

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#12
T- Marks - 40	Subject: Physics	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. SI unit of energy density of electric field is .

- a** J/C **B** J/V **c** J/m³ **d** J/F³

2. The term RC has same unit as that of

- a** Potential **B** Capacitance **c** Energy **d** Time

3. The unit of electric field intensity other than N/C is

- a** V/A **B** V/m **c** V/C **d** N/V

4. The force on an electron in a field of 1.8×10^8 N/C

- a** 2.6×10^{-8} N **B** 2.88×10^{-11} N **c** 2.6×10^{-19} N **d** 1.6×10^{-27} N

5. If potential difference between plates of parallel plate capacitor is doubled then energy stored in it will

- a** Two time **B** Four time **c** Eight time **d** Remains same

6. The value of maximum electric flux is obtained when angle between E and A.

- a** 90° **B** 0° **c** 270° **d** 180°

7. If the distance between two point charges is doubled then force between them will be comes

- a** Half **B** Double **c** Four times **d** One fourth

8. SI unit of coulomb constant

- a** Nm²C² **B** C²N²m⁻² **c** N⁻¹C²m² **d** Nm²C²

9. Sec/ohm is equal to.

- a** Farad **B** Coulomb **c** Joule **d** Ampere

10. Millikan and Fleter could find the charge on oil droplets in.

- a** Thermal equilibrium **B** Electricalequilibrium **c** Mechanical equilibrium **d** Unstable equilibrium

Q # 2

Short Questions

10 x 2 = 20

- Define electrostatic?
- What are the electric field line write its properties?
- Write four differences b/w electric and gravitational force?
- Is E necessary zero inside a charged rubber balloon if the balloon is spherical.
- How can you identify that which plate of capacitor is positively charged.
- Write application of Gauss law.
- Prove that 1 Newton /1columb =1 Volt/1 meter
- What is ev?
- Prove that 1.6×10^{-19} J.
- Define electric field.

Q # 3	Long Questions	2 X 5 = 10
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- 1 State and prove Guess's law .
- 2 Compare magnitude of electrical and gravitational force exerted on an object
Mass=10.0g charged =20.0 μ c by an identical object that is placed 10.0cm from the first.

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#13
T- Marks - 40	Subject: Physics	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. Lenz law is actually the law of conservation of

a Charge	B Mass	c Energy	d Momentum
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2. Which convert the mechanical energy into electric energy

a Transformer	B Galvanometer	c Ac generator	d DC motor
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3. An inductor may store energy in its

a Electric field	B Magnetic field	c Coils	d Neighboring circuit
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4. The ratio of average induced emf to rate of change of current in a coil is called .

a Self inductance	B Mutual inductance	c Self inductance	d Mutual induction
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5. One henry is equal to

a VSA	B VSA ²	c VSA ⁻¹	d None
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6. The frequency of AC in Pakistan is

a 30Hz	B 40Hz	c 50Hz	d 100Hz
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7. Which one is correct relation for transformer is.

a $N_s/N_p = V_p/V_s$	B $I_s/I_p = V_s/V_p$	c $N_s/N_p = I_p/I_s$	d $I_s/I_p = V_p/V_s$
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8. Maximum value of induced emf in the coil of AC generator is.

a NBA/W	B NWAB	c BA	d NIAB
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9. The power loss in transformer due to.

a Eddy current	B Magnetic field	c Hysteresis	d Both A and C
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10. Energy density of inductor is

a $B^2/2\mu^0$	B $\mu_0/2B$	c $M/2B^2$	d $B^2/2\mu_0$
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Q # 2	Short Questions	10 x 2 = 20
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1. A plane conducting loop is located in a uniform magnetic field that is directed along the x-axis for what orientation of the loop is the flux a maximum? For what orientation is the flux minimum?

- Describe the change in the magnetic field inside a solenoid carrying a steady current..if (a) the length of the solenoid is doubled but the number of turns remains the same and (b) the number of turn is doubled but the length remain the same?
- Its given instant proton moves in the positive x direction in a region where there is magnetic field in the negative z direction what is the direction of the magnetic force .will the proton continue to move in the positive x direction .explain.
- If a charged particle moves in a straight line through some region of space.can you say that the magnetic field in the region is zero?
- How can you use a magnetic field to separate isotope of chemical element?
- What is a voltmeter/multi meter?
- Write a note cathode ray oscilloscope?
- What is magnetic flux and flux density?
- State ampere law and determination of flux density ?
- Write the use of CRO?

