eExam Question Bank

Coursecode:

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Question Type	Question	A	B	C	D	Answer	Remark
FBQ	A type of rechargable cell in common use for electrical experiments in the laboratory, which can supply relatively constant voltage and current for a relatively longer period of time is called _____	accumulator	accumulator				eExam
FBQ	A student designed a circuit which consisted of two variable resistors P and Q, two cells E1 and E2 of negligible internal resistance and a galvanometer. He connected E1 across the series combination of P and Q and then connects the series combination of the cell E2 and the galvanometer across P. He adjusted the variable resistances to obtain a null condition of the galvanometer. The ratio of the emf of E2 to that of E1 is _____ (You may choose your answer from the list: P/Q, (P+Q)/Q, P/(P+Q), Q/(P+Q)	P/(P+Q)	P/(P+Q)				eExam
FBQ	In the absence of a slider contact a _____ clip may be used in experiments involving the use of metre bridge	crocodile	crocodile				eExam
FBQ	In an experiment to determine the internal resistance r of a dry cell using the potentiometer, the resistance box was used to provide different values of the external resistance R in the circuit. A graph of 1/R against _____ was plotted to obtain a straight line of the form y = mx + c, where m = I1/I2, I1 and I2 being the balance lengths for open and closed circuits respectively. The intercept on the horizontal axis when 1/R = 0 is used to find the internal resistance fo the cell	1/r	1/r				eExam

☐								
☐	FBQ	In an experiment involving two resistances in series, the slope of the graph of V against I represents [ ]	equivalent resistance	equivalent resistance				eExam
☐	FBQ	For a metallic conductor, Ohm's law holds provided [ ] _, pressure and other physical factors remains constant	temperature	temperature				eExam
☐	FBQ	When plotting straight line graphs of experimental data, the line is referred to as line of [ ]	bestfit	bestfit				eExam
☐	FBQ	An electrical source with internal resistance r is used to operate a lamp of resistance R. The fraction of the total power delivered to the lamp is [ ] __. You may choose your answer from: (r+R)/R, (r+R)/r, R/(r+R), R/r	R/(r+R)	R/(r+R)				eExam
☐	FBQ	Another means of introducing variable resistance into a ciruit instead of resistance wire is to use [ ] box	resistance	resistance				eExam
☐	FBQ	A 3V- battery with internal resistance of 0.5Ω is connected across a parallel combination of a 1-$\Omega $and2-\Omega $resistances. The current in the 2-\Omega$ resistance is [ ] A to 2 decimal places	0.91	0.91				eExam
☐	FBQ	In an experiment, $\frac{1}{V}$ is plotted against $\frac{1}{I}$. The physical significance of the slope of the graph is [ ]	conductance	conductance				eExam
☐	FBQ	A 1 mΩ resistor is to be made from a 1-mm diameter wire of resistivity $2.8 \times 10^{-8} \Omega{m}$. The length of the wire to one place of decimal is [ ] cm	2.8	2.8				eExam
☐	FBQ	Two resistances of 2 Ω each are connected in parallel and then connected in series to a 1Ω resistance.The equivalent resistance is [ ] Ω	2	two				eExam
☐	FBQ	Kirchoff's loop rule represents conservation of [ ]	energy	energy				eExam

☐								
☐	FBQ	The relation between the current I, through the heated filament and the applied voltage, V, is given by the general form $$I = KV^{n}$$, where K and n are constants. For the empirical relationship between I and V, a straight line graph is plotted from the relation log I = [ ]	n log V + log K	log K+n log V				eExam
☐	FBQ	The slide wire of the figure shown is balanced when the the uniform slide wire AB is divided as shown. The value of the resistance X is [ ] $$\Omega$$	2	two				eExam
☐	FBQ	The diagram shown is called a [ ]	metre bridge	Wheatstone bridge				eExam
☐	FBQ	The device shown is called [ ]	Wheatstone bridge	Wheatstone bridge				eExam
☐	FBQ	The difference between the emf of a battery and the lost volts when discharging is called [ ] potential difference or voltage	terminal	terminal				eExam
☐	FBQ	Resistances in series have the same [ ]	current	current				eExam
☐	FBQ	In the circuit shown, the name of the device which provides silding contact with the resistance wire PQ is called [ ]	jockey	jockey				eExam
☐	FBQ	A [ ] cell such Weston cadmium cell is used in a suitable circuit to determine the emf of unknown cell	standard	standard				eExam
☐	FBQ	To change a galvanometer to a voltmeter, connect a high resistance in [ ] to it	series	series				eExam
☐	FBQ	In the circuit shown, the wire PQ is usually made up of a material called [ ]	constantan	constantan				eExam
☐	FBQ	In the circuit diagram shown, the device marked X is a [ ]	galvanometer	galvanometer				eExam

