and angle of true dip is  $30^\circ$ . find the total magnetic flux density of earth and the vertical component.

Good Luck!



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AC



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**Group - 'A'**

**Attempt Any Three Questions. (Long Question) [ 3 × 6 = 18]**

1. State and prove principle of conservation of linear momentum.
2. What is simple pendulum? Show that the motion of simple pendulum is simple harmonic and hence find its time period.
3. Define minimum deviation produced by prism. Hence derive the

$$\text{relation } \mu = \frac{\sin\left(\frac{A+\delta m}{2}\right)}{\sin\frac{A}{2}}$$

Where the symbols have their usual meaning.

4. Prove  $\alpha = \beta/2 = \gamma/3$ , where symbols have their usual meanings.

**Group-'B'**

**Attempt Any Six Questions. (Short Question) [ 6 × 3 =18]**

5. State Newton's first and second law of motion. show that Newton's first law is the special case of Newton's second law of motion.
6. Show that g decreases with increase in height.
7. State and explain Stefan's law of black body radiation.
8. Show that  $C_p - C_v = R$ ; where symbols have their usual meanings.
9. Define critical angle and total internal reflection of light.
10. Define lens formula. Derive lens formula for convex lens.
11. Differentiate among diamagnetic, paramagnetic and ferromagnetic materials.

**Group-'C'**

**Attempt Any Six Questions.**

**[6×4=24]**

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12. A slab of mass 10kg is laying on a plane inclined at  $30^\circ$  to the horizontal. Find the least force which will pull the slab upward ( $\mu=0.15$ ).
13. A constant torque of 200 Nm turns a wheel about its centre. The momen of inertia about this axis is  $100 \text{ kgm}^2$ . Find the angular velocity gained in 4 Second used also calculate the kinetic energy gained after 20 revolution.
14. Find the result of mixing 20gm of water at  $90^\circ\text{C}$  with 5gm of ice at  $-10^\circ\text{C}$ . (Sp. heat of ice  $= 0.5 \text{ cal g}^{-1}^\circ\text{C}^{-1}$ , Sp. heat of water  $= 1 \text{ cal g}^{-1}^\circ\text{C}^{-1}$ , Latent heat of fusion of ice  $= 80 \text{ cal g}^{-1}$ ).
15. An object is placed 12cm from a concave mirror of radius of curvature 16 cm. Find the position of image and magnification of mirror.
16. Find the minimum deviation produced by an equilateral glass prism of refractive index 1.5.
17. A bar magnet 10cm long is placed in the magnetic meridian with its N- pole pointing geographical north. A neutral points obsorved at a point 15 cm from each pole. Calculate its magnetic moment
18. The total intensity of earth's magnetic field at a place where the angle of dip  $30^\circ$  is  $37 \times 10^{-6} \text{ T}$ . Find the horizontal and vertical components.

***Good Luck!***



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**AC**





Program:

Regular/Back Exam-2075, Falgun/Chaitra

Year/Part:

Diploma in DCE/ DAT/DRE/DME/DAE/DIT/ Full Marks: 60  
DEE/DEEX/DEX/DGE/DCOM/ Engineering

Subject:

Engineering Physics

Pass Marks: 24

Time: 3 hrs

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[3x6=18]

**Group 'A'**

Attempt Any Three questions.

1. State the parallelogram law of vector addition. Hence, derive the magnitude and direction of resultant vector.
2. What is satellite? Derive an expression for the orbital velocity of an artificial satellite and hence derive its time period.
3. State Newton's law of cooling. Determine the specific heat capacity of liquid by the method of cooling
4. What are the conditions required for total internal reflection?

Derive the relation  $\mu = \frac{\sin(\frac{A+Dm}{2})}{\sin \frac{A}{2}}$ , where the symbols have their usual meaning.

**Group 'B'**

[6x3=18]

Attempt Any Six Questions.

5. Define friction. Prove that tangent of angle of friction is equal to co-efficient of friction.
6. Define work. State and prove work energy principle.
7. Define angular momentum. State and prove principle of conservation of angular momentum for a rotating body.
8. Define how Boyle's law and Charle's law can be combined to give equation of state of ideal gas.
9. Explain isothermal process. Derive an expression for work done during isothermal process.
10. Define lens formula. Derive lens formula for convex lens.
11. What is total internal reflection? Show that  $\sin C = \frac{1}{\mu}$  Where C is critical angle and  $\mu$  is refractive index.
12. What is pole strength? State and explain tangent law in magnetism.

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**Group 'C'**

Attempt **Any Six** questions. [www.arjun00.com.np](http://www.arjun00.com.np)

- 13) A car of mass 1000kg moves up an inclination of  $30^\circ$  at constant speed of  $20\text{ms}^{-1}$ . Calculate the power developed by the engine if the co-efficient of friction is 0.2. ( $g=10\text{ms}^{-2}$ )
- 14) A simple pendulum is oscillating at the rate of 30 times per minute. Find time period and length of pendulum. ( $g=9.8\text{ms}^{-2}$ )
- 15) A ball of copper weighing 400gm is transferred from a furnace to 1kg of water at  $20^\circ\text{C}$ . The temperature of water increases to  $50^\circ\text{C}$ . What is the original temperature of the ball? Specific heat capacity of water =  $4200\text{J kg}^{-1} \text{K}^{-1}$ , specific heat capacity of copper =  $400\text{J kg}^{-1} \text{K}^{-1}$
- 16) A glass window 4mm thick has length 2.5m and height 1.5m. How much heat will be conducted through the glass in 1 minute. When the temperature of room is  $30^\circ\text{C}$  and that of outside is  $27^\circ\text{C}$ ? Thermal conductivity for glass is  $0.85\text{Wm}^{-1}\text{K}^{-1}$ .
- 17) An object of 4cm high is placed 12cm from a concave mirror of radius 40cm, find the position, nature and size of the image.
- 18) What is the apparent position of an object below a rectangular block of glass 6cm thick if a layer of water 4cm is on top of the glass? (Refractive index of glass = 1.5 and Refractive index of water = 1.33)
- 19) A bar magnet has a length 8cm, The magnetic field at the distance 5 cm from both ends of magnet is  $4 \times 10^{-6} \text{ T}$ . Calculate pole strength of the magnet. ( $\mu_0 = 4 \pi \times 10^{-7} \text{ TmA}^{-1}$ )

**Good Luck**



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