

**"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.**

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**Department of Physics**

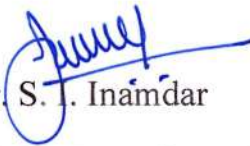
**Notice**

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, 16<sup>th</sup> 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. I. Inamdar

(Activity Co-ordinator)

  
Dr. M. M. Karanjkar

Head of Department  
Department of Physics  
Vivekanand College, Kolhapur  
Vivekanand College, Kolhapur



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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	Ghise
2	Sejal Manoj Shinde	7321	Shinde
3	Tejas Vikas Kothawale	7128	Kothawale
4	Patil Shivani Sidgonda	7081	Patil.
5	Vedika vaibhav chikhalkar	7204	VChikhalkar
6	Tejas Patil	7304	Patil.
7	Sanika Sarjerao Shinde	7080	Shinde.
8	Tahesin Altaf Mulla	7254	Mulla
9	Amev sunil zapke	7167	Zapke.
10	Nadaf Sabreen	7453	Nadaf
11	Anushree Rathod	7426	Rathod.
12	Varsha yashavant panhalkar	7053	Panhalkar.
13	Suyash Sanjay Dongare	7012	Dongare
14	Sakshi Mohan Kamate	7439	Kamate
15	Sanket Santosh patil	7143	Patil
16	Samrudhi suresh Borage	7325	Borage
17	Shruti Vinay Gutte	7016	Gutte.
18	Ritu Rajesh Kumawat	7239	Kumawat
19	Tejaswini sampat rao mali	7044	Mali
20	Ashutosh Sharad Jadhav	7221	A. Jadhav.
21	Lovely Jitendra Sav	7427	Sav
22	Swarup Prakash Mane	7046	Mane
23	Anjali Bhagwan Kamble	7029	Kamble
24	Harshad patil	7056	Patil
25	Aditi Narayan Ingale	7328	Ingale
26	Amrit Raj Birendra Singh	7428	Amrit
27	Tejas Jadhav	7007	Jadhav
28	Shweta rajput	7151	Rajput.
29	Shubham jayram rathod	7276	Rajput
30	Sourabh Rajendra Patil	7145	Patil
31	Harshavardhan kopardekar	7127	Kopardekar
32	Rajnandini Ganesh Gaikwad	7013	Gaikwad.
33	Devendra somnath chavan	7200	DChavan
34	Dhiraj Dattatray Jadhav	7308	D. Jadhav.
35	Ajay Mohan Suryavanshi	7161	Suryavanshi A.
36	Gajare Namrata Ratan	7110	Ratan
37	Bhagyashri bharat Yadav	7431	Yadav
38	Mitali Vijay Naik	7642	Naik
39	Shinde Manisha BaBasaheb	7077	M. B. Shinde.
40	Jadhav shreya Anil	7019	Jadhav
41	Om Sanjay Patil	7058	Patil



42	Shubham Babasaheb Kalkutki	7027	<i>Shubham</i>
43	Prathmesh	7436	<i>Prathmesh</i>
44	Muskan Maurya	7450	<i>Muskan</i>
45	Shankar Gajanan Jadhav	7465	<i>Shankar</i>
46	Omkar Sanjay Sutar	7084	<i>Omkar</i>
47	Patil Prajakta keshav	7060	<i>P. Patil</i>
48	psbote20@gmail.com	7302	<i>Komal C.</i>
49	Komal Prakash Chavan	7003	<i>Chavan</i>
50	Chavan Sakshi suwarnsing	7201	<i>P.P. More</i>
51	PRAJAKTA PRABHAKAR MORE	7049	<i>More</i>
52	Sachin	7258	<i>Sachin</i>
53	Kamble Rutuja Raghunath	7113	<i>Rambhale</i>
54	Sohan Gund	7525	<i>Sohan</i>
55	Adityashivajipatakure	7134	<i>Gund</i>
56	Manon chavhan	7311	<i>Manon</i>



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**Vivekanand College (Autonomous), Kolhapur.**

**Department of Physics**

**Quiz Contest 2021-22**

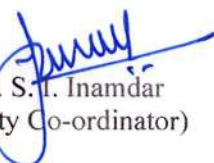
(Wednesday, 16<sup>th</sup> March 2022)


**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
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42	Shubham Babasaheb Kalkutki	7027	40
43	Prathmesh	7436	40
44	Muskan Maurya	7450	38
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46	Omkar Sanjay Sutar	7084	36
47	Patil Prajakta keshav	7060	36
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53	Kamble Rutuja Raghunath	7113	30
54	Sohan Gund	7525	30
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56	Manon chavhan	7311	30

  
 Dr. S. I. Inamdar  
 (Activity Co-ordinator)

  
 Dr. M. M. Karanjkar  
 Head of Department  
 Department of Physics  
 Vivekanand College, Kolhapur



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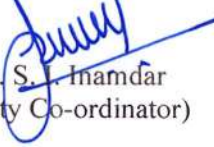
**Department of Physics**


**Quiz Contest 2021-22**

**(Held on Wednesday, 16<sup>th</sup> 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  
Vivekanand College, Kolhapur  
Department of Physics  
Vivekanand College, Kolhapur



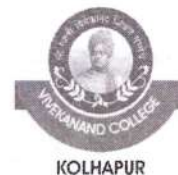
“Dissemination of Education for Knowledge, Science and Culture”