Q # 3

Long Questions

2 X 5 = 10

- Find the value of the magnetic field that will cause a maximum force of 7.0×10^{-3} on a 20.0cm straight wire carrying current of 10.0A.
- Calculate the formula for force on moving charge placed in a magnetic field.

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2 nd Year	Ch#14	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Physics	Time: 45 - M	Obtained Marks:
Objective Type			
Q#1	Encircle the Correct Option	10X1=10	

1. Unit of magnetic flux is.

- | | | | | | | | |
|---|-------|---|-------|---|-------|---|-----------------------|
| a | Weber | b | Gauss | c | Tesla | d | Amper /m ² |
|---|-------|---|-------|---|-------|---|-----------------------|

2. High resistance R_H that connected in series with galvanometer of resistance R_{gtc} convert into volt meter of range V volts is given by

- | | | | | | | | |
|---|---------------|---|-------------|---|-----------------|---|---------------|
| a | $V/I_g + R_g$ | b | $V/I_g R_g$ | c | $V/I_g + I R_g$ | d | None of these |
|---|---------------|---|-------------|---|-----------------|---|---------------|

3. Galvanometer can be made more sensitive if the value of factor C/NAB is.

- | | | | | | | | |
|---|------------|---|------------|---|------------------|---|---------------|
| a | Made large | b | Made small | c | Remains constant | d | None of these |
|---|------------|---|------------|---|------------------|---|---------------|

4. In order to increase the range of volt meter the series resistance is.

- | | | | | | | | |
|---|---------------|---|-----------|---|-----------|---|-----------|
| a | Kept constant | b | Decreased | c | Increased | d | Made zero |
|---|---------------|---|-----------|---|-----------|---|-----------|

5. Magnetic flux through an area A is.

- | | | | | | | | |
|---|--------------------|---|---------------------|---|--------------------|---|---------------------|
| a | $\Phi = E \cdot A$ | b | $\Phi = E \times A$ | c | $\Phi = B \cdot A$ | d | $\Phi = B \times A$ |
|---|--------------------|---|---------------------|---|--------------------|---|---------------------|

6. Which of the following is likely to have least resistance .

- | | | | | | | | |
|---|---------|---|--------------|---|------|---|-----------|
| a | Ammeter | b | Galvanometer | c | VTVM | d | Voltmeter |
|---|---------|---|--------------|---|------|---|-----------|

7. Voltmeter is always connected in circuit .

- | | | | | | | | |
|---|----------|---|--------|---|--------------|---|------|
| a | Parallel | b | Series | c | Both A and B | d | None |
|---|----------|---|--------|---|--------------|---|------|

8. 1 Tesla is equal to.

- | | | | | | | | |
|---|------------------------------------|---|-------------------------------|---|-----------------------|---|------------------|
| a | $1 \text{ NA}^{-1} \text{ m}^{-1}$ | b | $1 \text{ NA}^{-1} \text{ m}$ | c | 1 NA m^{-1} | d | 1 NA m |
|---|------------------------------------|---|-------------------------------|---|-----------------------|---|------------------|

9. Magnetic force is simply a.

a Deflecting force	b Reflecting force	c Restoring force	d Gravitational force
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10. Write hand palm rule is rule is used to find the direction .of

a Current	b Emf	c Force	d Temperature
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Q # 2

Short Questions

10 x 2 = 20

1. A place conducting loop is located in uniform magnetic field that is directed along the x axis for what orientation of the loop is flux a maximum? For what orientation is the flux minimum.
2. Describe the change in the magnetic field inside a solenoid carrying a steady current I if
 - (a) the length of solenoid is doubled , but the number of turns remains the same and
 - (b) the number of turn is doubled but the length remains the same.
3. At a given instance proton moves in the positive x direction in a region where there is magnetic field in the negative z direction .what is a direction of the magnetic force will the proton continue move in the positive x direction explain.
4. If a charge particle moves in a straight line through some region of space. Can you say that the magnetic field in the region is zero.
5. Who can you use the magnetic field to separate isotopes of chemical element?
6. What is Avo meter by multi meter ?
7. Write a note kethod ray ocilloscope ?
8. What is magnetic flux and flux density?
9. State ampere law and determination of flux density?
10. Write the we of CRO?

