"Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's **Vivekanand College, Kolhapur (Autonomous)**

Quiz competition

on

General knowledge on Physics

Organized by

Department of Physics

(16 March 2022)

Venue:

Department of Physics

Vivekanand College, (Autonomous) Kolhapur.

"Education for Knowledge, Science and Culture" -Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur. Department of Physics

Notice

Date: 08-03-2022

All the students of B.Sc./ M.Sc. are hereby informed that, a quiz contest will be conducted by **Department of Physics** on "General Knowledge on Physics" on Wednesday,16th March 2022, 02.00 pm at Physics Lab, Vivekanand College, Kolhapur. Interested students may register their names at Dr. S. I. Inamdar (Department of Physics).

Rules for Quiz contest

- 1. It is based on multiple choice questions.
- 2. Each question carries 4 marks.
- 3. Only one option can be considered by evaluator.
- 4. If two options have ticked then the question will be considered as not attempted.

Dr. S. J. Inamdar

(Activity Co-ordinator)

Dr. M. M. Karanjkar

Head of Department
Department of Physics
Vive Partment of Physics
Vive Repartment of Physics
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"Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur.

Department of Physics Quiz Contest 2021-22

Attendance Sheet

Sr. No.	Name of the students	Roll No.	Sign
1	Ganesh Dipak Bhise	7197	ablise
2	Sejal Manoj Shinde	7321	dijal
3	Tejas Vikas Kothawale	7128	telephonal
4	Patil Shivani Sidgonda	7081	Spatil.
5	Vedika vaibhav chikhalkar	7204	WCH
6	Tejas Patil	7304	Patil.
7	Sanika Sarjerao Shinde	7080	stindes.
8	Tahesin Altaf Mulla	7254	Mullan
9	Amey sunil zapke	7167	Toughe.
10	Nadaf Sabreen	7453	Bobseen
11	Anushree Rathod	7426	pathod.
12	Varsha yashavant panhalkar	7053	Donjer.
13	Suyash Sanjay Dongare	7012	Parhallia
14	Sakshi Mohan Kamate	7439	Kamat
15	Sanket Santosh patil	7143	Spatil
16	Samrudhi suresh Borage	7325	Dooge
17	Shruti Vinay Gutte	7016	Gutte.
18	Ritu Rajesh Kumawat	7239	Dunawet
19	Tejaswini sampat rao mali	7044	@mattl
20	Ashutosh Sharad Jadhav	7221	A Jalav.
21	Lovely Jitendra Sav	7427	Sair
22	Swarup Prakash Mane	7046	Dramble
23	Anjali Bhagwan Kamble	7029	lamale
24	Harshad patil	7056	Pati
25	Aditi Narayan Ingale	7328	Angale.
26	Amrit Raj Birendra Singh	7428	Amnin
27	Tejas Jadhav	7007	Jalen
28	Shweta rajput	7151	Rothers.
29	Shubham jayram rathod	7276	\$204 Put
30	Sourabh Rajendra Patil	7145	8 pati)
31	Harshavardhan kopardekar	7127	Kopardelon
32	Rajnandini Ganesh Gaikwad	7013	Gaitard.
33	Devendra somnath chavan	7200	Dihaven
34	Dhiraj Dattatray Jadhav	7308	Dahau.
35	Ajay Mohan Suryavanshi	7161	Suryanolw A
36	Gajare Namrata Ratan	7110	Gardin
37	Bhagyashri bharat Yadav	7431	Yadlun
38	Mitali Vijay Naik	7642	Maile.
39	Shinde Manisha BaBasaheb	7077	M. B. Shinde
40	Jadhav shreya Anil	7019	Jallagon
41	Om Sanjay Patil	7058	Medi

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42	Shubham Babasaheb Kalkutki	7027	Scalluli
43	Prathmesh	7436	Prathusk
44	Muskan Maurya	7450	Murla
45	Shankar Gajanan Jadhav	7465	Sjahav.
46	Omkar Sanjay Sutar	7084	(8th)
47	Patil Prajakta keshav	7060	spatil.
48	psbote20@gmail.com	7302	Komeuc.
49	Komal Prakash Chavan	7003	Clevale.
50	Chavan Sakshi suwarnsing	7201	P.P. More
51	PRAJAKTA PRABHAKAR MORE	7049	Morek
52	Sachin	7258	5 Pari
53	Kamble Rutuja Raghunath	7113	Planble
54	Sohan Gund	7525	Sound
55	Adityashivajipatakure	7134	Gural.
56	Manon chavhan	7311	Menny.



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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur. Department of Physics

Quiz Contest 2021-22

(Wednesday,16th March 2022) Result Sheet

Sr. No.	Name of the students	Roll No.	Marks
1	Sakshi Mohan Kamate	7439 86	
2	Sanket Santosh patil	7143	84
3	Samrudhi suresh Borage	7325	80
4	Shruti Vinay Gutte	7016	78
5	Ritu Rajesh Kumawat	7239	78
6	Tejaswini sampat rao mali	7044	72
7	Ashutosh Sharad Jadhav	7221	70
8	Lovely Jitendra Sav	7427	68
9	Swarup Prakash Mane	7046	68
10	Anjali Bhagwan Kamble	7029	66
11	Harshad patil	7056	64
12	Aditi Narayan Ingale	7328	64
13	Amrit Raj Birendra Singh	7428	64
14	Tejas patil	7007	64
15	Shweta rajput	7151	64
16	Shubham jayram rathod	7276	62
17	Sourabh Rajendra Patil	7145	62
18	Ganesh Dipak Bhise	7197	62
19	Sejal Manoj Shinde	7321	62
20	Tejas Vikas Kothawale	7128	60
21	Patil Shivani Sidgonda	7081	60
22	Vedika vaibhav chikhalkar	7204	60
23	Tejas Jadhav	7304	56
24	Sanika Sarjerao Shinde	7080	56
25	Tahesin Altaf Mulla	7254	56
26	Amey sunil zapke	7167	56
27	Nadaf Sabreen	7453	52
28	Anushree Rathod	7426	52
29	Varsha yashavant panhalkar	7053	52
30	Suyash Sanjay Dongare	7012	50
31	Harshavardhan kopardekar	7127	50
32	Rajnandini Ganesh Gaikwad	7013	50
33	Devendra somnath chavan	7200	50
34	Dhiraj Dattatray Jadhav	7308	48
35	Ajay Mohan Suryavanshi	7161	46
36	Gajare Namrata Ratan	7110	44
37	Bhagyashri bharat Yadav	7431	42
38	Mitali Vijay Naik	7642	42
39	Shinde Manisha BaBasaheb	7077	42
40	Jadhav shreya Anil	7019	42