☐								
☐	FBQ	In the circuit diagram shown, the wire PQ has the resistance of $$5\Omega$$ and the driver cell has an emf of 2.00 V. The value of the resistance R if a balance point is obtained at 0.600 m along PQ when measuring an emf of 6.00mV? is [ ] (Leave your answer to the nearest whole number)	995	995				eExam
☐	FBQ	The null condition in experiments involving the use of the device shown implies that the [ ] s are balanced	potential difference	voltage				eExam
☐	FBQ	The advantage of the device shown over the voltmeter in measurements of emf is that it does NOT draw [ ] from the cell or battery under test	electric current	current				eExam
☐	FBQ	The figure shown is the circuit diagram of a [ ]	potentiometer	potentiometer				eExam
☐	FBQ	In the construction of an ammeter, a low resistance called [ ] resistance is connected in parallel to a suitable galvanometer	shunt	shunt				eExam
☐	FBQ	The same electric [ ] flows through resistors connected in series	current	current				eExam
☐	FBQ	A device known as [ ] may be used for comparison of resistances	Wheatstone bridge	metre bridge				eExam
☐	FBQ	A device which may be used to compare the potential differences of electric cells is [ ]	potentiometer	potentiometer				eExam
☐	FBQ	The equivalent resistance of a 2Ω and a 3Ω resistances in parallel is [ ] $\Omega	6/5	1.2				eExam
☐	FBQ	The term "lost volts" is used to describe the energy dissipated in the [ ] of a source of electromotive force	internal resistance	internal resistance				eExam
☐	FBQ	Resistances in parallel have the same [ ]	potential difference	voltage				eExam

☐								
☐	FBQ	[ ] is defined as the time rate of flow of charge across a unit cross-sectional area of a conductor	electric current	Electric current				eExam
☐	FBQ	The ratio V/I = [ ] (The symbols have their usual meaning	R	R				eExam
☐	FBQ	Beyond the critical angle a ray of light moving from dense to rare medium suffers [ ]	total internal reflection	total internal reflection				eExam
☐	FBQ	The bending of a ray of light as it travels from one transparent medium to another is called [ ]	refraction	refraction				eExam
☐	FBQ	For the refraction through the triangular glass prism, $$(d-e)^{o}$$ was plotted on the vertical axis against $$i^{o}$$ on the horizontal axis according to the equation d-e = i-A and the symbols have their usual meaning. The graph obtained is a straight line and the intercept on the i-axis is [ ]	A	A				eExam
☐	FBQ	A lens which is thinnner at centre than at the edge is a [ ] lens	diverging	concave				eExam
☐	FBQ	When an object is placed in front of a convex lens L between F′ and 2F′, a [ ] and inverted image is formed	real	real				eExam
☐	FBQ	For concave mirrors, the object distance is always [ ] (Choose from: positve, negative)	positive	positve				eExam
☐	FBQ	The image of an object placed between the focal point and the pole of a concave mirror is behind the mirror, erect, enlarged and [ ]	virtual	virtual				eExam
☐	FBQ	Given the radius of curvature R of a spherical mirror, the miiror equation can be written in terms of the object distance u and image distance v as $$\frac{1}{u}+\frac{1}{v}=\frac{x}{R}$$. X is [ ]	2	2				eExam

