Roll No:

INTERMEDIATE PART-II (12th CLASS)

(SESSION 2015-2017) **GROUP-I** PHYSICS PAPER-II (NEW SCHEME)

TIME ALLOWED: 2.40 Hours

SUBJECTIVE

MAXIMUM MARKS: 68

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. Attempt any eight parts. $8 \times 2 = 16$

- Give similarity and difference between the Coulomb's and Gravitational Forces. (i)
- What is Photoconductor? (ii)
- Why does Capacitance of a Capacitor increase when some dielectric material is (iii) inserted between the plates?
- How can you identify that which plate of a charged capacitor is negatively charged? (iv)
- How can you use a magnetic field to separate isotopes of chemical element? (v)
- At a given instant, a proton moves in the positive X-direction in a region where there is (vi) magnetic field in the negative Z-direction. What is the direction of the Magnetic Force?
- What is Dead Beat Galvanometer? (vii)
- Write the formula used to convert a Galvanometer into Voltmeter, (viii) Why the resistance of Voltmeter should high?
 - A light metallic ring is released from above into a vertical bar magnet (ix) with N – pole upside. Does the current flow clockwise or anticlockwise in the ring?



- A suspended magnet is oscillating freely, in a horizontal plane. The oscillations are strongly damped (x) when a metal plate is placed under the magnet. Explain why this occurs?
- What are the main causes of power loss in a transformer? (xi)
- (xii) Where the capacitor and the inductor store their energies?

3. Attempt any eight parts.

 $8 \times 2 = 16$

- (i) What is the difference between Conventional Current and Electronic Current?
- What is Wheatstone Bridge? Write its Principle. (ii)
- A potential difference is applied across the ends of a Copper wire. What is the effect on the (iii) drift velocity of free electrons by increasing the potential difference and decreasing the temperature of the wire?
- What is Frequency Modulation? (iv)
- How does doubling the frequency affect the reactance of an inductor and a capacitor? (v)
- (vi) F.M. radio waves provide a higher quality transmission of sound than A.M radio waves. Discus briefly.
- (vii) Define Valence Band and Conduction Band.
- (viii) Define Semiconductors in terms of Energy Bands.
- (ix) Define Hysteresis Loop.
- (x) Define Rectification and write names of its types.
- (xi) Why Ordinary Silicon Diodes do not emit light?
- Why is the base current in a transistor very small? (xii)

 $6 \times 2 = 12$

4.

Attempt any six parts.

(i)	When ultraviolet light falls on certain dyes, visible light is emitted. Why does this not happen when infrared light falls on these dyes?	
(ii)	Why don't we observe a Compton's effect with visible light?	
(iii)	If an electron and a proton have the same de Broglie wavelength, which particle has greater speed?	
(iv)	What are the advantages of lasers over ordinary light?	
(v)	What is CAT – Scanner?	
(vi)	What is a radioactive tracer? Describe one application in medicine.	
(vii)	ARREST AND THE CONTRACT OF THE	
	(a) 10 mGy dose to the hand or (b) 1 mGy dose to the entire body	
(viii)	For what purpose Alcohol or Bromine is mixed with principal gas in Geiger tube?	
(ix)	Is it possible that fusion of two small nuclei may occur without collision of extremely high e	energy
	SECTION-II	
NOTE: -		
5.(a)	State Gauss's Law. How can you apply the Gauss's Law to calculate Electric Intensity due to an infinite sheet of charge?	5
(b)	1.0×10^7 electrons pass through a conductor in $1.0 \mu s$. Find the current in ampere flowing	
	through the conductor. Electronic charge is $1.6 \times 10^{-19} C$.	3
6(a)	Coloulate toward on a comput compile and beautiful and in a self-section of the control of the c	-
6.(a)	Calculate torque on a current carrying coil placed in a uniform magnetic field.	5
(b)	A permanent magnetic D.C motor is run by a battery of 24 V. The coil of the motor has a resistance of 2Ω . It develops a back emf of 22.5 V when driving the load at normal speed. What is the current when motor just starts up? Also find the current when motor is	
	running at normal speed.	3
7.(a)	Define phase of A.C. Also discuss the behaviour of $R-C$ and $R-L$ series circuits for the A.C.	5
(b)	The current flowing into the base of a transistor is $100\mu A$. Find its collector current I_C ,	
(0)	573	
*	its emitter current I_E and the ratio $\frac{I_C}{I_E}$, if the value of current gain β is 100.	3
8.(a)	What is Compton Effect? Calculate Compton Wavelength.	5
(b)	A 1.0 metre long Copper wire is subjected to stretching force and its length increases by 20 cm. Calculate the tensile strain and the percent elongation which the wire undergoes.	3
9.(a)	What is Solid State Detector? Describe its principle, construction and working. $1 + 1 + 1 + 2$	= 5
(b)	Calculate the longest wavelength of radiation for the Paschen Series.	3