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41	Om Sanjay Patil	7058	42
42	Shubham Babasaheb Kalkutki	7027	40
43	Prathmesh	7436	40
44	Muskan Maurya	7450	38
45	Shankar Gajanan Jadhav	7465	38
46	Omkar Sanjay Sutar	7084	36
47	Patil Prajakta keshav	7060	36
48	psbote20@gmail.com	7302	34
49	Komal Prakash Chavan	7003	34
50	Chavan Sakshi suwarnsing	7201	34
51	PRAJAKTA PRABHAKAR MORE	7049	34
52	Sachin	7258	32
53	Kamble Rutuja Raghunath	7113	30
54	Sohan Gund	7525	30
55	Adityashivajipatakure	7134	30
56	Manon chavhan	7311	30

Dr. S. I. Inamdar (Activity Co-ordinator) Dr. M. M. Karanjkar
Head of Department
Department of Physics
Department of Physics
Vivekanand College Konhapur



"Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur.

Department of Physics Quiz Contest 2021-22

(Held on Wednesday,16th March 2022) Final Result

Sr. No.	Name of the students	Roll No.	Marks	Rank
1	Sakshi Mohan Kamate	7439	86	First
2	Sanket Santosh patil	7143	84	Second
3	Samrudhi suresh Borage	7325	80	Third
4	Shruti Vinay Gutte	7016	78	consolation prize

Dr. S. Inamdar (Activity Co-ordinator) Dr. M. M. Karanjkar Head of Department Department of Physics

Department of Physics
Flead of the Collapur
Vivekanand College, Rolhapur
Vivekanand College, Kolhapur



"Dissemination of Education for Knowledge, Science and Culture"

- Shikshanmaharshi Dr. Bapuji Salunkhe



Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (Autonomous)



Department of Physics

One Page Report

	Name of the Department	Department of Physics Quiz contest on: "General Knowledge on Physics" Wednesday, 16th March 2022, 02.00 pm			
	Name of the Activity				
	Date / Duration				
	Aims and Objectives	799 VAZ 03V	wledge on students tudents for study of	on basic and general fbasic physics	physics.
	No. of Beneficiaries	Teachers	Male	01	02
		- Teachers	Female	01	02
		Students	Male	25	56
			Female	31	
				Total	58
	Expenditure and Fundings	College and BBC Marathi Funds			
	Brief Discussion	Vivekanand Colle this quiz contest	ege, Kolhapur (Aut on on 'General	and Head, Departm onomous) has support I Knowledge on Ph anducted the quiz con	orted to conductive orted to conductive or c
	Outcomes	Students got the c	hance to present the	eir knowledge in Phy	sics.

Dr. M. M. Karanjkar

HEAD
DEPARTMENT OF PHYSICS
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

Nome-Suyash Sanjay Dongare Roll No - 7012

"Education for Knowledge, Science and Culture"

Shri Swami Vivekanand Shikshan Sanstha's Vivekanand College (Autonomous), Kolhapur.

-Shikshanmaharshi Dr. Bapuji Salunkhe

Department of Physics **Quiz Contest 2021-22** Instruction: 1. Each question carries 2 marks. 2. Only one option can be considered by evaluator. 3. If two options have ticked then the question will be considered as not attempted. Q.) Select correct alternative. 1) Newton's first law of motion is known as law of ----a) Momentum b) Inertia c) Energy 1 d) Force 2) The energy possessed by the body by virtue of its motion is-----Kinetic energy b) Potential energy c) Mechanical energy d) Total energy 3) A valid solution of differential equation of S.H.M. is ----a) $x = a^2 \sin(\omega t + \alpha)$ $x = a \sin(\omega t + \alpha)$ d) $x^2 = a^2 \sin(\omega t + \alpha)$ c) $x^2 = a \sin(\omega t + \alpha)$ 4) For streamline flow the equation of continuity is $(b) a_1^2 v_1 = a_2^2 v_2$ a) $a_1v_1 = a_2v_2$ c) $a_1v_1^2 = a_2v_2^2$ d) $a_1^2 v_1^3 = a_2^3 v_2^2$ 5) Ultrasonic waves are waves a) Light 1 b) sound c) electromagnetic d) matter 6) In Huygen's eyepiece lenses are a) Plano Concave b) Convex Plano convex d) Concave 7) In case of compound pendulum, the centre of suspension and the centre of suspension of compound pendulum..... (a) cannot be interchanged b) are interchangeable c) are at two different points d) are same points in few cases 8) The angle of contact between glass and mercury is..... a) a right angle b) acute angle an obtuse angle d) always zero 9) At what temperature do he Celsius and the Fahrenheit scales coincides? a) 30° b) -30° c) 40° Ud)-400 10) Which of the following is the expression for the efficiency of Carnot engine? va) (Q1-Q2)/Q1 b)(P_1+P_2)/ P_1 $c)(T_1+T_2)/T_1$ d) $(P_1-P_2)/P_1$ 11) In Fresnel type of diffraction ----- at finite distance from obstacle a) both the source and screen b) only source d)none of these c) only screen