Q # 3

Long Questions

2 x 5 = 10

1. Find the value of magnetic field that will cause maximum force of $7.0 \times 10^{-3} \text{N}$. on a 20.cm straight wire carrying current of 10.0A.
- 2 Calculate the formula for force on moving charge placed in a magnetic field.

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#15	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Physics	Time: 45 - M	Obtained Marks:
Objective Type			
Q#1	Encircle the Correct Option		10X1=10

1. If inductor has N turns of a coil and Φ is magnetic flux through each turn when current I is flowing in it, then self inductance is given by.

a $1/N \Phi$	b $N \Phi/I$	c N/ Φ	d Φ/Nl
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2. The value of induced in armature of N turns and area A rotating in magnetic field B with frequency f is given by.

a $2\pi f N I A B$	b $2\pi f N^2 A B$	c $N I f A B$	d $4\pi f^2 N A B$
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3. In choke of inductance L and resistance R.

a L is large and R is small	b L is small and R is large	c Both R and L are large	d Both R and L are small
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4. Inductance is measured in.

a Volt	b Ampere	c Herry	d Ohm
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5. A 50 mH coil carries current of 24 the energy stored in its magnetic field is.

a 0.5j	b 0.1j	c 10j	d 100j
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6. Energy stored in inductor is given by.

a $\frac{1}{2}cV^2$	b $\frac{1}{2}LI^2$	c $\frac{1}{2}BL^2$	d None
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7. An deal transformer obey the law of conservation of .

a Flux	b Momentum	c Energy	d Charge
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8. The device which convert electrical energy into mechanical energy is called .

a Transformer	b Galvanometer	c AC Genitor	d DC motor
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9. The core of transformer is made an iron because of .

a High melting point	b Good conductor of electricity	c Good conductor of Heat	d Magnetic material
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10. Plat num wire becomes yellow at temperature?lenz law the actually the conservation of .

a Charge	b Mass	c Energy	d Momentum
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Q # 2

Short Questions

10 x 2 = 20

1. What is Motional emf?
2. State and explain Farady law.
3. Does the induesedemf always act to decrease the magnit flux through acircuit?
4. Show that \sum and $\Delta \phi / \Delta t$ hare some units?
5. What is direction of the comment through resistor R when switch s is (a) closed (b) open.
6. Does the induced emf always act to decrease the magnetic flux through circuit ?
7. What is back emf motor?
8. What is self induction ?
9. What is difference b/w induced current and induced emf?
10. Why the core of transformer is made an iron?

Q # 3

Long Questions

2 X 5 = 10

- 1 State and explain lenz law?
- 2 Solenoid has 250 turns and itself inductance is 2.4mN.what is the flux through each turn .when the current is 2A?what is the induced emf when the current changes at $20AS^{-1}$

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#16	مثبت سوچیں، خوش رہیں
T- Marks - 40	Subject: Physics	Time: 45 - M	Obtained Marks:
Objective Type			

Q#1	Encircle the Correct Option	10X1=10
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1. The power dissipated in AC circuit is given by $P = I_{rms} V_{rms} \cos \theta$ in relation $\cos \theta$ is called.			
a	Phase factor	b	Gain factor
c	Loos factor	d	Power factor
2. In a chok of induction L and resistance are.			
a	L is Large and R is small	b	L is small and R is large
c	Both L and R are large	d	Both L and R is small
3. Power dissipated in pure inductor and pure capacitor is .			
a	Large	b	Small
c	Infinitive	d	Zero
4. In three phase AC supply the phase difference between each pair of coil is			
a	45°	b	120°
c	90°	d	180°
5. Impedance can be impedance Z can be express by.			
a	$Z = V_{rms} / I_{rms}$	b	$Z = V_{rms} \times I_{rms}$
c	$Z = I$	d	None
6. A sinusoidal current has rms value of 10A its maximum value is.			
a	7.7A	b	10A
c	14.14A	d	20 A
7. The average value of AC over one period with peak value V_0 is.			
a	$V_0/2$	b	V_0
c	$2V_0$	d	Zero
8. The rms value of AC supply is 220 V its peak value V_0 is.			
a	150v	b	311v
c	110v	d	440v
9. In inductor the voltage .			
a	Lead the current 90°	b	Legs current by 90°
c	In is phase with current	d	Changes independently
10. High frequency radio wave is called			
a	Fluctuated	b	Career wave
c	Mater wave	d	Emerge wave

Q # 2	Short Questions	10 x 2 = 20
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- Why is AC widely used?
- What is the basic element of AC and DC currents.
- What is impedance write its formula and unit.
- Write a note RC.
- What is power in AC current?
- How many times per second will an in increscent lamp reach maximum brillance which connected to a 50 HZ source?
- How does doubling the frequency effect the reactance of (a)an inductor (b)a capacitor
- What three phase AC supply?
- Write a properties of parallel resonant current?
- Write a properties of series resonant circuit?