☐								
☐	FBQ	In an experiment, based on the equation $$\mu=\frac{sini}{sinr}$$, sini was plotted on the vertical axis and sinr on the horizontal axis. Then, $$\mu$$ is the [ ] of the graph.	slope	gradient				eExam
☐	FBQ	The equation $$\mu=\frac{sini}{sinr}$$, where the symbols have their usual meaning is called [ ] _'s law	Snell	Snell				eExam
☐	FBQ	In the equation $$\mu=\frac{sini}{sinr}$$, where I and r are the angles of incidence and refraction respectively, $$\mu$$ is called the [ ]	refractive index	index of refraction				eExam
☐	FBQ	The bending of a ray of lightas passes from one medium to another is called [ ]	refraction	refraction				eExam
☐	FBQ	A type of rechargable cell in common use for electrical experiments in the laboratory, which can supply relatively constant voltage and current for a relatively longer period of time is called [ ]	accumulator	accumulator				
☐	FBQ	A student designed a circuit which consisted of two variable resistors P and Q, two cells E1 and E2 of negligible internal resistance and a galvanometer. He connected E1 across the series combination of P and Q and then connects the series combination of the cell E2 and the galvanometer across P. He adjusted the variable resistances to obtain a null condition of the galvanometer. The ratio of the emf of E2 to that of E1 is [ ] (You may choose your answer from the list: P/Q, (P+Q)/Q, P/(P+Q), Q/(P+Q)	P/(P+Q)	P/(P+Q)				
☐	FBQ	In the absence of a slider contact a [ ] clip may be used in experiments involving the use of metre bridge	crocodile	crocodile				

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☐	FBQ	In an experiment involving two resistances in series, the slope of the graph of V against I represents [ ]	equivalent resistance	equivalent resistance				
☐	FBQ	For a metallic conductor, Ohm's law holds provided [ ] _, pressure and other physical factors remains constant	temperature	temperature				
☐	FBQ	When plotting straight line graphs of experimental data, the line is referred to as line of [ ]	bestfit	bestfit				
☐	FBQ	An electrical source with internal resistance r is used to operate a lamp of resistance R. The fraction of the total power delivered to the lamp is [ ] __. You may choose your answer from: (r+R)/R, (r+R)/r, R/(r+R), R/r	R/(r+R)	R/(r+R)				
☐	FBQ	Another means of introducing variable resistance into a ciruit instead of resistance wire is to use [ ] box	resistance	resistance				
☐	FBQ	A 3V- battery with internal resistance of 0.5Ω is connected across a parallel combination of a 1-\Ω and 2-Ω resistances. The current in the 2-Ω resistance is [ ] A to 2 decimal places	0.91	0.91				
☐	FBQ	In an experiment, $\frac{1}{V}$ is plotted against $\frac{1}{I}$. The physical significance of the slope of the graph is [ ]	conductance	conductance				

	FBQ	A 1 mΩ resistor is to be made from a 1-mm diameter wire of resistivity $2.8 \times 10^{-8} \Omega{m}$. The length of the wire to one place of decimal is [ ] cm	2.8	2.8				
	FBQ	Two resistances of 2 Ω each are connected in parallel and then connected in series to a 1Ω resistance.The equivalent resistance is [ ] Ω	2	two				
	FBQ	Kirchoff's loop rule represents conservation of [ ]	energy	energy				
	FBQ	The relation between the current I, through the heated filament and the applied voltage, V, is given by the general form $$I = KV^{n}$$, where K and n are constants. For the empirical relationship between I and V, a straight line graph is plotted from the relation log I = [ ]	n log V + log K	log K+n log V				
	FBQ	The slide wire of the figure shown is balanced when the the uniform slide wire AB is divided as shown. The value of the resistance X is [ ] $$\Omega$$	2	two				
	FBQ	The diagram shown is called a [ ]	metre bridge	Wheatstone bridge				
	FBQ	The device shown is called [ ]	Wheatstone bridge	Wheatstone bridge				
	FBQ	The difference between the emf of a battery and the lost volts when discharging is called [ ] potential difference or voltage	terminal	terminal				
	FBQ	Resistances in series have the same [ ]	current	current				
	FBQ	In the circuit shown, the name of the device which provides silding contact with the resistance wire PQ is called [ ]	jockey	jockey				
	FBQ	A [ ] cell such Weston cadmium cell is used in a suitable circuit to determine the emf of unknown cell	standard	standard				