Pape	er Code	2017 (A	A) Roll No	
Num	ber: 4471	INTERMEDIATE P	ART-II (12th CLASS)	
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ГІМІ	E ALLOWED: 20	Minutes OBJECT		GROUP-I M MARKS: 17
think Cutti as giv BUBI	is correct, fill that ci ng or filling two or n en in objective type BLES are not filled.	rcle in front of that question nore circles will result in ze question paper and leave o	e question as A, B, C and D. Ton number. Use marker or performed in that question. Attended there blank. No credit will be this sheet of OBJECTIVE PART	n to fill the circles. empt as many questions awarded in case
Q.No (1)		le of charges and distance be	etween them is doubled, then co	ulomb's force will be:-
· · /	(A) Doubled	(B) Half	(C) Remains same	(D) One fourth
(2)	Coulomb/volt is cal	Carrier Contract		
(-)	(A) Farad	(B) Ampere	(C) Joule	(D) Henry
(2)	37.15	3 5 · · ·	$1.0 \mu s$, then the current is:-	(-),
(3)	(A) 2 <i>A</i>	(B) 1.6 A	(C) $2.6 \times 10^{-6} A$	(D) $1.6 \times 10^{-6} A$
(4)		resistance is given by (Rg):-		X5X 212.2012 123
	(A) $\frac{I - Ig}{I\sigma}$	(B) $\frac{I - Vg}{Ig}$	(C) $\frac{I}{I - I\sigma}$	(D) $\frac{Vg}{I - Ig}$
(5)	Ig A sensitive galvano	18	I - Ig	I - Ig
	(A) Unstable	(B) Stable	(C) Moderate	(D) Both B & C
(6)	NAME OF STREET	as practical role in the perfor	1392 Mr. (Copy 350 del-1912)	(-)
(0)	(A) Rectifier	(B) A.C Generator	(C) Capacitor	(D) Transformer
(7)	Marine and the same and the sam	notor is zero, it draws:-	(c) expanses	(5) 111115111111
	(A) Zero current	(B) Minimum current	(C) Maximum current	(D) Steady current
(8)	27 27	0 1	etween each pair of coil is:-	(-)
100	(A) 90°	(B) 270°	(C) 120°	(D) 180°
(9)	3 A 8 8 8 8 8 8	frequency signal is known as	(4 (A)	(2) 100
(-)	(A) Carrier Wave	(B) Fluctuated signal	(C) Modulated carrier sign	al (D) Modulation signal
(10)	Above the curie ten		(e) Modulined cultier sign	ar (D) Wodalation Signa
()	(A) Paramagnetic	(B) Diamagnetic	(C) Ferromagnetic	(D) Not effected
(11)		urrent gain of a Transistor is	ARROWS TO SO THE POLICY OF THE POLICY	(D) Not effected
3 15	(A) $\beta = \frac{I_B}{I_C}$			(D) $\beta = I_B - I_C$
(12)	C	orn its current ON and OFF i	n:-	
	(A) Micro seconds	(B) Mega seconds	(C) Nano seconds	(D) Milli seconds
(13)	Platinum wire become	mes white at a temperature of	ANTHON THE CHICAGO CONCORDING CONTRACTOR	
8 62	(A) 1600°C	(B) 1300°C	(C) 1100°C	(D) 900°C
(14)	Stefen – Boltzmann	2 2 2 2 2 2	XEXOPER E	(-)
	(A) $E = h f$	2	(C) $E = \sigma T^4$	(D) $\lambda \times T = \text{constant}$
(15)	Radius of first Bohr	7. 71	7-7	- Constant
(**)	(A) 0.053 nm	(B) 0.053 mm	(C) 0.053 μm	(D) 0.053 m
(16)	Number of isotopes	The second secon	(5) 5,555 µ III	(D) 0.005 III
(10)	(A) 2	(B) 3	(C) 4	(D) 1
(17)	12 10	nucleon is maximum for:-	(6) 4	(D) 1
12.07	(A) Platinum	(B) Iron	(C) Uranium	(D) Lead
	A			1407 40000

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INTERMEDIATE PART-II (12th CLASS)

Num	ber: 44/2	MIERWIE	DIATETARIT	iz Chilos)	
РНҮ	SICS PAPER-	II (NEW SC)	HEME) (SESSI	ON 2015-2017)	GROUP-I
TIM	E ALLOWED: 20	0 Minutes	OBJECTIVE		M MARKS: 17
think Cutti as giv	is correct, fill that ng or filling two or en in objective typ BLES are not filled	circle in front of more circles will e question paper l. Do not solve q	pjective type question a that question number. I result in zero mark in and leave others blank uestion on this sheet of	Use marker or po that question. Att c. No credit will be	en to fill the circles. empt as many questions e awarded in case
	(A) 0.053 nm	(B) 0.053 mm	n (C) 0.0	53 μm	(D) 0.053 m
(2)	Number of isotor	es of Neon gas ar	e:-		

BUB	BLES are not filled	I. Do not solve question	on this sheet of OBJECTIVE I	APER.				
Q.No (1)	Radius of first Bo	ohr's orbit is:-						
	(A) 0.053 nm	(B) 0.053 mm	(C) $0.053 \ \mu \text{m}$	(D) 0.053 m				
(2)	Number of isotop	bes of Neon gas are:-						
	(A) 2	(B) 3	(C) 4	(D) 1				
(3)	Binding energy per nucleon is maximum for:-							
	(A) Platinum	(B) Iron	(C) Uranium	(D) Lead				
(4)	If both the magnit	tude of charges and distance	ce between them is doubled, then	coulomb's force will be				
	(A) Doubled	(B) Half	(C) Remains same	(D) One fourth				
(5)	Coulomb/volt is o	called:-						
	(A) Farad	(B) Ampere	(C) Joule	(D) Henry				
(6)	If 1×10 ⁷ electron	ns pass through a conducto	or in $1.0 \mu s$, then the current is:-					
	(A) 2 A	(B) 1.6 A	(C) $2.6 \times 10^{-6} A$	(D) $1.6 \times 10^{-6} A$				
(7)	The value of shun	t resistance is given by (R_s)):-					
(6)	If 1×10^7 electron (A) $2A$	ns pass through a conducto (B) $1.6 A$	or in 1.0 μ s, then the current is:- (C) 2.6 × 10 ⁻⁶ A					