Q # 3	Long Questions	2 X 5 = 10
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- 1 Explain principal generation transmission and reception of electromagnetism wave?
- 2 A 10mH 20Ω coil is connected acion 240v and $180/\wedge$ H sources . how much aware does it dissipate?

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#17
T- Marks - 40	Subject: Physics	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. Number of atoms in domains of microscopic size of teromagnetic substance are.

a 10^4-10^6	b 10^6-10^8	c $10^{12}-10^{16}$	d $10^{21}-10^{23}$
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2. At curie temperature Iron becomes

a Ferromagnetic	b Diamagnetic	c Paramagnetic	d Super conductor
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3. SI unit of stain is .

a N/m^2	b N/m	c Nm	d No unit
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4. The most stable material for making permanent magnet is

a Iron	b steel	c Aluminum	d Cooper
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5. A semiconductor behave as insulator when.

a p.d when applied it	b When its temperature is ok	c Petivalentinpurity is edit	d Trivalent ipurity is add
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6. The temperature at which ferromagnetic material becomes paramagnet is called

a Critical temperature	b Absolute temperature	c Curies temperature	d All of these
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7. The ratio of stress is to strain is called.

a Electricity	b Resistivity	c Conductivity	d Elastic modulus
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8. To make and type semiconductor appear si should be doped with items of .

a Ge	b Bc	c C	d ALS
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9. The substance which have partially field conduction bend are called.

a Insulator	b Semiconductor	c Conductor	d Super conductor
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10. The conductivity of material is of the order of

a $10^1(\text{ohm m})_{-1}$	b $10^{10}(\text{ohm m})_{-1}$	c $10^7(\text{ohm m})_{-1}$	d $10^{15}(\text{ohm m})_{-1}$
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Q # 2	Short Questions	10 x 2 = 20
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1. Describe electrical properties of solids?
2. What is the ductile and brittle substance .give example.
3. What is solid stale physics?

4. What is deformation?
5. What is elasticity?
6. Name the type of stress?
7. Write the uses of superconductor?
8. Define stress?
9. Define strain?
10. Define super conductor?

Q # 3	Long Questions	2 X 5 = 10
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1. Write a note on super conductor?
2. A 10 m long copper wire is objected to stretching force and subjected to stretching force and its length increases by 20 calculate the tensile strain and the percent elongation which wire under goes.

Student Name:		Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#18	مثبت سوچیں، خوش رہیں
T- Marks- 40	Subject: Physics	Time: 45 - M	Obtained Marks:
Objective Type			
Q#1	Encircle the Correct Option	10X1=10	

1. If I_f , I_b and I_c are ammeter, base and collector current respectively in transistor then

a $I_E = I_C + I_B$	b $I_C = I_E + I_B$	c $I_B = I_C + I_E$	d None of these
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2. The term inverter is used for

a NOR gate	b NAND gate	c NOT gate	d AND gate
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3. The reverse current through a semiconductor diode is due to

a Holes	b Electrons	c Majority carrier	d Minority carrier
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4. Potential barriers for silicon at room temperature is

a 0.9v	b 0.3v	c 0.7v	d 0.5v
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5. Process of conversion of AC into DC.

a Rectification	b Amplification	c Oscillation	d Modulation
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6. Process of conversion of DC into AC

a Rectification	b Amplification	c Oscillation	d Modulation
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7. Mathematical relation for NOT gate is

a $X=A$	b $X=A.B$	c $X=A+B$	d $X=A \oplus B$
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8. Which one of the following is called fundamental gate.

a NOR gate	b NOT gate	c NAND gate	d [x-OR gate
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9. The device used for rectification is called .

a	Rectifier	b	Transformer	c	Thermistor	d	Wheatstone bridge
10. Too input NAND gate with inputs A and input B has an output 0 if							
a	B=0	b	A=B=1	c	A=B=0	d	None of these

Q # 2	Short Questions	10 x 2 = 20
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1. Define electronics?
2. Write mean application of electronics?
3. What is PN junction Or semiconductor diode?
4. Why ordinary silicone diodes do not emit light?
5. Why charge careers are not present in the depletion region?
6. What is the net charge or an n small type or p small type substance?
7. Why charge are not present in the depletion region?
8. Why photodiode id operated in reverse based state?
9. What is night switch and LDR?
10. What are the advantage and disadvantage of transistor?