☐								
☐	FBQ	To change a galvanometer to a voltmeter, connect a high resistance in [ ] to it	series	series				
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☐	FBQ	In the circuit diagram shown, the device marked X is a [ ]	galvanometer	galvanometer				
☐	FBQ	In the circuit diagram shown, the wire PQ has the resistance of $$5\Omega$$ and the driver cell has an emf of 2.00 V. The value of the resistance R if a balance point is obtained at 0.600 m along PQ when measuring an emf of 6.00mV? is [ ] (Leave your answer to the nearest whole number)	995	995				
☐	FBQ	The null condition in experiments involving the use of the device shown implies that the [ ] s are balanced	potential difference	voltage				
☐	FBQ	The advantage of the device shown over the voltmeter in measurements of emf is that it does NOT draw [ ] from the cell or battery under test	electric current	current				
☐	FBQ	The figure shown is the circuit diagram of a [ ]	potentiometer	potentiometer				
☐	FBQ	In the construction of an ammeter, a low resistance called [ ] resistance is connected in parallel to a suitable galvanometer	shunt	shunt				
☐	FBQ	The same electric [ ] flows through resistors connected in series	current	current				
☐	FBQ	A device known as [ ] may be used for comparison of resistances	Wheatstone bridge	metre bridge				
☐	FBQ	A device which may be used to compare the potential differences of electric cells is [ ]	potentiometer	potentiometer				

☐								
☐	FBQ	The equivalent resistance of a 2Ω and a 3Ω resistances in parallel is [ ] $\Omega	6/5	1.2				
☐	FBQ	The term "lost volts" is used to describe the energy dissipated in the [ ] of a source of electromotive force	internal resistance	internal resistance				
☐	FBQ	Resistances in parallel have the same [ ]	potential difference	voltage				
☐	FBQ	[ ] is defined as the time rate of flow of charge across a unit cross-sectional area of a conductor	electric current	Electric current				
☐	FBQ	The ratio V/I = [ ] (The symbols have their usual meaning	R	R				
☐	FBQ	Beyond the critical angle a ray of light moving from dense to rare medium suffers [ ]	total internal reflection	total internal reflection				
☐	FBQ	The bending of a ray of light as it travels from one transparent medium to another is called [ ]	refraction	refraction				
☐	FBQ	For the refraction through the triangular glass prism, $$(d-e)^{o}$$ was plotted on the vertical axis against $$i^{o}$$ on the horizontal axis according to the equation d-e = i-A and the symbols have their usual meaning. The graph obtained is a straight line and the intercept on the i-axis is [ ]	A	A				
☐	FBQ	A lens which is thinnner at centre than at the edge is a [ ] lens	diverging	concave				
☐	FBQ	When an object is placed in front of a convex lens L between F′ and 2F′, a [ ] and inverted image is formed	real	real				
☐	FBQ	For concave mirrors, the object distance is always [ ] (Choose from: positve, negative)	positive	positve				
☐	FBQ	The image of an object placed between the focal point and the pole of a concave mirror is behind the mirror, erect, enlarged and [ ]	virtual	virtual				

