Program: FE ------- Engineering

Curriculum Scheme: Revised 2012

Examination: _____ Semester : _II_

Course Code: _FEC202_ and Course Name: _APPLIED PHYSICS II_

Time: 1 hour Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	For sustained interference conditions are?
Option A:	Two sources should not be monochromatic.
Option B:	Two sources are incoherent.
Option C:	For good contrast , the two amplitude are not equal.
Option D:	Two sources should be monochromatic.
Q2.	For constructive interference in uniform thicknesses of thin film
Option A:	$\Delta = n\lambda$
Option B:	$\Delta = (2n+1)\lambda / 2$
Option C:	$\Delta = (n+1)\lambda$
Option D:	$\Delta = (2n+1)\lambda$
Q3.	In wedge shaped film fringe width $\beta = \lambda / 2\mu\alpha$
Option A:	where α is angle of reflection
Option B:	where α is angle of diffraction
Option C:	where α is angle of wedge
Option D:	where α is angle of incidence
Q4.	The material use in anti reflecting coating
Option A:	Cu
Option B:	MgF2
Option C:	Al
Option D:	Si
Q5.	In Newton's Ring Expt.Light source is
Option A:	Normal light
Option B:	LED
Option C:	LASER
Option D:	Sodium lamp
Q6.	For Fraunhoffer diffraction which statement is correct

Option A:	The diffracted wavefront is plane
Option B:	The diffracted wavefront is spherical
Option C:	The diffracted wavefront is cylindrical
Option D:	The diffracted wavefront is cylindrical and spherical
Q7.	In N parallel Equidistant slits by Fraunhoffer diffraction d = (a+b)
Option A:	d is interplaner distance
Option B:	d is atomic diameter
Option C:	d is grating element
Option D:	d is integer
Q8.	The phenomenon of diffraction is divided into
Option A:	2
Option B:	3
Option C:	4
Option D:	5
Q9.	In fibre optics cable which is correct
Option A:	$n_1 = n_2$
Option B:	$n_1 > n_2$
Option C:	$n_1 < n_2$
Option D:	n_1 / n_2
Q10.	In fibre optics , core is made up of
Option A:	fine mica
Option B:	fine aluminium
Option C:	fine copper
Option D:	fineglass fibre
Q11.	In single mode fibre core diameter is in the range of
Option A:	2µm to 10µm
Option B:	10µm to 20µm
Option C:	20µm to 30µm
Option D:	32µm to 40µm
Q12.	LASER is
Option A:	Light Amplitude by Stimulate Emitting of Radiation
Option B:	Light Emitting Source
Option C:	Light Amplification By Stimulate Emission of Radiation
Option D:	Light Emitted by Absorption of Process
Q13.	He-Ne LASER is
Option A:	Solid LASER
Option B:	Gas LASER
Option C:	Liquid LASER

Option D:	Semiconductor LASER√
Q14.	The properties of LASER is
Option A:	It is a normal source
Option B:	It is a UV Light
Option C:	It is coherent source
Option D:	It is not coherent source
Q15.	According to De-Broglie wavelength $\lambda = h/mv$
Option A:	where $h = 6.63 \times 10^{-34}$
Option B:	where $h = 6.63 \times 10^{34}$
Option C:	where $h = 6.63 \times 10^{-30}$
Option D:	where $h = 6.63 \times 10^{30}$
Q16.	To select correct equation for De-Broglie in terms of potential
Option A:	$\lambda = 12.25/\sqrt{V}$ A^0
Option B:	$\lambda = 12.25\ \sqrt{V}$ A^0
Option C:	$\lambda = 8.25/\sqrt{V}$ $A^{0\geq}$
Option D:	$\lambda = 15.25\ \sqrt{V}$ A^0
Q17.	According to Uncertainty Principle , $\Delta x . \Delta p \geq h/2$ where
Option A:	Δp = uncertainty in momentum
Option B:	Δp = uncertainty in velocity
Option C:	Δp = uncertainty in displacement
Option D:	Δp = uncertainty in frequency
Q18.	The wavefunction Ψ satisfying the following condition
Option A:	Ψ must be finite
Option B:	Ψ must not be a finite quantity
Option C:	Ψ is not a single value function
Option D:	Ψ is not a complex quantity
Q19.	In electrostatic focussing on equipotential surface electric potential
Option A:	same
Option B:	increase
Option C:	decrease
Option D:	moderate
Q20.	CRO use for
Option A:	Measurement of Freq.
Option B:	Measurement of distance
Option C:	Measurement of humanity
Option D:	Measurement of temp.
Q21.	In superconductor the current generated due

Option A:	electron
Option B:	hole
Option C:	positive ions
Option D:	cooper pair
Q22.	Type I superconductor is
Option A:	Cu
Option B:	Ag
Option C:	Hg
Option D:	glass
Q23.	The critical temp Tc (K) of Mercury is
Option A:	7.21
Option B:	4.15
Option C:	1.19
Option D:	90
Q24.	In Transmission Electron Microscope TEM lens is
Option A:	convex lens
Option B:	Projection lens
Option C:	concave lens
Option D:	double convex lens
Q25.	The Nano particles use in
Option A:	mobile phones
Option B:	Telephones
Option C:	electric switch
Option D:	Trasformer