- (D) $\frac{Vg}{I Ig}$ (A) $\frac{I - Ig}{Ig}$ (B) $\frac{I - Vg}{Ig}$ (C) $\frac{I}{I - Ig}$ A sensitive galvanometer is:-(8)
- (A) Unstable (B) Stable (C) Moderate (D) Both B & C Mutual induction has practical role in the performance of:-(9)
- (A) Rectifier (B) A.C Generator (C) Capacitor (D) Transformer (10) When back emf in motor is zero, it draws:-
- (B) Minimum current (A) Zero current (C) Maximum current (D) Steady current (11) In three phase A.C generator, phase difference between each pair of coil is:-
- (A) 90° (B) 270° (C) 120° (D) 180°
- (12)In modulation, low frequency signal is known as:-(B) Fluctuated signal (A) Carrier Wave (C) Modulated carrier signal (D) Modulation signal
- (13) Above the curie temperature, Iron is:-(A) Paramagnetic (B) Diamagnetic (C) Ferromagnetic (D) Not effected
- An expression for current gain of a Transistor is given by:-
- (A) $\beta = \frac{I_B}{I_C}$ (B) $\beta = \frac{I_C}{I_B}$ (C) $\beta = I_B + I_C$ (D) $\beta = I_B - I_C$ (15) A photodiode can turn its current ON and OFF in:-
- (A) Micro seconds (B) Mega seconds (C) Nano seconds (D) Milli seconds (16) Platinum wire becomes white at a temperature of:-
- (A) 1600°C (B) 1300°C (C) 1100°C (D) 900°C
- Stefen Boltzmann law is given by:-(17)(A) E = h f (B) $E = mc^2$ (C) $E = \sigma T^4$ (D) $\lambda \times T = constant$

Pape	er Code			2017 (A)	Roll No	0
Num	ber:	4475	INTERMED	IATE PAI	RT-II (12th CLASS)	
PHY	SICS	PAPER-II	(NEW SCH	EME) (SESSION 2015-201'	7) GROUP-I
	ATTACK TOTAL CO.	OWED: 20 N		BJECTI		MUM MARKS: 17
think Cutting as giv	is correing or filen in ob BLES and	ect, fill that cir ling two or mo ojective type q re not filled.	cle in front of the ore circles will re uestion paper an	at question sult in zero d leave othe stion on this	number. Use marker of	Attempt as many questions I be awarded in case
	(A) Ze	ero current	(B) Minimum cu	ırrent	(C) Maximum current	(D) Steady current
(2)	In three	phase A.C gen	nerator, phase diffe	erence betwe	een each pair of coil is:-	190 m. 18. 10 100 m. 100 100 100 100 100 100 100 100 100 10
	(A) 9	50 (51-0	(B) 270°		(C) 120°	(D) 180°
(3)	In mod	dulation, low fr	equency signal is	known as:-	8-34 35-31	V-2 2-5
27.2%			(B) Fluctuated s		(C) Modulated carrier s	ignal (D) Modulation signa
(4)	Above	the curie temp	erature, Iron is:-			
	(A) Pa	aramagnetic	(B) Diamagnetic	:	(C) Ferromagnetic	(D) Not effected
(5)	An ex	pression for cu	rrent gain of a Tra	ansistor is gi	ven by:-	
			(B) $\beta = \frac{I_C}{I_B}$		827	(D) $\beta = I_B - I_C$
(6)			rn its current ON a	and OFF in:-	ta .	
	(A) M	icro seconds	(B) Mega second	ds	(C) Nano seconds	(D) Milli seconds
(7)	Platin	um wire becon	nes white at a temp	perature of:-		
	(A) 10	600° C	(B) 1300°C		(C) 1100°C	(D) 900°C
(8)	Stefen	- Boltzmann	law is given by:-			
	(A) E	= h f	(B) $E = mc^2$		(C) $E = \sigma T^4$	(D) $\lambda \times T = \text{constant}$
(9)	Radius	s of first Bohr'	s orbit is:-			
	(A) 0.0	053 nm	(B) 0.053 mm		(C) 0.053 μm	(D) 0.053 m
(10)	Numbe	er of isotopes of	of Neon gas are:-			
	(A) 2		(B) 3		(C) 4	(D) 1
(11)	Bindin	ig energy per n	ucleon is maximu	m for:-		8 %
	(A) Pl	atinum	(B) Iron		(C) Uranium	(D) Lead
(12)	If both	the magnitude	of charges and d	istance betw	een them is doubled, then	coulomb's force will be:-
	(A) Do	oubled	(B) Half		(C) Remains same	(D) One fourth
(13)	Coulor	mb/volt is calle	ed:-			
	(A) Fa	rad	(B) Ampere		(C) Joule	(D) Henry
(14)	If $1 \times$	10 ⁷ electrons p	oass through a con	ductor in 1.0	μs , then the current is:-	
(15)	(A) 2.		(B) 1.6 A	(n)	(C) $2.6 \times 10^{-6} A$	(D) $1.6 \times 10^{-6} A$
(15)		The state of the s	esistance is given (B) $\frac{I - Vg}{Ig}$	by (R_s) :-	(C) $\frac{I}{I-I\rho}$	(D) $\frac{Vg}{I - Ig}$
(16)		itive galvanon			1 - 48	I - Ig

