# CARMEL SCHOOL, MADHUPUR FIRST UNIT TEST 2025 – 2026

STD: X

### PHYSICS

Time: 1 hr M.M: 50

# Section – A(14 Marks)

Q.No(1)	Choose the correct answer from the options given below.	
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- (i) A body is acted upon by two unequal forces in opposite directions, but not in the same line. The effect is that:
- (a) the body will only have rotational motion
- (b) the body will only have translational motion
- (c) the body will have neither rotational motion nor translational motion
- (d)the body will have rotational as well as translational motion.

# (ii) Centrifugal force is:

- (a) a real force
- (b) the force of reaction of centripetal force
- a fictitious force (c)
- (d) directed towards the centripetal force.

#### (iii) Assertion (A): The centre of gravity of an irregularly -Shaped object always lies at its geometric centre.

Reason(R): The centre of gravity depends on the distribution of mass within an object.

- both A and R are true and R is the correct explanation
- both A and R are true and R is not the correct explanation of A. (b)
- assertion is false but reason is true. (c)
- assertion is true but reason is false. (d)

#### The energy of electron is 2.5 eV. When expressed in joule, it is: (iv)

- $1.6 \times 10^{-19} \,\text{J}$  (b)  $4.0 \times 10^{-19} \,\text{J}$  (c)  $3.2 \times 10^{-19} \,\text{J}$ (a)
- Assertion(A): When the displacement is normal to the direction of force, the (v) work done is zero.

Reason (R)Work done depends on the angle between force and displacement.

- both A and R are true and R is the current explanation of A. (a)
- both A and R are True and R is not the correct explanation of A. (b)
- assertion is false but reason is true (c)
- assertion is true but reason is false. (d)
- If there are n movable pulleys with one fixed pulley, the M.A is given by: (vi)
- (b)  $2^{n+1}$
- (c)  $2^{n-1}$
- (d)  $2^{n+2}$

(vii) How many strands are supporting the load in case of block and tackle system of 4 pulleys when effort is in the downwards direction?

- (a) 5
- (b) 4
- (c)3
- (d) 6

(viii) The direction of motion in circular motion:

- in linear (a)
- (b) is along the tangent at that point of the circular path
- towards the centre (c)
- (c) none of these
- When the speed of a moving object is doubled, then its kinetic energy. (ix)
- remains the same (a)
- (b) decreases (c) is doubled
- (d) becomes four times

[P.T.O]

(x)	Clockwise moment produced by a force bout a fulcrum is considered to be:
(a)	Positive (b) Negative (c) Zero (d) None of these
Q.No (2)	Fill in the blanks:-
(a)	1 Joule is equivalent to erg.
(b)	class of levers have effort and load on the same side of fulcrum.
(c)	A bottle opener is an example of
(d)	When a body moves in a circular path in a horizontal plane, the work done is
	Section-B(36 marks)
Q.No(3) (i)	(a) Define Centre of Gravity. [12]
(b)	A hollow ice cream cone has height 6 cm.
(i).	Where is the position of its centre of gravity from the broad base?
(ii)	Will its position change when it is filled completely with honey? Write Yes or No.
(c)	Meera chose to use a block and tackle system of '9' pulleys instead of a single movable pulley to lift a heavy load.
(i)	What is the advantage of using a block and tackle system over a single movable pulley?
(ii)	Why should she connect more number of pulleys in the upper fixed block?
(d)	Sumit does 600 J of work in 10 min and Amit does 300 J of work in 20 min. Calculate the ratio of the powers delivered by them.
veloc	Calculate the power spent by a crane while lifting a load of mass 2000 kg, at ity of 1.5 ms-1. (g = 10 ms-2)  A block and tackle system of pulleys has velocity ratio 4.
(b) (i)	Draw a labelled diagram of the system indicating clearly, the direction of the load and the
(ii)	What is the value of the mechanical advantage of the given pulley system if it is an ideal
(c))	A metre scale of weight 50 gf can be balanced at 40 cm mark without any weight suspended on it.
(i)	If this ruler is cut at its centre then state which part [0 to 50 cm or 50 to 100 cm] of the ruler will weigh more than 25 gf.
(ii)	What minimum weight placed on this metre ruler can balance this ruler when it is pivoted at its centre?
ON-(5) (i)	What is meant by the term" moment of force" [12]
Q.No(5) (i) (ii)	where does the position of centre of gravity lie for:
(a)	. 1 1ina (b) a triangular lamina
(iii)(a)	Two bodies of masses m1 and m2 have equal kinetic energies. What will be the ration of their linear momenta?
a.	Why is the M.A of a leaver of second order always greater than one?  Define work and find the relation between S.I and CGS unit of work.
(iv) (a)	A boy weighing 350 N climbs up 30 steps, each 20 cm high in 1 min. Calculate:
(b)	the work done (ii) the power spent
(i)	&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&&

# CARMEL SCHOOL MADHUPUR FIRST UNIT TEST 2025-26

STD-X Time -1 Hrs. SUB-Hindi M.M.-50

## विभाग - 'अ'

प्रश्न1- किन्हीं एकविषय पर 150 शब्दों पत्र लिखिए:-

10

- क- आपका छोटा भाई अपना अधिकांश समय सोशल मीडिया के उपयोग में व्यतीत करता है। सोशल मीडिया से दूर रहने का सुझाव देते हुए उसे पत्र लिखें।
- ख- अपने नगर / क्षेत्र के स्वास्थ्य अधिकारी को पत्र लिखकर अपने क्षेत्र में 'खाने की वस्तुओं में मिलावट 'की घटनाओं के प्रति उनका ध्यान आकृष्ट कीजिए।