12) The unit of figure of merit is	
\sim a)mm/ μA	b)cm/μA
(0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1) (0.1)	d) IIA/cm
13) CMRR stands for	
(a) Common Mode Rejection Ratio b) Con	nmon Mode Referential Ratio
c) Common Mode Reference Ratio d) (Commercial Mode Rejection Ratio
14) Reverberation of sound is mainly due to	
a)reflection	b)diffraction
c)polarization	drefraction
15) If 'b' is breadth and 'd' is the depth of bar,	then its geometrical moment of inertia is given by
BILLIAN SAN S	
a) $\frac{b^3d^3}{}$	b) $\frac{b^2 d^2}{12}$ d) $\frac{b^2 d^2}{13}$
12 n ² d ³	$\frac{12}{h^2d^2}$
$\frac{1}{\sqrt{2}}$	d) $\frac{b}{12}$
16) Characteristic X-rays depend on	
a)target material	b) wavelength
c) frequency	d) energy of cathode rays
2	
17) A thin coin of radius 6 cm is rolling over a pl	ane horizontal surface. Obtain its critical velocity.
a)52.58cm/s	b)72.58cm/s
	Ld)82.58cm/s
18) Torsional oscillations of wire are due to its	
a) modulus of rigidity	b)Young's modulus
U T bulk modulus of elasticity	d)high density
19) For Rankin's method amount of gas required	is
a) very large	blarge
c)very small	d)huge
	the object and image distances from the respective
focal points for an optical system then	
$0 $ a) $X_1X_2=f_1f_2$	$(b) X_1/X_2=f_1/f_2$
c) $X_1X_2=f_1/f_2$	d) $X_1X_2=f_1f_2$
21) If the total force acting on a particle or system	is zero, then of the particle or system of particles
is conserved.	
(a) Tinear momentum	b) angular momentum
c) energy	d)force
22) The maimum horizontal distance covered by	
a) displacement	b)range
c) flight	d)trajectory
23) Rigid body consist of degrees of free	
a) 3	d) 0
5 × c)6	d) 9
24) A rigid hade in mation can be completely on	ocified if its and are given
24) A rigid body in motion can be completely spe	osition, velocity
	rientation, centre of mass
25) The principle of work is expressed by the eq	uation
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1	(\$\(\frac{1}{2}\)\(\frac{1}{2}\)\(\frac{1}{2}\)
	(X JUNE) \$

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	a) $\sum F_i \cdot \delta r_i = 0$ c) $\sum F_i \cdot \delta v = 0$ d) $F_i \cdot \delta r_i = 0$
	a) $\sum F_i \cdot \delta r_i = 0$ d) $F_i \cdot \delta r_i = 0$
	c) $\sum F_i . \delta v = 0$ d) $F_i . \delta r_i = 0$ 26) A constraint is on the freedom of motion of a system of particles
	the street of
	c) information d) none of these 27) Hamilton's principle is principle
	27) Hamilton's principle is
	d) summation
	c) an algebraic 28) The shortest distance between two points in a plane is along a passing through the two
2	
	points b) normal to plane
	a) curve
	of a particle is same in the fixed and the rotating system
	d) momentum
	30) The frequency of antisymmetric mode is frequency of symmetric mode.
	a) higher than b) lower than
	d)zero
	31) The trajectory of a particle entering an electric field in a direction perpendicular to \vec{E} is
	31) The trajectory of a particle entering an electric north in a second in a
	by parahola
	a) straight line parallel to \vec{E} b) parabola d)circle
	c)hyperbola 32) If \emptyset is scalar potential function then following equation represent Laplace's equation $\frac{1}{2} (q) = \frac{1}{2} (q) = \frac{1}{$
	32) If \emptyset is scalar potential function their following equation represents Φ : $a)\nabla^2\emptyset = 0$
	1) 70 - 0/5
	c) $\nabla \phi = 0$ 33) Mathematical formulation of empirical laws in electricity and magnetism are known as
	a) Lagrangian's equations b) Maxwell's equations
	u) DuBrung
	34) The equation of continuity is in accordance with the law of conservation of
	34) The equation of continuity is in accordance with the law of some momentum
	a) chergy
	c) charge 35) Electric dipole moment per unit volume of polarized medium is called
	35) Electric dipole moment per unit volume of polarization vector P b) Polarization vector P
	d) Electric intensity vector E
	c) Magnetization M 36) According to Ampere's circuital law the line integral of magnetic induction B around closed path
	is equal to the total current I enclosed by the closed path.
1	a) twice
1	d) $\mu_0/4$ times
	c) μ ₀ /2 times 37) The electromagnetic energy crossing unit area in unit time is called
1	a) Poynting vector b)polarization vector
	a) Poynting vector c) energy density b) polarization vector d) current density
	20) I ale tramagnatic fields
	a) total energy is conserved
	d) neither a nor b
	20) The trajectory of charged particle in a constant uniform magnetic field is
	a) straight line
	A A
	0 1
- 1	0110



c)hyperbola	d)c	circle	
40) The trajectory of charged par	ticle in crossed, uniform	n and constant electric and magnetic field is	3
Cycloid	b	b) parabola	
c) hyperbola	d	d) circle	
41) X-rays are the way	'es		
a)electromagnetic		b)longitudinal	
c)mechanical	d)	I)elastic	
42) Characteristic X-rays depend	on	5 0	
, a) target material	b)) wavelength	
c) frequency	d) energy	y of cathode rays	
43) The energy released per fission	on of uranium is about		
a)100 MeV	Lb	7200 MeV	
c)400 MeV	d)	1) 150MeV	
() 44)is the source of stell	lar energy		
a)Nuclear fusion	b)	n)Nuclear fission	
c) chain reaction	d	l)heavy water	
45) The Carbon-Nitrogen cycle of	ontribution about	percentage to the total solar energy	
√ a)5 1,b)	25 c) 10	0 d) 20	
46) In microphonecon	verts into electrical energi	rgy	
(a)sound	b)light		
c)laser energy	d) magnetic field		
47) The 'S' energy levels are alw	ays		
a)double	biriple		
c)single	d)multiple		
48) Doublet separation	with increase of atomic	c number	
a)increases	b)decreases	\$	
c)remain same	d)becomes zero		
49) Principal quantum number 'r	' defines the position of	f electron in	
a)Shell	b)Subshell		
c)nucleus	Ld)outermost		
50) Normal Zeeman effect is ob	served when atom is plan	aced infield	
a)Weak magnetic	(b)strong ma	agnetic	
c)weak electric	d)strong ele	ectric	



Miss. Tahesin Altat Mulla

Roll No. 7254

"Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur.