(17) Mutual induction has practical role in the performance of:-(A) Rectifier

(B) Stable

(B) A.C Generator

(A) Unstable

(C) Capacitor

(C) Moderate

(D) Transformer

(D) Both B & C

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Pape	er Code	2017 (A		
Num	ther: 4477	INTERMEDIATE PA	ART-II (12 th CLASS)	
TIMI Note think Cutti as giv	E ALLOWED: 20 : You have four che is correct, fill that c ng or filling two or n yen in objective type	oices for each objective type ircle in front of that questio nore circles will result in ze question paper and leave of	(SESSION 2015-2017) IVE MAXIMUM question as A, B, C and D. To number. Use marker or per ro mark in that question. Attentions blank. No credit will be this sheet of OBJECTIVE PAP	n to fill the circles. mpt as many questions awarded in case
Q.No (1)	.1 The value of shunt:	resistance is given by (R_s) :-		
	(A) $\frac{I - Ig}{Ig}$	(B) $\frac{I - Vg}{Ig}$	(C) $\frac{I}{I - Ig}$	(D) $\frac{Vg}{I - Ig}$
(2)	A sensitive galvano		(O) N/ I	(D) D-4- D & C
	(A) Unstable	(B) Stable	(C) Moderate	(D) Both B & C
(3)		as practical role in the perform		(D) T
127022-01	(A) Rectifier	(B) A.C Generator	(C) Capacitor	(D) Transformer
(4)		notor is zero, it draws:-	(0) 11	m a 1
	(A) Zero current	(B) Minimum current	(C) Maximum current	(D) Steady current
(5)	In three phase A.C	generator, phase difference b		
	(A) 90°	(B) 270°	(C) 120°	(D) 180°
(6)	In modulation, low	frequency signal is known as	3:-	
	(A) Carrier Wave	(B) Fluctuated signal	(C) Modulated carrier signa	al (D) Modulation signa
(7)	Above the curie ter	nperature, Iron is:-		
	(A) Paramagnetic	(B) Diamagnetic	(C) Ferromagnetic	(D) Not effected
(8)	An expression for o	current gain of a Transistor is	given by:-	
	$(A) \beta = \frac{I_B}{I_C}$	$_{(B)} \beta = \frac{I_C}{I_B}$	(C) $\beta = I_B + I_C$	(D) $\beta = I_B - I_C$
(9)	A photodiode can t	urn its current ON and OFF i	n:-	
	(A) Micro seconds	(B) Mega seconds	(C) Nano seconds	(D) Milli seconds
(10)	Platinum wire beco	omes white at a temperature of	f:-	
	(A) 1600°C	(B) 1300°C	(C) 1100° C	(D) 900°C
(11)	Stefen – Boltzman	n law is given by:-		
	(A) $E = h f$	(B) $E = mc^2$	(C) $E = \sigma T^4$	(D) $\lambda \times T = \text{constant}$
(12)	Radius of first Boh	r's orbit is:-		
1/	(A) 0.053 nm	(B) 0.053 mm	(C) 0.053 μm	(D) 0.053 m
(13)		s of Neon gas are:-		And Anti-Anti-Anti-Anti-Anti-Anti-Anti-Anti-
(13)	(A) 2	(B) 3	(C) 4	(D) 1
(14)	WE CONTROL	r nucleon is maximum for:-	(0) 4	(D) 1
(14)	(A) Platinum	(B) Iron	(C) Uranium	(D) Lead
(15)			etween them is doubled, then co	
(10)	(A) Doubled	(B) Half	(C) Remains same	(D) One fourth
(16)	Coulomb/volt is ca	N. N	7=/	/ /
,	(A) Farad		(C) Joule	(D) Henry

If 1×10^7 electrons pass through a conductor in $1.0 \,\mu\,s$, then the current is:-

(B) 1.6 A

(17)

(A) 2A

(C) $2.6 \times 10^{-6} A$ (D) $1.6 \times 10^{-6} A$

Roll No:

INTERMEDIATE PART-II (12th CLASS)

PHYSICS PAPER-II (NEW SCHEME) (SESSION 2015-2017) GROUP-II

TIME ALLOWED: 2.40 Hours

SUBJECTIVE

MAXIMUM MARKS: 68

NOTE: - Write same question number and its part number on answer book, as given in the question paper.

SECTION-I

2. Attempt any eight parts.

 $8 \times 2 = 16$

- (i) Define Capacitance. Also define its unit.
- (ii) Write down any two properties of Electric Field Lines.
- (iii) Describe the force or forces on a positive point charge when placed between parallel plates
 - (a) With similar and equal charge
- (b) With opposite and equal charges
- (iv) Show that $1eV = 1.6 \times 10^{-19} J$
- (v) Define right hand rule for determining the direction of the magnetic field.
- (vi) Define AVO meter and Ohmmeter.
- (vii) Why does the picture on T.V screen become distorted when a magnet is brought near the screen?
- (viii) Why the resistance of an ammeter should be very low?
- (ix) Write down two methods to improve the efficiency of a transformer.
- (x) Show that $\mathcal{E}_{and} \frac{\Delta \phi}{\Delta t}$ have the same units.
- (xi) Can an electric motor be used to drive an electric generator with the output from generator being used to operate the motor?
- (xii) When an electric motor, such as an electric drill, is being used, does it also act as a generator? If so, what is the consequence of this?

Attempt any eight parts.

 $8 \times 2 = 16$

- What is Wheatstone bridge? Draw its circuit diagram.
- (ii) Why does the resistance of a conductor rise with temperature?
- (iii) What is meant by the tolerance? Find the resistance of the resistor with colours Red – Violet – Orange – Silver.
- (iv) What is Choke Coil?
- (v) What is meant by A.M and F.M?
- (vi) How does doubling the frequency affect the reactance of (a) an inductor (b) a capacitor?
- (vii) Distinguish between Crystalline and Polymeric Solids.
- (viii) What is meant by Para and Ferromagnetic substances? Give examples for each.
- (ix) Define Modulus of elasticity. Show that the units of Modulus of elasticity and stress are the same.
- (x) The inputs of a gate are 1 and 0. Identify the gate if its out put is (a) 0 (b) 1.
- (xi) How does the motion of an electron in a n type substance differ from the motion of holes in a p - type substance?
- (xii) Why a photo diode is operated in reverse biased state?

Attempt any six parts.

 $6 \times 2 = 12$

- (i) What is NAVSTAR navigation system?
- (ii) What are the measurements on which two observers in a relative motion will always agree upon?
- (iii) What are the advantages of electron microscope over an optical microscope?
- (iv) Define Ionization Energy and Ionization Potential.