प्रश्न2- निर्देशानुसार प्रश्नों काउत्तर दीजिए:-

क- विलोम शब्द लिखिए:अवित, निर्मल, गरल, उत्थान, कुटिल।
ख- तत्सम शब्द लिखिए:मक्खी, हाथ, पत्थर, गेहूं, किवाड़।
ग- निम्नशब्दों को शुद्ध कीजिए:किवित्री, नरायन, समाजीक, रिसि, ग्यान।

# विभाग- 'ब'

प्रश्न3- किसी एक अवतरण का उत्तर दीजिए :-

25

"परजिसस्त्री कीमान-प्रतिष्ठा कामैं ईश्वर के दरबार में उत्तरदाता हूं, उसके प्रति ऐसा घोरअन्याय और पशुवतव्यवहार असह्य है।"

- क- यह किस तरह की कहानी है? कहानीकार का संक्षिप्त परिचय दीजिए।
- ख- वक्ता कौन है? वक्ता का परिचय दीजिए।
- ग- वक्ता के लिए कौन- सी बात असह्य थी तथा क्यों?
- घ- वक्ता ईश्वर के दरबार में किस बात के लिए उत्तरदाता है और क्यों?
- ड- अर्थ लिखिए:- पितामह, उद्योग, सजीला, अधिपति, निंदा।

प्रश्न4- जसोदा हरि पालने झुलावै।हलरावै, दुलराई, मल्हावै, जोई- सोई कछु गावै।।मेरे लाल को आउ निंदरिया, काहेनआनिसुवावै।तू काहे नहिं बेगहिंआवै, तो कोकान्ह बुलावै।।

- क- प्रस्तुत पद्य के कवि किस काल के है? कवि का संक्षिप्त परिचय दीजिए।
- ख- यहां सूरदास जी ने यशोदा के किस प्रयास का वर्णन किया है?
- ग- श्री कृष्णसोते समय कौन-कौन सी क्रियाएं कर रहे हैं?
- घ- सूरदास ने यशोदा के सूरत के बारे में क्या कहा है, और क्यों ?
- ङ- अर्थ लिखिए:- आनि, सुवावै, बेगिहं,मूंदि, निंदरिया।

# CARMEL SCHOOL , MADHUPUR FIRST UNIT TEST 2025 – 2026

STD: X

## PHYSICS

Time: 1 hr M.M: 50

	사람이 가는 사람들이 얼마나 아니는
	Section - A(14 Marks)
Q.No(1)	Choose the correct answer from the options given below.
(i) A T	body is acted upon by two unequal forces in opposite directions, but not in the same line the effect is that:
	the body will only have rotational motion the body will only have translational motion ne body will have neither rotational motion nor translational motion ne body will have rotational as well as translational motion.
(ii) Cen	trifugal force is:
	a) a real force (b) the force of reaction of centripetal force
(	c) a fictitious force (d) directed towards the centripetal force.
	Assertion (A): The centre of gravity of an irregularly —Shaped object always lies at it eometric centre.
Reas	son(R): The centre of gravity depends on the distribution of mass within an object.
(	a) both A and R are true and R is the correct explanation
	b) both A and R are true and R is not the correct explanation of A.
	c) assertion is false but reason is true.
(	d) assertion is true but reason is false.
(iv) 1	The energy of electron is 2.5 eV. When expressed in joule, it is:
(	a) $1.6 \times 10^{-19} \text{J}$ (b) $4.0 \times 10^{-19} \text{J}$ (c) $3.2 \times 10^{-19} \text{J}$ (d) 0
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(vi) I	f there are n movable pulleys with one fixed pulley, the M.A is given by:
	a) $2^n$ (b) $2^{n+1}$ (c) $2^{n-1}$ (d) $2^{n+2}$
	Iow many strands are supporting the load in case of block and tackle system of 4 pulleys then effort is in the downwards direction?
(a) 5	(b) 4 (c)3 (d) 6
(viii) T	The direction of motion in circular motion:

(a) in linear
 (b) is along the tangent at that point of the circular path
 (c) towards the centre
 (c) none of these

(ix) When the speed of a moving object is doubled, then its kinetic energy.

(a) remains the same (b) decreases (c) is doubled (d) becomes four times

[P.T.O]

	(x)		
	(a)	Positive (b) Negative (c) Zero (d) None of these	
Q.	No (2)	Fill in the blanks:-	
	(a)	1 Joule is equivalent toerg.	
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	(b)		
	(i).	Will its position change when it is filled completely with honey? Write Yes or No.	
	(ii)	Meera chose to use a block and tackle system of '9' pulleys instead of a single movable	e
	(c)	pulley to lift a heavy load.	
	(i)	What is the advantage of using a block and tackle system over a single movable pulley	!
	(ii)	Why should she connect more number of pulleys in the upper fixed block?	
	(d)	Sumit does 600 J of work in 10 min and Amit does 300 J of work in 20 min. Calculate	
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	(b)	A block and tackle system of pulleys has velocity ratio 4.	
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Q.No	(5) (i)	where does the position of centre of gravity lie for:	
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	a.	Define work and find the relation between S.I and CGS unit of work.	
iv)	(a)	A boy weighing 350 N climbs up 30 steps, each 20 cm high in 1 min. Calculate:	
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