	FBQ	Given the radius of curvature R of a spherical mirror, the miiror equation can be written in terms of the object distance u and image distance v as $$\frac{1}{u}+\frac{1}{v}=\frac{x}{R}$$. X is _____	2	2				
	FBQ	In an experiment, based on the equation $$\mu=\frac{sini}{sinr}$$, sini was plotted on the vertical axis and sinr on the horizontal axis. Then, $$\mu$$ is the _____ of the graph.	slope	gradient				
	FBQ	The equation $$\mu=\frac{sini}{sinr}$$, where the symbols have their usual meaning is called _____ _'s law	Snell	Snell				
	FBQ	In the equation $$\mu=\frac{sini}{sinr}$$, where I and r are the angles of incidence and refraction respectively, $$\mu$$ is called the _____	refractive index	index of refraction				
	FBQ	The bending of a ray of lightas passes from one medium to another is called _____	refraction	refraction				
	MCQ	The advantage of potentiometer over voltmetr in measurements of emf is that	the potentiometer wire is assumed to be uniform	it does not draw current from the circuit under test	the temperatue of the wire must remain constant	faults may arise due to breaks or wrong connections in the circuit	B	eExam
	MCQ	Which of these is not a useful precaution in an electrical experiment?	key should be removed between readings to avoid battery run-down	jockeys should be dragged on resistance wires	the connections in the circuit should be tight	readings should be recorded as soon as they are obtained	B	eExam
	MCQ	Which of the following is NOT true about a rheostat?	It is a constant current instrument	It is a resistor with moving contact	It is used for varying the current in a circuit	It is used for varying the resistance in a circuit	A	eExam
	MCQ	In an experiment, potential difference is plotted on the vertical axis and current on the horizontal axis. The slope of the graph represents	resistivity	conductivity	resistance	conductance	C	eExam
	MCQ	For a metallic conductor, Ohm's law holds provided	potential difference varies	current remains constant	temperature remains constant	potential difference remains constant	C	eExam
	MCQ	The lens of the human eye is	concave	converging	planconcave	diverging	B	eExam

☐	MCQ	Which of the following precautions is NOT applicable to experiment involving planoconvex lens?	planoconvex lens should have small focal length	parallax error should be avoided	the surface of the lens should be cleaned properly	the tip of the optical pin should be at the same level with the principal axis of the lens	A	eExam
☐	MCQ	A glass prism of refracting angle 60 degrees gives a minimum deviation of 47degrees. What is the refractive index of the glass?	1.61	1.20	1.52	1.41	A	eExam
☐	MCQ	Calculate the distance and magnification of an object placed 20cm from a converging lens	60cm and 0.3 times the size of object	20cm and 0.3 times the size of object	60cm and 3 times the size of object	80cm and 3 times the size of object	D	eExam
☐	MCQ	diopter measures	linear magnification of lens	power of lens	inverse of object distance from lens	inverse of image distnce from lens	C	eExam
☐	MCQ	Which of the following is not true about diverging lens	the principal focus is positive	the principal focus is ngative	they poduce virtual images only	they form virtual, erect and smaller images of real object	B	eExam
☐	MCQ	In an experiment to determine the focal length of a convex lens, 1/u (cm^{-1}) was plotted on horizontal and 1/v (cm^{-1}) on the vertical axis, where u and v have their usual meaning. What is the physical significance of the reciprocal of the intercept on the horizontal axis?	linear magnification	focal length	object distance	image distance	C	eExam
☐	MCQ	In an experiment to determine the focal length of a convex lens, 1/u (cm^{-1}) was plotted on horizontal and 1/v (cm^{-1}) on the vertical axis, where u and v have their usual meaning. What is the physical significance of the reciprocal of the slope of the graph?	linear magnification	focal length	object distance	image distance	A	eExam
☐	MCQ	In practical experiment inloving the use of optical pins, parallax is reduced or removed if on slightly displacing one's eye from side to side	the object and image are not coincident but move together in same directions	the object and image move in opposite directions relative to each other	the object and image are coincident and move together in the same direction	the object and image are coincident and remain stationary	C	eExam
☐	MCQ	In an experiment with a concave mirror, the image of an optical pin which is 4 times its size was cast on on a screen 6m from the object pin. How far from the object pin should the mirror be placed?	8m	6m	3m	2m	D	eExam