(v)	What are the reasons of unstability of heavy nuclei?	
(vi)	Hydrogen atom contains one electron but its spectrum contains so many lines, exp	olain.
(vii)	Define mass deficit and binding energy.	
(viii)	What are Background Radiations? Write the name of its two sources.	
(ix)	What do we mean by the term Critical Mass?	
	SECTION-II	
NOTE: -	Attempt any three questions.	
5.(a)	Define Absolute Electric Potential. Derive its relation due to a point charge.	5
(b)	A Platinum wire has resistance of 10Ω at $0^{\circ}C$ and 20Ω at $273^{\circ}C$.	
	Find value of temperature coefficient of resistance of Platinum.	3
6.(a)	Derive an expression for the energy stored in an inductor.	5
(b)	What current should pass through a solenoid that is 0.5 m long with 10,000 turns of Copper wire so that it will have a magnetic field of 0.4 T?	3
7.(a)	What is RLC – parallel circuit? Find the value of the resonance frequency and also write its four properties.	+2+2=5
(b)	The current flowing into the base of a transistor is $100 \mu A$.	
	Find its emitter current I_E , if the value of current gain β is 100.	3
8.(a)	What is Doping? Explain formation of n – type and p – type semiconductors.	5
	A Sodium surface is illuminated with light of wavelength 300 nm. The work function of Sodium metal is $2.46eV$. Determine the cut off wavelength for Sodium.	on 3
9.(a)	What are Isotopes and how Isotopes are detected by Mass spectrograph?	1 + 4 = 5

Calculate the longest wavelength of radiation for the Paschen Series.

(b)

3

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Paper	Code

Roll No.

INTERMEDIATE PART-II (12th CLASS)

PHYSICS	PAPER-II	(NEW SCHEME	(SESSION	(2015-2017)	GROUP-II	
TIME ALL	OWED: 20 M	linutes	OBJECTIVE	MA	AXIMUM MARKS: 17	7

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions given in objective type question paper and leave others blank. No credit will be awarded in case

-			n on this sheet of OBJ	ECTIVE PAPER.
Q.No	.1			
(1)	The drum in a photo	copier is coated with	a layer of:-	
	(A) Aluminium	(B) Silver	(C) Gold	(D) Selenium
(2)	If a charged body is	moved against the ele	etric field it will gain:-	(A) Elastic Potential Energy
	(B) Kinetic Energy	(C) Gravitat	ional Energy	(D) Electric Potential Energy
(3)	For Ohmic device the	e graph between V as	nd I is:-	
	(A) A straight line	(B) Curve	(C) Hyperbola	(D) Parabola
(4)	A device used for de	tection of current is ca	alled:-	
	(A) Inductor	(B) Voltmeter	(C) Capacitor	(D) Galvanometer
(5)	(A) Repel each other	wires carrying currer (B) Attract each oth their individual magn	nt in opposite direction:- ner (C) Have no enetic effect	effect upon each other
(6)	is not present	in A.C generator.	(A) Armature (B) Mag	net (C) Slip-rings (D) Commutator
(7)	expressions fo	r mutual inductance i	s correct.	
	$(A) M = \frac{N_S \phi_S}{I_P}$	(B) $M = \frac{\phi_S}{N_S I_p}$	(C) $M = \frac{I_{\rho}}{N_S \phi_S}$	(D) $M = \frac{N_S}{I_P \phi_S}$
(8)	The output voltage o	f an A.C generator at	time $t = \frac{T}{4}$ is given by	/:-
	(A) $V = -V_o$	(B) $V = V_o$	(C) $V = 0$	(D) $V = \frac{V_o}{4}$
(9)			urrent and voltage are:-	
	(A) In phase	(B) Out of phase	(C) At right angle to	each other (D) At angle of 120"
(10)	The substance in whi strong magnetic field	ich atom cooperate will is called:-	ith each other in such a	way so as to exhibit a
	(A) Ferromagnetic	(B) Paramagnetic	(C) Diamagnetic	(D) Non-magnetic
(11)	Logic gates can contr	rol some physical par	ameters like:-	(A) Temperature Pressure

(B) Resistance, Inductance (C) Capacitance, Impedance (D) Current, Voltage

(12)The term invertor is used for:-(A) NOR gate (B) NAND gate (C) XNOR gate (D) NOT gate

The velocity at which relativistic length of a body reduces to half of its original length is:-(13)

(D) $\frac{\sqrt{3}}{2}C$

When the K.E max of photoelectron is zero, the frequency of incident photon is (14)threshold frequency:- (A) Less than (B) Greater than (C) Much greater (D) Equal to

The radiations emitted from hydrogen filled discharge tube can be analyzed into:-(15)

(A) Band Spectrum (B) Line Spectrum (C) Continuous Spectrum (D) Absorption Spectrum

In Beta – decay, _____ reaction takes place.

(A) ${}_{0}^{1}n \rightarrow {}_{1}^{1}H + {}_{1}^{0}e$ (B) ${}_{1}^{3}H \rightarrow {}_{0}^{1}n + {}_{-1}^{0}e$ (C) ${}_{0}^{1}n \rightarrow {}_{1}^{2}H + {}_{-1}^{0}e$ (16)(D) ${}_{0}^{1}n \rightarrow {}_{1}^{1}H + {}_{0}^{0}e$

The particles equal or greater in mass than that of protons is called:-(17)

(A) Baryons (B) Leptons (C) Mesons (D) Quarks

20(Obj)(\$\frac{1}{2}\$)-2017(A)-7000 (MULTAN)

Paper Code	2017 (A)	Roll No

4	47	4	Number:
	+ /	4	Number:

INTERMEDIATE PART-II (12th CLASS)

