ਵਿਸ਼ਾ ਫਿਜਿਕਸ 10+2 (ਪੇਪਰ ਦੀ ਬਣਤਰ)

(ਦੂਜਾ ਸਮੈਸਟਰ)

ਸਮਾ 3 ਘੰਟੇ 15 ਮਿਨਟ **ਪੇਪਰ ਦੀ ਬਣਤਰ** **ਕੁੱਲ ਅੰਕ**

1.	1 ਅੰਕ ਦੇ ਪ੍ਰਸ਼ਨ (ਪ੍ਰਸ਼ਨ ਨੰ: 1 ਤੋਂ 10) ਪੂਰੇ ਸਲੇਬਸ ਵਿੱਚੋਂ ਆਣਗੇ।	10×1=10
2.	ਪ੍ਰਸ਼ਨ ਨੰ: 11 ਤੋ. 18 ਤੱਕ ਹਰੇਕ ਪ੍ਰਸ਼ਨ 2 ਅੰਕਾਂ ਦਾ ਹੋਵੇਗਾ।	8×2=16
3.	ਪ੍ਰਸ਼ਨ ਨੰ: 19 ਤੋਂ 26 ਤੱਕ ਹਰੇਕ ਪ੍ਰਸ਼ਨ 3 ਅੰਕਾਂ ਦਾ ਹੋਵੇਗਾ।	8×3=24
4.	ਪ੍ਰਸ਼ਨ ਨੰ: 27 ਤੋਂ 30 ਤੱਕ ਹਰੇਕ ਪ੍ਰਸ਼ਨ 5 ਅੰਕਾਂ ਦਾ ਹੋਵੇਗਾ ਅਤੇ ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਵਿੱਚ ਅੰਦਰੂਨੀ ਛੋਟ ਹੋਵੇਗੀ ਅਤੇ 5 ਅੰਕਾਂ ਦਾ ਪ੍ਰਸ਼ਨ ਪਾਰਟਸ ਵਿੱਚ ਨਹੀਂ ਪੁਛਿੱਆ ਜਾਵੇਗਾ।	4×5=20

ਕੁੱਲ ਸਿਲੇਬਸ ਵਿੱਚੋਂ ਨੰਬਰਾਂ ਦੀ ਵੰਡ ਹੇਠ ਲਿਖੇ ਅਨੁਸਾਰ ਹੋਵੇਗੀ।

Learning Outcomes	**Marks**	**Percentage of Marks**
Knowledge	22	32%
Understanding	33	47%
Application	15	21%
Total	**70**	**100%**

SEMESTER-II (THEORY)

Time: 3 hrs

Theory- 70 Marks
Practical- 30 Marks
CCE/Internal Sem- 20 Marks

DISTRIBUTION OF MARKS

		Periods	**Assessment Marks**
UNIT-V	ELECTROMAGNGTIC WAVES	05	05
UNIT-VI	OPTICS	36	23
UNIT-VII	DUALNATURE OF MATTER	08	08
UNIT-VIII	ATOMS OF NUCEI	20	10
UNIT-IX	ELECTRONIC DEVICES	24	13
UNIT-X	COMMUNICATION SYSTEM	10	06
	TOTAL	03	70

ਯੂਨਿਟ ਵਾਈਜ਼ ਅੰਕਾਂ ਦੀ ਵੰਡ (Distribution of Marks according to units)

UNIT	CHAPTER	1 MARK	2 MARKS	3 MARKS	5 MARKS	TOTAL
UNIT-V	ELECTROMANNETIC WAVES		2	3 T	-	5
UNIT-VI	OPTICS	1	2+2+2 T (N) (N)	3+3 (T) (N)	5+5 T T	23
UNIT-VII	DUALNATURE OF MATTER	1	2+2 (T) (N)	3 (T)	-	08
UNIT-VIII	ATOMS OF NUCEI	-	2 (T)	3 (N)	5 (T)	1 0
UNIT-IX	ELECTRONIC DEVICES	1+1	-	3+3 (T) (N)	5 (T)	13
UNIT-X	COMMUNICATION SYSTEM	1	2 (T)	3 (T)	-	06
	OVERALL SYLLABUS WHOLE	1+1+1+ 1+1				05