	MCQ	The image of an object which is between the concave mirror's reflecting surface and its principal focus is	in front of the mirror erect real and diminished	behind the mirror inverted real and diminished	in front of the mirror erect virtual and enlarged	behind the mirror erect virtual and enlarged	D	eExam
	MCQ	The bending of a ray of light as it travels from one transparent medium to another is called --------	reflection	polarisation	refraction	diffraction	C	eExam
	MCQ	In the construction of an ammeter, a low resistance called resistance---------- is connected in parallel to a suitable galvanometer	multiplier	shunt	milliammeter	galvanometer	B	eExam
	MCQ	The unit of electrical energy expended per unit time is calledd ----------	joule	ampre	volt	watt	D	eExam
	MCQ	The name of the device which provides sliding contact with the potentiometer wire is called ----------	jockey	rheostat	galvanometer	meter bridge	A	eExam
	MCQ	The difference between the emf of a battery and the lost volts when discharging is called	electromotive force	terminal voltage	internal resistance	lost power	B	eExam
	MCQ	A device known as ---------- may be used for comparison of resistances	Wheatstone bridge	potentiometer	voltmeter	rheostat	A	eExam
	MCQ	A device which may be used to compare the potential differences of electric cells is called ----------	metre bridge	wheatstone bridge	rheostat	potentiometer	D	eExam
	MCQ	The term "lost volts" is used to describe ---------- of a cell	electromotive force	terminal potential difference	energy dissipated in the internal resistance	total current	C	eExam
	MCQ	The time rate of flow of charge across a unit cross-sectional area of a conductor defines	potential differenc	electromotive force	electrical resistance	electric cirrent	D	eExam
	MCQ	A 1 mΩ resistor is to be made from a 1-mm diameter wire of resistivity $2.8\time10{-8}.Find the length of the wire	4.2cm	3.6cm	2.8cm	1.4cm	C	eExam
	MCQ	Which of the following is correct?	Kirchoff's junction rule reprecents conservation of momentum	Kirchoff's loop rule represents conservation of charge	Kirchoff's loop rule represents conservation of energy	Kirchoff's junction rule represents conservation of energy	C	eExam
	MCQ	Two resistances of 2Ω each are connected in parallel and then connected in series to a 1Ω resistance. What is the equivalent resistance	1Ω	2Ω	3Ω	4Ω	B	eExam

☐	MCQ	A slide-wire potentiometer is balanced against 1.0182V standard cell at slide contact of 40.2cm. For an unknown emf the slide contact is 11.9cm.What is the emf of the unknown cell?	1.24V	0.24V	1.53V	0.30V	D	eExam
☐	MCQ	The null condition in potentiometer experiment shows that	the potential difference under test is zero	current is varying in the circuit	current is increasing in the circuit	potential differences are balanced	D	eExam
☐	MCQ	Which of the following is NOT correct about the experiment shown?	R1 and R2 are inseries	the same current flows through R1 and R2	the potential difference across R1 and R2 is the same	the equivalent resistance of R1 and R2 is the sum of the two resistances	C	eExam
☐	MCQ	The advantage of potentiometer over voltmeter in measurements of emf is that	the potentiometer wire is assumed to be uniform	it does not draw current from the circuit under test	the temperature of the wire must remain constant	faults may arise due to breaks or wrong connections in the circuit	B	eExam
☐	MCQ	Which of these is not a useful precaution in an electrical experiment?	key should be removed between readings to avoid battery run-down	jockeys can be dragged or pressed sufficiently hard on resistance wires	the connections in the circuit should be tight	readings should be recorded as soon as they are obtained	B	eExam
☐	MCQ	Which of the following is not true about a rheostat?	It is a constant current instrument	It is a variable resistor with moving contact	It is used for varying the current in a circuit	It is used for varying the resistance in a circuit	A	eExam
☐	MCQ	In an experiment, potential difference is plotted on the ordinate (vertical axis) and current on the abscissa(horizontal axis). The slope of the graph represents	potential difference	current remains constant	resistance	resistivity	C	eExam
☐	MCQ	In an experiment to determine the refractive index of glass using the triangular glass prism, the difference between the angle of deviation and the angle of emergence $$(d-e)^{o}$$ was plotted on the vertical axis against the angle of incidence $$i^{o}$$ on the horizontal axis. From which of the following can the value of the angle of the prism, A be found from the graph?	slope of graph	inverse of the slope of grap	intercepts on either axes	inverse of the intercept on either of the axes	C	eExam