(SESSION 2015-2017) GROUP-II PHYSICS PAPER-II (NEW SCHEME) MAXIMUM MARKS: 17 OBJECTIVE TIME ALLOWED: 20 Minutes Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Attempt as many questions as given in objective type question paper and leave others blank. No credit will be awarded in case BUBBLES are not filled. Do not solve question on this sheet of OBJECTIVE PAPER. Q.No.1 The velocity at which relativistic length of a body reduces to half of its original length is:-(1) (C) $\frac{1}{\sqrt{2}}C$ (D) $\frac{\sqrt{3}}{2}C$ (B) $\frac{3}{2}C$ When the K.E max of photoelectron is zero, the frequency of incident photon is _ (2) threshold frequency:- (A) Less than (B) Greater than (C) Much greater (D) Equal to The radiations emitted from hydrogen filled discharge tube can be analyzed into:-(3) (A) Band Spectrum (B) Line Spectrum (C) Continuous Spectrum (D) Absorption Spectrum In Beta – decay, _____ reaction takes place. (4) (A) ${}_{0}^{1}n \rightarrow {}_{1}^{1}H + {}_{0}^{0}e$ (B) ${}_{1}^{3}H \rightarrow {}_{0}^{1}n + {}_{0}^{1}e$ (C) ${}_{0}^{1}n \rightarrow {}_{1}^{2}H + {}_{0}^{0}e$ (D) ${}_{0}^{1}n \rightarrow {}_{1}^{1}H + {}_{0}^{0}e$ The particles equal or greater in mass than that of protons is called:-(5) (B) Leptons (C) Mesons (D) Quarks (A) Baryons The drum in a photocopier is coated with a layer of:-(6) (C) Gold (A) Aluminium (B) Silver (D) Selenium If a charged body is moved against the electric field it will gain:-(A) Elastic Potential Energy (7) (C) Gravitational Energy (D) Electric Potential Energy (B) Kinetic Energy For Ohmic device the graph between V and I is:-(8) (A) A straight line (B) Curve (C) Hyperbola (D) Parabola A device used for detection of current is called:-(9) (B) Voltmeter (A) Inductor (C) Capacitor (D) Galvanometer Two parallel straight wires carrying current in opposite direction:-(10)(A) Repel each other (B) Attract each other (C) Have no effect upon each other (D) They cancel out their individual magnetic effect (11)is not present in A.C generator. (A) Armature (B) Magnet (C) Slip-rings (D) Commutator _____ expressions for mutual inductance is correct. (12)(A) $M = \frac{N_S \phi_S}{I_P}$ (B) $M = \frac{\phi_S}{N_S I_P}$ (C) $M = \frac{I_P}{N_S \phi_S}$ (D) $M = \frac{N_S}{I_P \phi_S}$ The output voltage of an A.C generator at time $t = \frac{T}{4}$ is given by:-(13)(C) V = 0 (D) $V = \frac{V_o}{A}$ (A) $V = -V_0$ (B) $V = V_0$ The expression P = VI holds only when current and voltage are:-(14)(C) At right angle to each other (D) At angle of 120° (A) In phase (B) Out of phase The substance in which atom cooperate with each other in such a way so as to exhibit a (15)strong magnetic field is called:-

(A) Ferromagnetic (B) Paramagnetic

(B) Resistance, Inductance

The term invertor is used for:-

Logic gates can control some physical parameters like:-

(16)

(17)

(A) NOR gate (B) NAND gate (C) XNOR gate (D) NOT gate 20(Obj)(2017(A)-7000 (MULTAN)

(C) Capacitance, Impedance (D) Current, Voltage

(D) Non-magnetic

(A) Temperature, Pressure

(C) Diamagnetic

Pape	er Code		201	7 (A)	Roll No
Nun	nber:	4476	INTERMEDIAT	E PART-II (12 th C	CLASS)
Note think Cutti as giv	E ALL : You is corr ing or fiven in o	OWED: 20 Maye four choin ect, fill that cirelling two or many bjective type of the control of th	Minutes ces for each objective rcle in front of that qu ore circles will result	objective type question as A, B nestion number. Use n in zero mark in that q we others blank. No	MAXIMUM MARKS: 17 , C and D. The choice which you marker or pen to fill the circles. question. Attempt as many questions credit will be awarded in case ECTIVE PAPER.
Q.No	.1				
(1)		expressions fo	or mutual inductance is	correct.	
	(A) A	$M = \frac{N_S \phi_S}{I_P}$	(B) $M = \frac{\phi_S}{N_S I_P}$	(C) $M = \frac{I_p}{N_S \phi_S}$	(D) $M = \frac{N_S}{I_P \phi_S}$
(2)	The ou	tput voltage of	an A.C generator at tin	ne $t = \frac{T}{4}$ is given by:	
	(A)	$V = -V_{\alpha}$	(B) $V = V_o$	(C) $V = 0$	(D) $V = \frac{V_o}{\Lambda}$
(3)			VI holds only when cu		
	(A) I	n phase	(B) Out of phase	(C) At right angle to	each other (D) At angle of 120°
(4)	The su		ch atom cooperate with		
	(A) I	Ferromagnetic	(B) Paramagnetic	(C) Diamagnetic	(D) Non-magnetic
(5)	Logic	gates can cont	rol some physical para	meters like:-	(A) Temperature, Pressure
	(B) R	esistance, Indu	ctance (C) C	apacitance, Impedance	(D) Current, Voltage
(6)	The to	erm invertor is	used for:- (A) NOR	gate (B) NAND gate	e (C) XNOR gate (D) NOT gate
(7)	The v	elocity at which	h relativistic length of	a body reduces to half	of its original length is:-
	(A)	$\frac{1}{2}C$	(B) $\frac{3}{2}C$	(C) $\frac{1}{\sqrt{2}}C$	(D) $\frac{\sqrt{3}}{2}C$
(8)	When	the K.E max on the hold frequency:	of photoelectron is zero (A) Less than (B)	, the frequency of incide Greater than (C) M	lent photon is that of luch greater (D) Equal to
(9)	The r	adiations emitte	ed from hydrogen filled	l discharge tube can be	analyzed into:-
	(A) E	Band Spectrum	(B) Line Spectrum	(C) Continuous Spec	trum (D) Absorption Spectrum
(10)	In Be (A) 10	$ta - decay, \underline{\qquad}$ $n \to {}_{1}^{1}H + {}_{1}^{0}e$	reaction takes place (B) ${}_{1}^{3}H \rightarrow {}_{0}^{1}n + {}_{-1}^{0}e$	(C) ${}_{0}^{1}n \rightarrow {}_{1}^{2}H +$	$_{-1}^{0}e$ (D) $_{0}^{1}n \rightarrow _{1}^{1}H + _{-1}^{0}e$
(11)	The p	particles equal o	or greater in mass than	that of protons is called	i:-
	(A) 1	Baryons	(B) Leptons	(C) Mesons	(D) Quarks
(12)	The o	lrum in a photo	copier is coated with a	layer of:-	
	(A) A	Muminium	(B) Silver	(C) Gold	(D) Selenium
(13)	Ifac	harged body is	moved against the elec	tric field it will gain:-	(A) Elastic Potential Energy
	(B) K	Cinetic Energy	(C) Gravitati	onal Energy	(D) Electric Potential Energy
(14)	For C	hmic device th	e graph between V an	d I is:-	
	(A) A	A straight line	(B) Curve	(C) Hyperbola	(D) Parabola
(15)	A de	vice used for de	etection of current is ca	lled:-	
	(A)	Inductor	(B) Voltmeter	(C) Capacitor	(D) Galvanometer
(16)	(A) I	Repel each other	t wires carrying current r (B) Attract each other their individual magn	er (C) Have no	effect upon each other
(17)		is not present	in A.C generator (A) Armature (B) Mag	met (C) Slip-rings (D) Commutator