Department of Physics Quiz Contest 2021-22

Instruction:

1. Each question carries 2 marks



1.	Lacii question carries 2 in	diks.
2.	Only one option can be co	onsidered by evaluator.
3.	If two options have ticked	I then the question will be considered as not attempted.
Q.) Selec	t correct alternative.	
1) Newto	n's first law of motion is kn	own as law of
a) Momentum	b) Inertia
C	e) Energy	d) Force
2) The en	ergy possessed by the body	by virtue of its motion is
		b) Potential energy
	c) Mechanical energy	
		quation of S.H.M. is
	$x = a^2 \sin(\omega t + \alpha)$	
С	$x^2 = a \sin(\omega t + \alpha)$	d) $x^2 = a^2 \sin(\omega t + \alpha)$
	eamline flow the equation o	
	a) $a_1v_1 = a_2v_2$	b) $a_1^2 v_1 = a_2^2 v_2$
	a) $a_1 v_1 = a_2 v_2$ b) $a_1 v_1^2 = a_2 v_2^2$	d) $a_1^2 v_1^3 = a_2^3 v_2^2$
	onic waves are w	
	ı) Light	b) sound
(2,0)	electromagnetic	d) matter
	gen's eyepiece lenses are	
0 8) Plano Concave	b) Convex
	e) Plano convex	d) Concave
7) In case	of compound pendulum, th	he centre of suspension and the centre of suspension of compound
pendulum	1	
	cannot be interchanged	
		d) are same points in few cases
8) The an	gle of contact between glas	s and mercury is
a)	a right angle	b) acute angle
	an obtuse angle	d) always zero
9) At wha	at temperature do he Celsius	s and the Fahrenheit scales coincides?
/) /	30°	b) -30°
(c) 4		d) -40°
10) Whic	h of the following is the exp	pression for the efficiency of Carnot engine?
7 -a)	$(Q_1-Q_2)/Q_1$	b)(P_1+P_2)/ P_1
	$(T_1+T_2)/T_1$	$d)(P_1-P_2)/P_1$
11) In Fre	esnel type of diffraction	at finite distance from obstacle
2 - a)	both the source and screen	
c) (only screen	d)none of these



12) The unit of figure of merit is	
a)mm/µA	b)am/u 4
c) µA/mm	b)cm/µA
13) CMRR stands for	d) μA/cm
a) Common Mode Rejection Ratio b)	Common Mode Referential Ratio
	d) Commercial Mode Rejection Ratio
14) Reverberation of sound is mainly due to .	
a)reflection	b)diffraction
c)polarization	d)refraction
4.0 Get 3.0 April 4.0 Apri	bar, then its geometrical moment of inertia is given by
O^	,
b^3d^3	b^2d^2
a) 12	0) 12
a) $\frac{b^3 d^3}{12}$ c) $\frac{b^2 d^3}{12}$	b) $\frac{b^2 d^2}{12}$ d) $\frac{b^2 d^2}{12}$
16) Characteristic X-rays depend on	12
a)target material	b) wavelength
c) frequency	d) energy of cathode rays
, oquas)	a) onoigh or sumous ruje
17) A thin coin of radius 6 cm is rolling over	a plane horizontal surface. Obtain its critical velocity.
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c)62.58cm/s	d)82.58cm/s
18) Torsional oscillations of wire are due to it	
a) modulus of rigidity	b)Young's modulus
e) bulk modulus of elasticity	d)high density
19) For Rankin's method amount of gas requi	ired is
a) very large	b)large
c)very small	d)huge
20)By Newton's formula, if X ₁ and X ₂ are i	resp. the object and image distances from the respective
focal points for an optical system then	
a) $X_1X_2=f_1f_2$	b) $X_1/X_2=f_1/f_2$
e) $X_1X_2=f_1/f_2$	d) $X_1X_2=f_1f_2$
	stem is zero, then of the particle or system of particles
is conserved.	
a) linear momentum	b) angular momentum
c) energy	d)force
A STATE OF THE STA	d by a projectile is called theof the projectile
a) displacement	b)range
c) flight	d)trajectory
23) Rigid body consist of degrees of	
a) 3	b) 1
e) 6	d) 9
21) A rigid body in motion can be completely	y specified if its and are given
\ / /	b)position, velocity
	d) orientation, centre of mass
25) The principle of work is expressed by the	
25) The principle of work is expressed by the	OLLEGE
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a) $\sum F_i . \delta r_i = 0$	b) $\sum F_i^{(a)} \delta r_i = 0$
c) $\sum F_i \cdot \delta v = 0$	d) $F_i \cdot \delta r_i = 0$
26) A constraint is on the freedom	
a) restriction	b)condition
c) information	d) none of these
27) Hamilton's principle is prin	nciple
a) differential	b) integral
c) an algebraic	d) summation
28) The shortest distance between two points	nts in a plane is along a passing through the two
points	
a) curve	b) normal to plane
e) straight line	d) circle
(29) of a particle is same in the f	ixed and the rotating system
a) velocity	b) linear acceleration
e) angular acceleration	d) momentum
70) The frequency of antisymmetric mode i	s frequency of symmetric mode.
a) higher than	b)lower than
c) towest than	d)zero
31)The trajectory of a particle entering an e	lectric field in a direction perpendicular to \vec{E} is
0	1. 1
a) straight line parallel to \vec{E}	b)-parabola
c)hyperbola	d)circle
	ollowing equation represent Laplace's equation
a) $\nabla^2 \emptyset = 0$	b) $\nabla^2 \emptyset = \rho/\epsilon_0$
\mathbf{e}) $\nabla \mathbf{\phi} = 0$	d) $\nabla \phi = \rho/\epsilon_0$
	laws in electricity and magnetism are known as
a) Lagrangian's equations	
c) Lorent'sz equations	d) Newton's equations
	nce with the law of conservation of
a) energy	b) momentum
c) charge	d)angular momentum
35) Electric dipole moment per unit volume	
a) Displacement vector D	
c) Magnetization M	d) Electric intensity vector E
	e line integral of magnetic induction B around closed path
is equal to the total current I end	
75 CX	b) μ ₀ times
a) twice c) μ ₀ /2 times	d) $\mu_0/4$ times
37) The electromagnetic energy crossing un	
a) Poynting vector	b)polarization vector
<u> </u>	d) current density
c)energy density	d) current density
38) In electromagnetic fields	b)total momentum is conserved
a) total energy is conserved	d) neither a nor b
e) both a and b	
39) The trajectory of charged particle in a	b) parabola
a) straight line	o, paraoota
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c)hyperbola d)circle 40) The trajectory of charged particle in crossed, uniform and constant electric and magnetic field is -b) parabola a) Cycloid c) hyperbola d) circle 41) X-rays are the waves a)electromagnetic b)longitudinal d)elastic c)mechanical 42) Characteristic X-rays depend on a) target material b) wavelength c) frequency d) energy of cathode rays 43) The energy released per fission of uranium is about a)100 MeV b)200 MeV c)400 MeV d) 150MeVis the source of stellar energy a) Nuclear fusion b) Nuclear fission d)heavy water c) chain reaction 45) The Carbon-Nitrogen cycle contribution about percentage to the total solar energy c) 10 d) 20 b) 25 a)5 46) In microphoneconverts into electrical energy a)sound b)light d) magnetic field c)laser energy 47) The 'S' energy levels are always b)triple a)double d)multiple c)single 48) Doublet separation with increase of atomic number b)decreases a)increases d)becomes zero c)remain same 49) Principal quantum number 'n' defines the position of electron in a)Shell b)Subshell d)outermost orbit c)nucleus Normal Zeeman effect is observed when atom is placed infield a)Weak magnetic b)strong magnetic d)strong electric e)weak electric



Mr. Amey Sunil Zapke Roll No. 7167

"Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur.