ਮਾਡਲ ਟੈਸਟ ਪੇਪਰ (Model Test Paper)

Max. Marks- 70 **Semester – II**

Physics

Ques-1	Define the unit of electric Potential.	1
Ques-2	State Ampere's Circuital Law.	1
Ques-3	What is the basic cause of induced emf?	1
Ques-4	What are coherent sources of light?	1
Ques-5	What is dispersion of light?	1
Ques-6	What is rest mass of photon?	1
Ques-7	What is mass defect?	1
Ques-8	What is p type semiconductor?	1
Ques-9	Write down the truth table or gete?	1
Ques-10	What is demodulation?	1
Ques-11	State two properties of X-rays.	2
Ques-12	What are polaroids? Write their two uses?	2
Ques-13	A candle is held 3 cm away from a concave mirror of radius of curvature 24 cm. where is the image formed? What is the nature of the image?	2

Ques-14 A ray of light passes from air to glass (u=1.5) at an angle of $30^{0?}$ Calculate angle of refraction? What is speed of light in glass? 2

Ques-15 An X ray tube produces a continuous spectrum of radiation with its short wavelength end at 0.45 A^0? What is the maximum energy of a photon in the radiation? 2

Ques-16 Explain the term stopping Potential & threshold frequency? 2

Ques-17 State Laws of radioactive decay? 2

Ques-1 8 Why sky waves are not used in the Transmission of Television signals? 2

Ques-19 What are electromagnetic waves? Explain them characteristics? 2

Ques-20 What is total internal reflection of light? What are its conditions? Give one application of total internal reflection? 1+1+1

Ques-21 Describe photoelectric effect & state the laws of photoelectric emission? 1+2

Ques-22 In Young's double slit experiment while using a source of light of waves length 5000 A^0 ,the fringe Width obtained is 0.6 cm. If the distance between the screen & slit is reduced to half. What should be the wave length of source to get fringes 0.003 m wide? 3

Ques-23 Calculate the binding energy per millions of $_{20}Ca^{40}$ nucleus. given

$_{20}Ca^{40}$ = 39. 962589 a.m.u

Mn= 1.00865 a.m.u

Mp= 1.007825 a.m.u 3

Ques-24 Distinguish between conductors (methods), semiconductors & insulators on the basis of Energy band diagram? 1+1+1=3

Ques-25 An input resistance of a silicon transistor is 66552. Its base current is changed by 15up which results in the change in the collector current by 2 mA. This transistor is used as a common emitier amplifier with a load resistance of 5 k.m. What is the …….gain of the amplifier? 3

Ques-26 What is modulation? Define different types of modulation. Explain briefly need of modulation? 1+1+1=3

Ques-27 What is diffraction of light? Explain Fraunhofer diffraction at simple slit with help of diagram and derive the reaction for width of central maxima? 1+1+3=5

or

What is meant by interference of light? Describe briefly young's double slit experiment to demonstrate interference of light. Describe an expression for frige width in the interference pattern? 1+1+1+2=5

Ques-28 With the help of ray diagram, explain the principal & working of compound microscope and derive an expression for magnifying power when image is formed at least distance of distinct vision? 1+1+1+2=5

or

What is Astronomical telescope? With the help of ray diagram, explain the principle & working of astronomical telescope and derive an expression for magnifying power when image is formed at infinity? 1+1+1+2=5

Ques-29 What is an amplifier? With the help of a labeled diagram, explain the working of npn transistor as an amplifier (Common emitter amplifier) and determine its voltage gain? 1+1+2+1=5

or

Which the help of a circuit diagram explain the working of the transistor as an oscillator in common emitter configuration?

Ques-30 State the basic postulates of Bohr's theory of atomic spectra. Hence obtain an expression for radius of orbit, velocity of electron and Energy of orbital electron in hydrogen atoms? 2+1+1+1=5

or

Explain the origin of different spectral lines of hydrogen atom on the basis of Bohr's theory and draw the Energy level diagram of spectral series. 3+2=5