20(Obj)(\$\frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{2} -2017(A)-7000 (MULTAN)

	1			
Paper	Code		017 (A)	Roll No
Numl	per: 4478	INTERMEDIA	TE PART-II (12th	CLASS)
Note: think in Cutting	ALLOWED: 20 M You have four choics is correct, fill that cit ig or filling two or men in objective type of	Minutes ices for each objective rele in front of that core circles will result question paper and l	OBJECTIVE ye type question as A question number. Us It in zero mark in tha	MAXIMUM MARKS: 17 , B, C and D. The choice which you se marker or pen to fill the circles. At question. Attempt as many question to credit will be awarded in case BJECTIVE PAPER.
Q.No.	1			
(1)	(A) Repel each other	t wires carrying curre r (B) Attract each ot their individual mag		n:- no effect upon each other
(2)	is not present	in A.C generator.	(A) Armature (B) M	agnet (C) Slip-rings (D) Commutator
(3)		or mutual inductance		
	$(A) M = \frac{N_S \phi_S}{I_P}$	(B) $M = \frac{\phi_S}{N_S I_P}$	(C) $M = \frac{I_p}{N_S \phi_S}$	(D) $M = \frac{N_S}{I_P \phi_S}$
(4)	The output voltage of	of an A.C generator at	time $t = \frac{T}{4}$ is given	i by:-
	(A) $V = -V_o$	(B) $V = V_n$	(C) $V = 0$	(D) $V = \frac{V_o}{4}$
(5)			current and voltage ar	000000
	(A) In phase	(B) Out of phase	(C) At right angle	to each other (D) At angle of 120°
(6)	13 30 57K	ich atom cooperate w		a way so as to exhibit a
	(A) Ferromagnetic	(B) Paramagnetic	(C) Diamagnetic	(D) Non-magnetic
(7)	Logic gates can con	trol some physical pa	arameters like:-	(A) Temperature, Pressure
	(B) Resistance, Indu	ictance (C)	Capacitance, Impedar	nce (D) Current, Voltage
(8)	The term invertor is	s used for:- (A) N	OR gate (B) NAND	gate (C) XNOR gate (D) NOT gate
(9)				alf of its original length is:-
		The state of the s	(C) $\frac{1}{\sqrt{2}}C$	
(10)				ncident photon is that of) Much greater (D) Equal to
(11)	The radiations emit	ted from hydrogen fil	led discharge tube car	be analyzed into:-
	(A) Band Spectrum		(C) Continuous S	pectrum (D) Absorption Spectrum
(12)	In Beta – decay, (A) ${}_{0}^{1}n \rightarrow {}_{1}^{1}H + {}_{0}^{0}e$	reaction takes pla (B) ${}_{1}^{3}H \rightarrow {}_{0}^{1}n + {}_{0}$	ice. $_{-1}^{0}e$ (C) $_{0}^{1}n \rightarrow _{1}^{2}H$	$+ {}^{0}_{-1}e$ (D) ${}^{1}_{0}n \rightarrow {}^{1}_{1}H + {}^{0}_{-1}e$
(13)	The particles equal	or greater in mass tha	in that of protons is ca	lled:-
	(A) Baryons	(B) Leptons	(C) Mesons	(D) Quarks
(14)	The drum in a photo	ocopier is coated with	a layer of:-	
	(A) Aluminium	(B) Silver	(C) Gold	(D) Selenium
(15)	If a charged body is	moved against the el	lectric field it will gain	n:- (A) Elastic Potential Energy
	(B) Kinetic Energy	(C) Gravita	ational Energy	(D) Electric Potential Energy
(16)	For Ohmic device t	the graph between V	and I is:-	
	(A) A straight line	(B) Curve	(C) Hyperbola	(D) Parabola
(17)	A device used for de	etection of current is	called:-	
	(A) Inductor	(B) Voltmeter	(C) Capacitor	(D) Galvanometer

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION,

OBJECTIVE KEY FOR INTER (PARTA/II) Annual Examination, 2017.

