Q. No.	Question	Option A	Option B	Option C	Option D
1	The quantity of charge required to raise its potential by one unit is	Inductance	capacitance	resistance	none
2	A capacitance is connected to a battery of 50 volt, so that a charge of 500 μC is obtained at the plates . Find the capacitance of a capacitor.	10μF	2μF	500μF	0.1μF
3	The capacity of parallel plate capacitor is 12μF. what is new capacity if separation between the plates is doubled and area is halved?	4μF	3μF	2μF	5μF
4	The capacity of condenser containing air is 4μF. Find its capacity if air is replaced by a material of dielectric constant 5.	10μF	15μF	20μF	25μF
5	The plates of parallel plate of capacity C1 are moved closer together until they are half their original separation .what is the new capacitance?	C2=C1	C2=2C1	C2=C1/2	C2=5C1
6	A condenser is charged to a potential of 200V,has the energy of 1J, The capacity of condenser is	25μF	50μF	75μF	30μF
7	Find equivalent capacitance if four capacitors of 4μF are connected in parallel	16μF	1μF	4μF	8μF
8	Find equivalent capacitance if four capacitors of 4μF are connected in series	16μF	1μF	4μF	8μF
9	Capacitance of a condenser is inversly proportional to	area of plates	dielectric material	distance between the plates	current through circuit
10	Capacitance of a condenser is given by	C=QV	C=Q/V	C=V/Q	none of these
11	If number of capacitors are connected in parallel, then effective capacitance	increases	decreases	remains same	or decreases
12	E.M.F. of a cell is defined as potential difference between two terminals of a cell when	circuit is closed	circuit is open	high current is drawn	none of these
13	If area of metal plates of capacitor is doubled, then capacitance will be	C	2C	3C	C/2
14	If distance between metal plates of capacitor is doubled,then capacitance will be	C	2C	3C	C/2

Q. No.	Question	Option A	Option B	Option C	Option D
15	If three capacitors of capacitance'C'are connected in series,then capacitance will be	C	C/2	C/3	3C
16	Two capacitors of 50µF are connected in parallel. the combination is connected in series with capacitor of 100 µF.The equivalent capacitance is	10µF	125µF	50µF	150µF
17	A resistance of 10 ohm is connected in series with a cell of e.m.f 4V and internal resistance 0.5 ohm . Determine the current .	0.48A	0.38A	3.81A	3.18A
18	If a battery of e.m.f 12V is connected across a resistance of 120 Ω and potentail drop observed across a resistance is 11.8 V,Calculate internal resistance of cell	2.075ohm	.02 ohm	.01ohm	.02ohm
19	The algebric sum of currents at junction point in any electric circuit is equal to	zero	infinity	both	none of these
20	The resistance offered by electrolyte solution of a cell is	impedance	external resistance	internal resistance	reactance
21	The mathematical equation of Kirchhoff's current law (first law) is	sigma I=0	sigma E=0	sigma IR=0	sigma IR+ sigma E=0
22	The mathematical equation of Kirchhoff's voltage law (second law) is	sigma I=0	sigma E=0	sigma IR=0	sigma IR=sigma E
23	The meter bridge is a modification of	Wheatstone's network	potiometer	galvanometer	speedometer
24	The meter bridge is used to	determine unknown resistance	measure current	measure p.d.	all of these
25	In poteitiometer ,p.d. across potetiometer wire is directly proportional to	length	area	resistance	none of
26	E1/E2 =	L1/L2	L2/L1	L1 xL2	L1+L2
27	The unit of potential gradient is	V.cm	V/m	ohm.cm	ohm.m
28	Potentiometer is used to	measure e.m.f of a cell	compare e.m.f of two cells	determine internal resistance of a cell	all of these