Q # 3	Long Questions	1X 10=10
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- 1 What is transistor give the type of transistor also explain types of transistor briefly.

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#19
T- Marks - 40	Subject: Physics	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. Momentum of photon is given by?							
a	hf/λ	b	hf/c	c	$f\lambda$	d	$H\lambda$
2. Compton effect is observed with ?							
a	X-rays	b	Visible light	c	Radio waves	d	All of these
3. Photon with energy greater than 1.02 MeV can matter with matter as?							
a	Photo electric effect	b	Compton effect	c	Pair production	d	All of these
4. Maximum Compton shift in the wavelength of scattered photon will at?							
a	180"	b	90"	c	45"	d	60"
5. The rest mass of X-ray photon is?							

a	Infinite	b	Zero	c	$9.1 \times 10^{31} \text{kg}$	d	None
6. Photo electric current depend on?							
a	Frequency of light	b	Intensity of light	c	Speed of light	d	Polarization of light
7. Electron is an anti-particle of ?							
a	Proton	b	Photon	c	Positron	d	Deuteron
8. The minimum energy required by a photon to produce electron positron pair is?							
a	2MeV	b	1.02MeV	c	0.51MeV	d	Zero
9. Due to annihilation of electron and positron the number of photons produced is?							
a	1	b	2	c	3	d	4
10. Plat num wire becomes yellow at temperature?							
a	500°C	b	900°C	c	1100°C	d	1300°C

Q # 2	Short Questions	10 x 2 = 20
	<ol style="list-style-type: none"> What is Modern Physics? Define thermal Radiations? What is photo cell? What are the measurement on which two observes in relative motion will always agree upon? As a solid is heated and begins to glow, why does it first appear red? What happen to total radiation from a blackbody if its absolute temperature is doubled? Is it possible to create a single electron from energy? Explain Why don't we observe a Compton effect with visible lights? When does light behave as a wave as a practical? What advantage on electron microscope as over an optical microscope? 	
Q # 3	Long Questions	2 X 5 = 10

- State and explain Heisenberg UNCERTANTY Principle.
- What is the de Broglie wavelogth of an electron whose kinetic energy is 120ev?

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#20
T- Marks - 40	Subject: Physics	Time: 45 - M
Obtained Marks:		
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. If an electron jump from nth orbit of energy E_n to pth(lower) orbit of energy E_p and a photon of frequency F and wave length λ is emitted then

- | | | | |
|---------------------------------|----------------------------------|---------------------------------|---------------------------------|
| a $F\lambda = E_n - E_p$ | b $hc\lambda = E_n - E_p$ | c $hf = E_n - E_p - E_n$ | d $h\lambda = E_p - E_n$ |
|---------------------------------|----------------------------------|---------------------------------|---------------------------------|

2. The unit of Rydberg constant is.

- | | | | |
|-------------------|---------------|-------------------|--------------------|
| a m^{-2} | b Ms | c m^{-1} | d ms^{-1} |
|-------------------|---------------|-------------------|--------------------|

3. If 1 or more electrons are completely removed from an atom then atom is to be.

- | | | | |
|------------------|------------------|--------------------|---------------------|
| a Excited | b Ionized | c Polarized | d Stabilized |
|------------------|------------------|--------------------|---------------------|

4. The numerical value of ground state energy for hydrogen atom in eV is.

- | | | | |
|--------------|---------------|-------------|----------------|
| a -10 | b 13.6 | c 10 | d -13.6 |
|--------------|---------------|-------------|----------------|

5. The residence time of atom metastable state is

- | | | | |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| a 10^{-6} sec | b 10^{-5} sec | c 10^{-4} sec | d 10^{-3} sec |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|

6. The value of Rydberg constant is m^{-1}

- | | | | |
|-----------------------------|-----------------------------|-----------------------------|---------------------------------|
| a 1.09×10^7 | b 1.07×10^8 | c 1.07×10^9 | d 6.63×10^{-34} |
|-----------------------------|-----------------------------|-----------------------------|---------------------------------|