Dhuxics

Name of Subject

Gro	up: 1	st (N	160)	
Q. Nos.	Paper	Paper	Paper	Paper Code
2000000	4471	4473	4475	4477
1.	С	Α	C	D
2.	Α	B	С	Α
3.	D	B	D	D
4.	D	С	Α	C
5.	D A	B C A	В	C C D
6.	D C C	D	C	D
7.	С	D	Α	Α
8.	С	Α	C	В
9.	D	D	Α	С
10.	Α	C	B	A C
11.	В	C C		С
12.	С	D	B	Α
13.	A	A	. A	В
14.	C		D	В
15.	A	B C	D	С
16.	A B	Α	Α	Α
17.	В	С	D	D
18.	,	,	,	
19.	1	1	/	1
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			100000000000000000000000000000000000000	and the second

Grou	p: 2nd			
Q. Nos.	Paper Code	Paper Code	Paper Code	Paper Code
	4472	4474	4476	4478
1.	D	D	Α	A
2.	D	D	В	D
3.	Α	В	Α	Α
4.	D	D	Α	B
5.	A	Α	A	A
6.	D	D	D	Α
7.	A	D	D	Α
8.	В	Α	D	D
9.	Α	D	B	D
10.	Α	A	D	D
11.	Α	D	Α	B
12.	D	A	D	D
13.	D	B	D	A
14.	D	Α	A	D
15.	В	Α	D	D
16.	D	A	A	A
17.	Α	D	D	D
18.	,	,	,	1
19.	1	/	/	
20.	/ /	/ /	1	1.

Session 2015 - 2017

سر فیفیکیٹ بابت تھیج سوالیہ پر چا مار کنگ Key

ہم نے منمون Phy 8i وی اید ہونے نید مروش آ کی سلیس کے بین مطابق اور کا کان 2017 کا سوالیہ پرچہ میں کوئی استون کی کوئی الدواور الکرین کی منظر عمیق چیک کرلیا ہے یہ پر پہلیس کے بین مطابق Set کیا گیا ہے۔ اس موالیہ پرچہ مس کی تم کی کوئی فلطی نہ ہے۔ ہم نے موالیہ پرچہ کا ادواور اگریزی Version بھی چیک کرلیا ہے یہ اور کردواور اگریزی Version آپس میں مطابق سے کہ مطابق بھی ہیں منظر نہ ہے۔ کے مطابق بھی ہیں میزاس پرچہ کی جانب بھی تقد کی جائی ہے کہ یہ کی درست بنائی گئی ہے۔ اس میں بھی کی تم کی کوئی فلطی نہ ہے۔ کے مطابق بھی ہیں میں اور کی جانب سے تیارہ کردہ ہدایات وصول کر کے ان کا بنور مطالعہ کرلیا ہے اور ان کی روشنی میں میں کا بھی ہیں کہ وہدایات وصول کر کے ان کا بنور مطالعہ کرلیا ہے اور ان کی روشنی میں کو کہدایات وصول کر کے ان کا بنور مطالعہ کرلیا ہے اور ان کی روشنی میں کو کہدایات وصول کر کے ان کا بنور مطالعہ کرلیا ہے اور ان کی روشنی میں کو کہدایات وصول کر کے ان کا بنور مطالعہ کرلیا ہے اور ان کی روشنی میں کو کہدایات وصول کر کے ان کا بنور مطالعہ کرلیا ہے اور ان کی روشنی میں کو کہدایات کی کہدایات کو کہدایات کی کہدایات کی کہدایات کی کہدایات کی کہدایات کے کہدایات کی کہدایات کی کہدایات کے کہدایات کی کہدایات کی کہدایات کی کہدایات کی کہدایات کی کہدایات کے کہدایات کی کہدایات کی کہدایات کے کہدایات کی کہدایات کی کہدایات کی کہدایات کی کہدایات کی کہدایات کی کہدایات کے کہدایات کی کہدایات کی کہدایات کے کہدایات کے کہدایات کی کہدایات کے کہدایات کے کہدایات کے کہدایات کے کہدایات کے کہدایات کی کہدایات کے کہدایات کی کہدایات کے کہدایات کی کہدایات کی کہدایات کے کہدایات کے کہدایات کے کہدایات کے کہدایات کے کہدا

شانوی و اعلی ثانوی تعلیمی بورد، ملتان مورد: 17-5-16 منون: Physics پچ: 11 گروپ: 1 جزل مدایات برائد الافعی انوکیم (مارکگ کیم)

انٹر پارٹ فرمنے اسکنڈ سالاند اسٹی امتحان 2017ء

P.I

Sr#	Code	Error Indicated	Sr#	Code	Error Indicated
1.	UN	Un-Necessary	8.	SP	Spelling Error
2.	Ir	Irrelevant	9.	P	Punctuation
3.	IN	Incomplete	10.	Wo	Wrong word error
4.	EX	Extra	11.	Wt	Wrong Tense
5.	Rp	Re-Produced	12.	Wf	Wrong Form
6.	1	Insufficient	13.	OA	Over Attempt
7.	Gr	Grammar Error			

اہم نوٹ: ہرسوال "Full Award" ہے کم نمبرلگانے کی صورت میں وجہضر ور کھیں۔ SECTION – I

For Question. No 2,3 and 4, 9 f idea/ Reason is given then award the Maximum Marks.

- Q2 (i) Similarity of Fe and Fg (oi) mark + Difference (oimark)
 - (ii) Definition (02) marks
 - (iii) Brief Explaination (02) Marks
 - (iv) Brief Explaination (02) Marks
 - (V) Explanation with formula &=mv (02 monte)
 - (Vi) Reason with formula F= &(vxB)(02 mans)
 - (Vii) Definition (02) marks

(Viii) While Formula $R_h = \frac{V}{Ig} - R_g (olmark) +$

Reason (oimark)

- (ix) Lenz law (01) marks + clockwise (01 mark)
- (X) Brief Explaination (02 marks)
- (Xi) Any Two Causes of Power loss (02 marks)
- (Xii) Capacitor Store Energy Electric field (mark)

SAM!

100

3