Department of Physics Quiz Contest 2021-22

Instruction:

- 1. Each question carries 2 marks.
- 2. Only one option can be considered by evaluator.

	3. If two options have ticked	d then the question will be considered as not attempted.
Q.) Sel	ect correct alternative.	
1) New	ton's first law of motion is kn	nown as law of
20	a) Momentum	b) Inertia
	c) Energy	d) Force
2) The		by virtue of its motion is
0/	a) Kinetic energy	b) Potential energy
	Mechanical energy	
3) A v	valid solution of differential ed	quation of S.H.M. is
OX	a) $x = a^2 \sin(\omega t + \alpha)$	b) $x = a \sin(\omega t + \alpha)$
	$(x) x^2 = a \sin(\omega t + \alpha)$	d) $x^2 = a^2 \sin(\omega t + \alpha)$
4) For s	streamline flow the equation of	
OX	a) $a_1v_1 = a_2v_2$ c) $a_1v_1^2 = a_2v_2^2$	b) $a_1^2 v_1 = a_2^2 v_2$
y5) Ultra	asonic waves are v	
61	a) Light	b) sound
2000 1000 1000	electromagnetic	
	uygen's eyepiece lenses are .	
W.	a) Plano Concave	The state of the s
-/-		d) Concave
		the centre of suspension and the centre of suspension of compound
	um	
	a) cannot be interchanged	
		d) are same points in few cases
		ss and mercury is
0%	a) a right angle	b) acute angle
	c) an obtuse angle	d) always zero
	17.1	s and the Fahrenheit scales coincides?
	a) 30°	b) =30°
	2) 40°	d) -40°
		pression for the efficiency of Carnot engine?
	a) $(Q_1-Q_2)/Q_1$	b)(P_1+P_2)/ P_1
	c) $(T_1+T_2)/T_1$	d)(P ₁ -P ₂)/P ₁
		at finite distance from obstacle
	a) both the source and screen	
	c) only screen	d)none of these



12)	The unit of figure of monit is	
0	The unit of figure of merit is a)mm/μA	h) and /i. A
	c) μA/mm	b)cm/µA
13)	CMRR stands for	d) μ <i>A</i> /cm
OX)	a) Common Mode Rejection Ratio b) Con	mmon Mode Referential Potio
0/	c) Common Mode Reference Ratio dy	Commercial Mode Rejection Ratio
14)	Reverberation of sound is mainly due to	commercial wode rejection ratio
	a)reflection	b)diffraction
	c)polarization	d)refraction
15)		then its geometrical moment of inertia is given by
~ X		and the grant and an arranged and the grant of
0	a) $\frac{b^3d^3}{}$	b) $\frac{b^2d^2}{}$
	a) $\frac{b^3 d^3}{12}$ c) $\frac{b^2 d^3}{12}$	b) $\frac{b^2 d^2}{12}$
	c) $\frac{b}{12}$	d) 6-a-
16)	Characteristic X-rays depend on	12
	a)target material	b) wavelength
	e) frequency	d) energy of cathode rays
17)	A thin coin of radius 6 cm is rolling over a pla	ane horizontal surface. Obtain its critical velocity.
0/	a)52.58cm/s	b)72.58cm/s
1.0%	c)62.58cm/s	d)82.58cm/s
18)	Torsional oscillations of wire are due to its	
7	a) modulus of rigidity	b)Young's modulus
10)	c) bulk modulus of elasticity	d)high density
× (19)	For Rankin's method amount of gas required	
0/	a) very large	b)large
201	c)very small	d)huge
foc	al points for an optical system then	the object and image distances from the respective
7	a) $X_1X_2=f_1f_2$	b) $X_1/X_2=f_1/f_2$
	c) $X_1X_2=f_1/f_2$	d) $X_1 X_2 = f_1 f_2$
21)		is zero, then of the particle or system of particles
	onserved.	,
1	a) linear momentum	b) angular momentum
	c) energy	d)force
22)	The maimum horizontal distance covered by	a projectile is called theof the projectile
0//	a) displacement	b)range
	c) flight	d)trajectory
23)	Rigid body consist of degrees of free	(ACC) 194
OX	a) 3	b) 1
	c) 6	d) 9
24)	A rigid body in motion can be completely spe	oified if its and are given
		sition, velocity
		ientation, centre of mass
25)	The principle of work is expressed by the equ	
2	and primarphia at manning empressions by time equ	
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		(JUNE) E
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		A STATE OF THE STA