Q. No.	Question	Option A	Option B	Option C	Option D
29	The balancing condition for a Wheatstone's network with R1,R2,R3,R4 in cyclic order is	R1/R2=R3/R4	R1/R2=R4/R3	R1/R4==R3/R2	R1R2-=R3R4
30	In a potiometer experiment, the null point is obtained at 140 cm for a cell of e.m.f 1.2 V.Find e. m.f of a cell for which null point is is obtained at 210 cm	0.8V	1.8V	2.8V	3.8V
31	Radioactivity is due to	stable electronic confiuration	unstable nuclei	unstable electronic confiuration	stable nuclei
32	Radioactivity is a	sponteneous phenomenon	Nuclear phenomenon	production of radio waves	both a and b
33	The alpha paticles are same as	helium nuclei	gas atom	ionised atom	carbon nuclei
34	The paricles are defected by electric and magnetic field are	Alpha and Gamma	Beta and Gamma	Alpha and Beta	all of these
35	**B**eta rays are	positively charged	negatively charged	neutral	all the above
36	Which of the following is same as electron	Alpha rays	Beta rays	Gamma rays	x-rays
37	Which of the following have high ionising power	Alpha rays	Beta rays	Gamma rays	all the above
38	Which rays have high penetating power	Alpha rays	Beta rays	Gamma rays	all the above
39	The velocity of gamma rays is---------- velocity of alpha rays and beta rays	greater than	smaller than	equal to	zero as compared to
40	Decay constant-----	(dN/dt)/N	N/(dN/dt)	N x(dN/dt)	all are wrong
41	Decay constant depends on	Nature of substance	temperature	pressure	both B and C
42	Rays which are defected towards posive plate are	Alpha rays	Beta rays	Gamma rays	x-rays
43	Rays which are defected towards negative plate are	Alpha rays	Beta rays	Gamma rays	x-rays
44	Which of the following element is not a radioactive element	Uranium	Radium	Thorium	Calcium
45	All naturally occurring elements whose atomic numbers are greater than ----------are radioactive	12	32	52	82
46	Doubly ionised helium atoms are	Alpha particles	Bita particles	Gyama particles	photons

Q. No.	Question	Option A	Option B	Option C	Option D
47	Gamma arays are	positively charged	negatively charged	neutral	non of these
48	Alpha rays have	one negative charge	one positive charge	two negative charges	two positive charges
49	Half life period=T=	0.693/lamda	lamda/0.693	0.693/N	N/0.693
50	The particles which are undeflected by electric and magnetic field are	Alpha rays	Beta rays	Gamma rays	x-rays
51	The frequency of ultrasonic wave is	More than 20 kHz	Less than 20 Hz	200 Hz	20 Hz to 20 kHz
52	Sounds of frequency higher than 20,000 Hz which are inaudible to normal human ear are called	noise	frequency	ultrasonics	amplitude
53	SONAR is abbreviation of	small navigation and random	sky navigation and ranging	sun nuclear ranging	sound navigation and ranging
54	Which of the following effects can be used to produce ultrasonic waves?	Magnetostriction effect	Doppler Effect	Magnetic effect	Sound effect
55	When is ultrasonic waves produced using piezo electric oscillator?	At constant temperature	At resonance	At constant pressure	At constant voltage
56	What is the other name for ultrasonic flaw detector?	Destructive testing	Magnetostrictive testing	Non-destructive testing	Echo testing
57	Identify the correct relation betweeen velocity, frequency and wavelength.	$n = v\lambda$	$v = n\lambda$	$v = n/\lambda$	$v = \lambda/n$
58	Which of the following is natural piezoelectric materials?	quartz	tourmaline	rochelle salt	all of these
59	Ultrasonic waves have	high frequency	high energy	lowwavelength	all of these
60	Find the frquency of wave having velocity 300m/sand wavelength 0.3m	100HZ	1000Hz	10Hz	10000Hz
61	Detection of flaws, drilling, cutting cleaning, welding, SONAR, are examples of	Ultrasonic waves	Doppler Effect	Radioactivity	None of these

Q. No.	Question	Option A	Option B	Option C	Option D
62	Which of the following statement is not true?	When the observer moves away from the stationary source, then the pitch of sound decreases	When the observer moves towards the stationary source, then the pitch of sound increases	When the source moves away from stationary observer then the pitch of the sound decreases	When the source moves towards the stationary observer then the pitch of the sound decreases
63	The distance between two successive compression	period	frequency	amplitude	wavelength
64	The time required to complete one oscillations is called	period	frequency	amplitude	wavelength
65	The ratio of photon energy to its frequency is _____	amplitude	- its velocity	- its wavelength	plancks constant
66	The work function of a substance is 1.6 eV. Find the longest wavelength of light that can produce photoemission from the substance	2900 Å	3867 Å	5800 Å	7734 Å
67	LASER light is coherent _____	All the waves have same frequency	All the waves are exactly in the same phase	All the waves have same	All the waves are exactly in the opposite phase
68	In He-Ne LASER, the tube is filled with_____	10 % He and 90 % Ne	20 % He and 80 % Ne	90 % He and 10 % Ne	80 % He and 20 % Ne
69	The conductivity of LDR increases as	intensity of light increases	intensity of light decrease	- wavelength of light increases	None of the above
70	Which of the following statement is not true?	When the observer moves away from the stationary source, then the pitch of sound decreases	When the observer moves towards the stationary source, then the pitch of sound increases	When the source moves away from stationary observer then the pitch of the sound decreases	When the source moves towards the stationary observer then the pitch of the sound decreases