☐								
☐	MCQ	In an experiment to determine the refractive index of glass using the triangular glass prism, the difference between the angle of deviation and the angle of emergence $$(d-e)^{o}$$ was plotted on the vertical axis against the angle of incidence $$i^{o}$$ on the horizontal axis. Which of the following correctly gives the sketch of the graph?	I	II	III	IV	D	eExam
☐	MCQ	In an experiment to determine the focal length of a convex lens using an optical bench, a graph of was plotted with the values of 1/v on the vertical ais and 1/u on the horizontal axis. Which of the following correctly gives the power of the lens?	slope of the grah	inverse of the slope of the graph	intercept on either of the axes	inverse of the intercept on either of the axes	C	eExam
☐	MCQ	Describe the image of candle positioned 20 cm in front of a concave mirror of focal length 3 0cm	virtual, inverted, 12cm behind mirror and magnified 3 times	real, inverted, 12cm in front of mirror and diminished 3 times	virtua,l erect, 60cm behind mirror and magnified 3 time	real, erect, 60cm in front of mirror and diminished 3 times	C	eExam
☐	MCQ	In an experiment to determine the focal length of a convex lens using an optical bench, the object pin was placed in front of the lens between F' and 2F'. Describe the image of the the pin as seen on the other side of the lens.	real and inverted	real and upright	virtual and erect	virtual and upright	A	eExam
☐	MCQ	In an experiment to demonstrate how the object and images distances vary for a convex mirror, a graph with 1/u on the ordinate and 1/v on the abscissa was plotted. Which of the following figures correctly gives the shape of the graph?	I	II	III	IV	B	eExam
☐	MCQ	In an experiment involving a spherical mirror, 1/v was plotted on the vertical axis and 1/u on the horizontal axis. What is the linear magnification?	slope of the graph	inverse of the the slope of the graph	intercept on the vertical axis	intercept on the horizontal axis	B	eExam
☐	MCQ	Which of the following is NOT true of experiments involving curved mirrors?	image distance is negative for for real image	object distance is positive	image distance is negative for virtual image	focal length is negative for convex mirrors	A	eExam
☐	MCQ	In an expreiment, derived values such as those obtained from four figure tables should be recorded to at least ------- decimal places	2	3	5	7	B	eExam

☐	MCQ	Which of the following is NOT applicable when plotting the graph of experimntal data?	Lines of bestfit should always be used to connect the plotted points	circled dots or crosses may be used to show plotted points	thin, sharp and continuous lines are acceptable	the scale must be chosen to make the graph occupy as small as possible of the graph page	D	eExam
☐	MCQ	An estimate of the refractive index of glass is 1.5. If the angle of incidence is $$30^{o}$$ the angle of refraction is	$$19^{o}$$	$$60^{o}$$	$$35^{o}$$	$$70^{o}$$	A	eExam
☐	MCQ	The critcal angle for total internal reflection at an air- water interface is approximately $$48^{o}$$. In which of the following situations will total internal reflection occur.	light incident in water at $$440^{o}$$	light incident in water at $55^{o}$$	light incident in air at $$40^{o}$$	light incident in air at $$55^{o}$$	B	eExam
☐	MCQ	In experimental observations involving rectangular glass blocks,	the angle of incidence is less than the angle of refraction in general	the angle of incidence is equal to the angle of refraction	the angle of incidence is greater than the angle refraction when light is moving out of the block	the angle of refraction is less than the angle of incidence when light is entering the block	D	eExam
☐	MCQ	Which of the following is NOT a precaution in optical experiments that involve glass blocks?	sharp, thin lines should be drawn to represent the rays	The glass block must be properly replaced on the traced outline	Optical pins must cluster together	Optical pins must be kept erect	C	eExam
☐	MCQ	In an optical experiment to determine the refractive index of a glass block, a student plotted the values of the sines of the angles of incidence, $$sini$$ on the vertical axis and the values of the sines of the angles of refraction, $$sinr$$ on the horizontal axis of his graph. Which of the following correctly gives the refractive index of the glass block from Snell's law using his graph?	intercept on the horizontal axis	intercept on the vertical axis	inverse of the slope of the graph	slope of the graph	D	eExam

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