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a) $\sum F_i \cdot \delta r_i = 0$	b) $\sum F_i^{(a)} . \delta r_i = 0$
c) $\sum F_i \cdot \delta v = 0$	$d\mathbf{r} \mathbf{F}_{i} \cdot \delta \mathbf{r}_{i} = 0$
26) A constraint is on the freedom	of motion of a system of particles
a) restriction	b)condition
(e) information	d) none of these
27) Hamilton's principle is prin	ciple
a) differential	b) integral
	d) summation
	ts in a plane is along a passing through the two
points	1
2 a) curve	b) normal to plane
c) straight line	d) circle
a) velocity	
2 a) velocity c) angular acceleration	b) linear acceleration
30) The frequency of antisymmetric mode is	d) momentum
a) higher than	b)lower than
	dizero
31)The trajectory of a particle entering an ele	Total and appropriate the same of the sam
	ective field in a direction perpendicular to E — is
a) straight line parallel to \vec{E}	b) parabola
c)hyperbola	d)circle
	llowing equation represent Laplace's equation
a) $\nabla^2 \phi = 0$	b) $\nabla^2 \emptyset = \rho/\epsilon_0$
$c) \nabla \emptyset = 0$	$d) \nabla \emptyset = \rho/\epsilon_0$
	aws in electricity and magnetism are known as
a) Lagrangian's equations	b) Maxwell's equations
c) Lorent'sz equations	d) Newton's equations
34)The equation of continuity is in accordance	
a) energy	b) momentum
c) charge	d)angular momentum
35) Electric dipole moment per unit volume	
a) Displacement vector D	b) Polarization vector P
c) Magnetization M	d) Electric intensity vector E
	line integral of magnetic induction B around closed path
is equal to the total current I encl	
a) twice	b) μ_0 times
c) $\mu_0/2$ times	d) $\mu_0/4$ times
The electromagnetic energy crossing uni	b)polarization vector
a) Poynting vector c)energy density	d) current density
38) In electromagnetic fields	d) current density
a) total energy is conserved	b)total momentum is conserved
c) both a and b	d) neither a nor b
39) The trajectory of charged particle in a c	1.50
a) straight line	b) parabola
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d)circle c)hyperbola 40) The trajectory of charged particle in crossed, uniform and constant electric and magnetic field is -b) parabola a) Cycloid d) circle c) hyperbola 41) X-rays are the waves a)electromagnetic b)longitudinal d)elastic c)mechanical 2) Characteristic X-rays depend on b) wavelength a) target material d) energy of cathode rays c) frequency 43) The energy released per fission of uranium is about b)200 MeV a)100 MeV d) 150MeV c)400 MeVis the source of stellar energy b)Nuclear fission a) Nuclear fusion d)heavy water c) chain reaction 45) The Carbon-Nitrogen cycle contribution about percentage to the total solar energy d) 20 a)5 b) 25 c) 10 46) In microphoneconverts into electrical energy b)light a)sound d) magnetic field c)taser energy 47) The 'S' energy levels are always bitriple a)double d)multiple c)single 48) Doublet separation with increase of atomic number b)decreases a)increases cremain same d)becomes zero 49) Principal quantum number 'n' defines the position of electron in b)Subshell a)Shell d)outermost orbit c)nucleus 50) Normal Zeeman effect is observed when atom is placed infield b)strong magnetic a)Weak magnetic d)strong electric c)weak electric



Miss Vedika Vaibhov Chikhalkar Roll No:- 7204

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Department of Physics Quiz Contest 2021-22

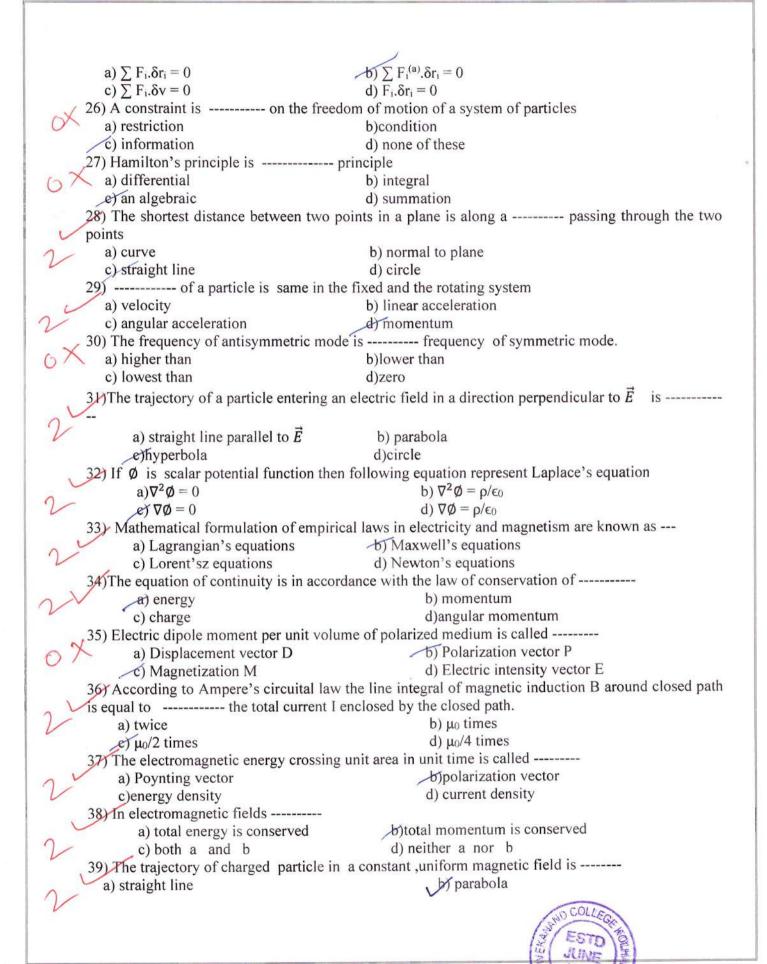
Instruction:

1. Each question carries 2 marks.

	1. Each question carries 2 marks	
	Only one option can be considered.	lered by evaluator.
	3. If two options have ticked the	n the question will be considered as not attempted.
0).) Select correct alternative.	
	그렇게 없는 없어 보다 하는 나는 아이들이 어려면 있다면 하다면 하면 맛이 되어 하고 있다면 하고 있다면 하는데	l C
1) Newton's first law of motion is known	
2-1	a) Momentum	b) Inertia
	c) Energy	d) Force
2) The energy possessed by the body by	
1 V	(a) Kinetic energy b) F	otential energy
V	c) Mechanical energy d)	Total energy
3) A valid solution of differential equati	on of S.H.M. is
OX	a) $x = a^2 \sin(\omega t + \alpha)$ /b)	$x = a \sin(\omega t + \alpha)$
0	c) $x^2 = a \sin(\omega t + \alpha)$ d)	
4) For streamline flow the equation of co	
OX	a) $a_1v_1 = a_2v_2$ b) a	$a_1^2 v_1 = a_2^2 v_2$
	a) $a_1v_1 = a_2v_2$ b) a c) $a_1v_1^2 = a_2v_2^2$ d) a	$a_1^2 v_1^3 = a_2^3 v_2^2$
5) Ultrasonic waves are waves	S
~X		ound
01		natter
6) In Huygen's eyepiece lenses are	
	TEST (1997년 1일 1997년 - 1997년 199	Convex
OX		Concave
7		
	endulum	ntre of suspension and the centre of suspension of compound
o \		intended and lo
1	a) cannot be interchanged by	
	c) are at two different points d	
8) The angle of contact between glass and	
01	a) a right angle	b) acute angle
	c) an obtuse angle	d) always zero
9	At what temperature do he Celsius and	the Fahrenheit scales coincides?
	a) 30°	b) -30°
2	c) 40°	d)-40°
1	(9) Which of the following is the express	ion for the efficiency of Carnot engine?
2	$(Q_1-Q_2)/Q_1$	b)(P_1+P_2)/ P_1
V	$c)(T_1+T_2)/T_1$	d)(P_1 - P_2)/ P_1
1	1) In Fresnel type of diffraction	at finite distance from obstacle
~	a) both the source and screen	b) only source
0/1	e) only screen	d)none of these
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12) The	
12) The unit of figure of merit is	(a)
$\frac{2}{2}$ a)mm/ μA	b)cm/µA
c) µA/mm	d) μA/cm
13) CMRR stands for	The Annual of the second of th
a) Common Mode Rejection Ra	tio b) Common Mode Referential Ratio
c) Common Mode Reference Ra	tio d) Commercial Mode Rejection Ratio
14) Reverberation of sound is mainly du	
a)reflection	b)diffraction
c)polarization	d)refraction
11 b is breadth and 'd' is the dept	th of bar, then its geometrical moment of inertia is given by
b^3d^3	h^2d^2
$\frac{b^3 d^3}{12}$ c) $\frac{b^2 d^3}{12}$	b) $\frac{b^2 d^2}{12}$ d) $\frac{b^2 d^2}{12}$
c) $\frac{b^2d^3}{}$	d) $b^2 \overline{d}^2$
12	12
16) Characteristic X-rays depend on	
a)target material c) frequency	b) wavelength
c) frequency	d) energy of cathode rays
17) A thin coin of radius 6 cm is rolling	over a plane horizontal surface. Obtain its critical velocity.
a)52.58cm/s	b)72.58cm/s
c)62.58cm/s	d)82.58cm/s
18) Torsional oscillations of wire are due	e to its
a) modulus of rigidity	b)Young's modulus
c) bulk modulus of elasticity	d)high density
19) For Rankin's method amount of gas	
a) very large	b)large
c)very small	d)huge
	are resp. the object and image distances from the respective
focal points for an optical system then	
$a)X_1X_2=f_1f_2$	(b) $X_1/X_2=f_1/f_2$
c) $X_1X_2=f_1/f_2$	d) $X_1X_2=f_1f_2$
21) If the total force acting on a particle of	or system is zero, then of the particle or system of particles
is conserved.	Potential and the Potential an
a) linear momentum	b) angular momentum
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22) The maimum horizontal distance co	vered by a projectile is called theof the projectile
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c) flight	d)trajectory
23) Rigid body consist of degree	es of freedom
(a) 3	b) 1
c) 6	d) 9
24/ A rigid body in motion can be compl	etely specified if its and are given
a) position, orientation	b)position, velocity
c) position, centre of mass	d) orientation, centre of mass
25) The principle of work is expressed b	
2 The principle of Work is expressed to	college
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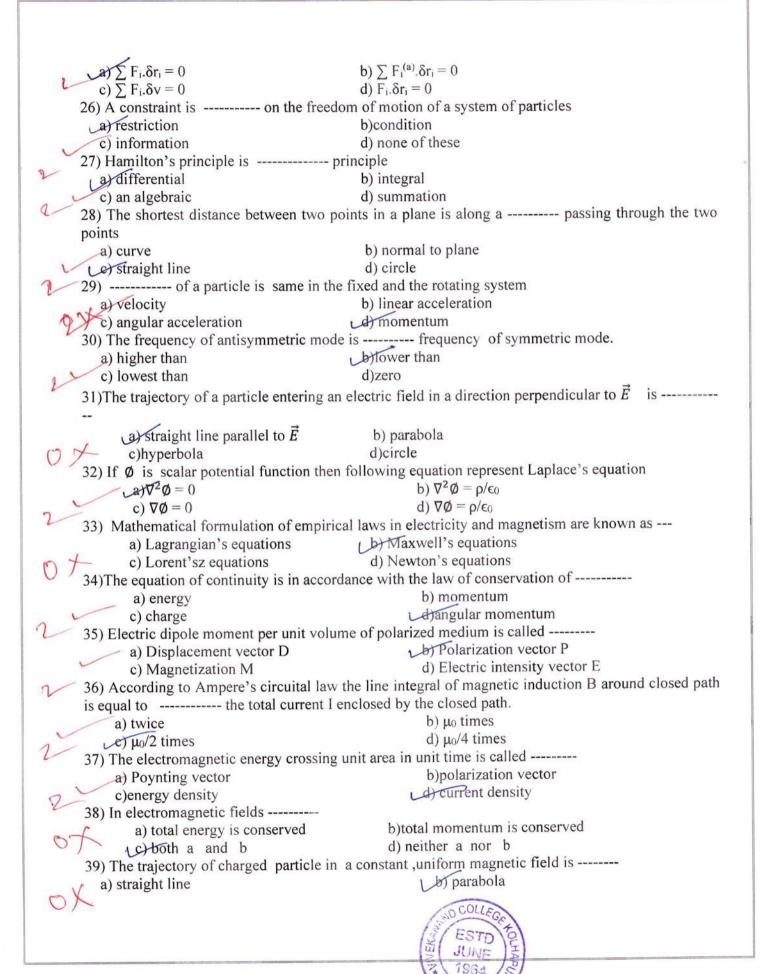
c)hyperbola d)circle 40) The trajectory of charged particle in crossed, uniform and constant electric and magnetic field is -a) Cycloid b) parabola c) hyperbola d) circle 41) X-rays are the waves a)electromagnetic b)longitudinal c)mechanical d)elastic 42) Characteristic X-rays depend on a) target material b) wavelength e frequency d) energy of cathode rays 43) The energy released per fission of uranium is about a)100 MeV b)200 MeV c)400 MeV et 150MeVis the source of stellar energy a)Nuclear fusion b)Nuclear fission c) chain reaction d)heavy water 45) The Carbon-Nitrogen cycle contribution about percentage to the total solar energy b) 25 d) 20 c) 10 46) In microphoneconverts into electrical energy b)light a)sound c)laser energy d) magnetic field 47) The 'S' energy levels are always a)double b)triple c)single d)multiple 18) Doublet separation with increase of atomic number ajincreases b)decreases c)remain same d)becomes zero 9) Principal quantum number 'n' defines the position of electron in a)Shell b)Subshell c)nucleus d)outermost orbit 50) Normal Zeeman effect is observed when atom is placed infield a)Weak magnetic b)strong magnetic d)strong electric c)weak electric