7. X-rays are

- | | | | |
|-------------------------------|-----------------------------|-----------------------------|------------------------------|
| a High energy electron | b High energy photon | c High energy proton | d High energy neutron |
|-------------------------------|-----------------------------|-----------------------------|------------------------------|

8. Which one of the following is not characteristic of laser

- | | | | |
|-------------------------|---------------------------|----------------------|------------------------|
| a High intensity | b High directivity | c Incoherence | d Monochromatic |
|-------------------------|---------------------------|----------------------|------------------------|

9. Laser can only be reproduced if an atom is in its

- | | | | |
|-----------------------|------------------------|------------------------|---------------------------|
| a Normal state | b Excited state | c Ionized state | d De-excited state |
|-----------------------|------------------------|------------------------|---------------------------|

10. X-ray photon moves with a velocity of

- | | | | |
|--------------------------|----------------|-----------------------------|----------------|
| a Less than light | b Light | c Greater than light | d Sound |
|--------------------------|----------------|-----------------------------|----------------|

Q # 2

Short Questions

10 x 2 = 20

1. Define atomic spectrum?
2. Bohr's theory of hydrogen atom is based upon several assumptions. Do any of their assumptions contradict classical physics?
3. What is meant by A line spectrum.
4. Is energy conserved when an atom emits a photon of light.
5. What do you mean when we say that the atom is excited.
6. What are the advantages of lasers over ordinary light?
7. What are the uses of laser in medical?
8. What is laser?
9. What are X-rays?
10. Explain why laser action could not occur without population inversion b/w atomic levels?

Q # 3

Long Questions

2 x 5 = 10

1. Give the postulates of Bohr's atomic model. How did de-Broglie deduce Bohr's second postulate.

2. What are the energy in ev of quanta of wave length? $\lambda=400,500$ and 700nm .

Student Name:	Roll No:	Date: / /
سوچ بدلیں، معاشرہ بدلیں	Class 2nd Year	Ch#21
T- Marks - 40	Subject: Physics	Time: 45 - M
Objective Type		
Q#1	Encircle the Correct Option	10X1=10

1. Color TV (while operating) emits.

a	Alpha rays	b	Beta rays	c	Gama rays	d	x-rays
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2. In a fast nuclear U-238 absorbs a fast neutron and its ultimately transformed into ---by emitting beta particles

a	U-238	b	PU-239	c	Pb-208	d	Th-232
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3. After two half lives the number of decayed nuclear of an element are

a	N	b	N/2	c	N/4	d	3N/4
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4. Binding energy can be found by relation.

a	$E=\Delta m/c^2$	b	$E=\Delta mc^2$	c	$E=1/2\Delta mc^2$	d	$E=mgh$
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5. Which following is similar to electron

a	Alpha particle	b	Beta particle	c	Neutron	d	Photon
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6. The rate of decay of radioactive substance.

a	Remains constant with time	b	Increase with time	c	Decrease with time	d	May increase or decrease with time
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7. Which following isotopes of natural uranium undergoes a fission reaction with slow neutron .

a	U-234	b	U-235	c	U-238	d	None of these
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8. The amount of energy equivalent 1 amu is .

a	9.315Mev	b	93.45Mev	c	931.5Mev	d	1.025Mev
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9. Thyroid cancer is caused by.

a	C-14	b	Na-24	c	I-131	d	Co-60
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10. Radiation emitted by a radioactive element are .

a	Visible	b	Visible by pyrex glass	c	Invisible	d	None of these
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Q # 2

Short Questions

10 x 2 = 20

- How can radioactive help in the treatment of cancer?
- Which radiation does would deposit more energy to your body?(a) 10 mGy to your hand or (b) 1mGy does to your entire body?
- If you swallowed on a source and a B source which would be the more dangerous to you explain?why?
- What do we mean by the term critical mass?

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5. Why must a Giger Muller tube for detecting a particle have a very thin end windows.
6. A practical which produces more ionization is less penetration. why?
7. Describe a brief account of interaction of various type of radiation with matter.
8. If a nuclide has a half life of one year does this mean that it will be completely decayed after 2 year?explain?
9. What is fusion reaction?
10. Define term mass defect and binding energy?

Q # 3

Long Questions

2 X 5 = 10

1. What is meant by half life of a radioactive elements?
2. Find the mass defect and the binding energy for tritium if the atomic mass of tritium is 3.01604?