"Education for Knowledge, Science and Culture" -Shikshanmaharshi Dr. Bapuji Salunkhe Shri Swami Vivekanand Shikshan Sanstha's Vivekanand College (Autonomous), Kolhapur. Department of Physics Ouiz Contest 2021-22 Instruction: Each question carries 2 marks. 2. Only one option can be considered by evaluator. 3. If two options have ticked then the question will be considered as not attempted. O.) Select correct alternative. 1) Newton's first law of motion is known as law of ------Momentum b) Inertia c) Energy d) Force 2) The energy possessed by the body by virtue of its motion is-----(a) Kinetic energy b) Potential energy c) Mechanical energy d) Total energy 3) A valid solution of differential equation of S.H.M. is ----a) $x = a^2 \sin(\omega t + \alpha)$ b) $x = a \sin(\omega t + \alpha)$ c) $x^2 = a \sin(\omega t + \alpha)$ d) $x^2 = a^2 \sin(\omega t + \alpha)$ 4) For streamline flow the equation of continuity is a) $a_1v_1 = a_2v_2$ c) $a_1v_1^2 = a_2v_2^2$ b) $a_1^2v_1 = a_2^2v_2$ d) $a_1^2 v_1^3 = a_2^3 v_2^2$ 5) Ultrasonic waves are waves a) Light Lb) sound c) electromagnetic d) matter 6) In Huygen's eyepiece lenses are a) Plano Concave b) Convex Plano convex d) Concave 7) In case of compound pendulum, the centre of suspension and the centre of suspension of compound pendulum..... b) are interchangeable a) cannot be interchanged c) are at two different points d) are same points in few cases 8) The angle of contact between glass and mercury is...... a) a right angle b) acute angle 1 c) an obtuse angle d) always zero 9) At what temperature do he Celsius and the Fahrenheit scales coincides? b) -30° a) 30° 1et -400 c) 40° 10) Which of the following is the expression for the efficiency of Carnot engine? ($Q_1 - Q_2$)/ Q_1 b)(P_1+P_2)/ P_1 $c)(T_1+T_2)/T_1$ d) $(P_1-P_2)/P_1$ 11) In Fresnel type of diffraction ----- at finite distance from obstacle a) both the source and screen b) only source c) only screen d)none of these

12) The unit of figure of merit is	
a)mm/µA	b)cm/μA
(LC) AA/mm	d) μA/cm
13) CMRR stands for	
(a) Common Mode Rejection Ratio b) Co	
c) Common Mode Reference Ratio d)	Commercial Mode Rejection Ratio
14) Reverberation of sound is mainly due to	
a)reflection	b)diffraction
c)polarization	d)refraction
15) If 'b' is breadth and 'd' is the depth of bar	r, then its geometrical moment of inertia is given by
	. 21.3
$ \begin{array}{c} $	16) 6° 42°
$ \begin{array}{c} $	$d) \frac{b^2 d^2}{12}$
c) $\frac{b}{12}$	d) $\frac{1}{12}$
16) Characteristic X-rays depend on	
a target material	b) wavelength
c) frequency	d) energy of cathode rays
17) A thin coin of radius 6 cm is rolling over a p	plane horizontal surface. Obtain its critical velocity.
a)52.58cm/s	b)72.58cm/s
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18) Torsional oscillations of wire are due to its	
a) modulus of rigidity	b)Young's modulus
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19) For Rankin's method amount of gas required	d is
a) very large	b)large
a) very large	d)huge
20)By Newton's formula, if X1 and X2 are response	p. the object and image distances from the respective
focal points for an optical system then	3 73
a) $X_1X_2=f_1f_2$	b) $X_1 + X_2 = f_1/f_2$ d) $X_1 X_2 = f_1 f_2$
$(0) \xrightarrow{a} (X_1 X_2 = f_1 f_2)$ c) $(X_1 X_2 = f_1 / f_2)$	$d)X_1X_2=f_1f_2$
21) If the total force acting on a particle or system	m is zero, then of the particle or system of particles
is conserved.	
a) linear momentum	b) angular momentum
c) energy	d)force
The maimum horizontal distance covered b	y a projectile is called theof the projectile
a) displacement	b)range
c) flight	ditrajectory
23) Rigid body consist of degrees of fr	
a) 3	b) 1
of Lieto	d) 9
	ig its
24) A rigid body in motion can be completely s	pecified if its and are given
a) position, orientation	position, velocity
/ / / /	orientation, centre of mass
25) The principle of work is expressed by the e	equation





	c)hyperbola	d)circle
	40) The trajectory of charged particle in cre	ossed, uniform and constant electric and magnetic field is
170		
0	a) Cycloid	(b) parabola
1	c) hyperbola	d) circle
	41) X-rays are the waves	
_	a)electromagnetic	b)longitudinal
2	c)mechanical	d)elastic
	42) Characteristic X-rays depend on	
	a) target material	b) wavelength
2	c) frequency	d) energy of cathode rays
	43) The energy released per fission of uran	ium is about
	a)100 MeV	b)200 MeV
50	(e)400 MeV	d) 150MeV
	44)is the source of stellar energy	
	a)Nuclear fusion	Nuclear fission
0.	c) chain reaction	d)heavy water
	45) The Carbon-Nitrogen cycle contribution	on about percentage to the total solar energy
+	a)5 b) 25	(c) 10 d) 20
0/	46) In microphoneconverts into	electrical energy
	(a)sound b)ligh	
2	c)laser energy d) magn	etic field
	47) The 'S' energy levels are always	**************************************
•	a)double	b)triple
07	c)single	\d)multiple
	48) Doublet separation with inci-	rease of atomic number
	a)increases	b)decreases
m 7	c)remain same d)become	es zero
0)	49) Principal quantum number 'n' defines	the position of electron in
	(a)Shell	b)Subshell
7	c)nucleus	d)outermost orbit
	50) Normal Zeeman effect is observed wh	en atom is placed infield
	La)Weak magnetic	b)strong magnetic
07	c)weak electric	d)strong electric
	10.00	