- Shikshanmaharshi Dr. Bapuji Salunkhe



Shri Swami Vivekanand Shikshan Sanstha's

**Vivekanand College, Kolhapur (Autonomous)**



**Department of Physics**

### One Page Report

<b>Name of the Department</b>	Department of Physics																		
<b>Name of the Activity</b>	Quiz contest on : <b>“General Knowledge on Physics”</b>																		
<b>Date / Duration</b>	Wednesday, 16th March 2022, 02.00 pm																		
<b>Aims and Objectives</b>	1) To test the knowledge on students on basic and general physics. 2) To Encourage students for study of basic physics																		
<b>No. of Beneficiaries</b>	<table border="1"><tr><td rowspan="2">Teachers</td><td>Male</td><td>01</td><td rowspan="2">02</td></tr><tr><td>Female</td><td>01</td></tr><tr><td rowspan="2">Students</td><td>Male</td><td>25</td><td rowspan="2">56</td></tr><tr><td>Female</td><td>31</td></tr><tr><td colspan="2"></td><td><b>Total</b></td><td><b>58</b></td></tr></table>			Teachers	Male	01	02	Female	01	Students	Male	25	56	Female	31			<b>Total</b>	<b>58</b>
Teachers	Male	01	02																
	Female	01																	
Students	Male	25	56																
	Female	31																	
		<b>Total</b>	<b>58</b>																
<b>Expenditure and Fundings</b>	College and BBC Marathi Funds																		
<b>Brief Discussion</b>	Dr. M. M. Karanjkar, Professor and Head, Department of Physics, Vivekanand College, Kolhapur (Autonomous) has supported to conduct this quiz contest on 'General Knowledge on Physics' Dr. S. I. Inamdar and Mr. A. V. Shinde has conducted the quiz contest.																		
<b>Outcomes</b>	Students got the chance to present their knowledge in Physics.																		

Dr. M. M. Karanjkar

**HEAD**  
**DEPARTMENT OF PHYSICS**  
**VIVEKANAND COLLEGE, KOLHAPUR**  
**(AUTONOMOUS)**





12) The unit of figure of merit is -----

- OX a) mm/ $\mu A$  b) cm/ $\mu A$   
c)  $\mu A$ /mm d)  $\mu A$ /cm

13) CMRR stands for -----

- 2 ✓ a) Common Mode Rejection Ratio b) Common Mode Referential Ratio  
c) Common Mode Reference Ratio d) Commercial Mode Rejection Ratio

14) Reverberation of sound is mainly due to .....

- OX a) reflection b) diffraction  
c) polarization d) refraction

15) If 'b' is breadth and 'd' is the depth of bar, then its geometrical moment of inertia is given by .....

- 2 ✓ a)  $\frac{b^3 d^3}{12}$  b)  $\frac{b^2 d^2}{12}$   
c)  $\frac{b^2 d^3}{12}$  d)  $\frac{b^2 d^2}{12}$

16) Characteristic X-rays depend on .....

- 2 ✓ a) target material 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.

- OX a) 52.58 cm/s b) 72.58 cm/s  
c) 62.58 cm/s d) 82.58 cm/s

18) Torsional oscillations of wire are due to its.....

- OX a) modulus of rigidity b) Young's modulus  
c) bulk modulus of elasticity d) high density

19) For Rankin's method amount of gas required is.....

- 2 ✓ a) very large b) large  
c) very small d) huge

20) By Newton's formula, if  $X_1$  and  $X_2$  are resp. the object and image distances from the respective focal points for an optical system then.....

- OX a)  $X_1 X_2 = f_1 f_2$  b)  $X_1 / X_2 = f_1 / f_2$   
c)  $X_1 X_2 = f_1 / f_2$  d)  $X_1 X_2 = f_1 f_2$

21) If the total force acting on a particle or system is zero, then ---- of the particle or system of particles is conserved.

- 2 ✓ a) linear momentum b) angular momentum  
c) energy d) force

22) The maximum horizontal distance covered by a projectile is called the ----- of the projectile

- 2 ✓ a) displacement b) range  
c) flight d) trajectory

23) Rigid body consist of ----- degrees of freedom

- OX a) 3 b) 1  
c) 6 d) 9

24) A rigid body in motion can be completely specified if its ----- and ----- are given

- OX a) position, orientation b) position, velocity  
c) position, centre of mass d) orientation, centre of mass

25) The principle of work is expressed by the equation -----



a)  $\sum F_i \cdot \delta r_i = 0$

c)  $\sum F_i \cdot \delta v = 0$

b)  $\sum F_i^{(a)} \cdot \delta r_i = 0$

d)  $F_i \cdot \delta r_i = 0$

26) A constraint is ----- on the freedom of motion of a system of particles

a) restriction

b) condition

c) information

d) none of these

27) Hamilton's principle is ----- principle

a) differential

b) integral

c) an algebraic

d) summation

28) The shortest distance between two points in a plane is along a ----- passing through the two points

a) curve

b) normal to plane

c) straight line

d) circle

29) ----- of a particle is same in the fixed and the rotating system

a) velocity

b) linear acceleration

c) angular acceleration

d) momentum

30) The frequency of antisymmetric mode is ----- frequency of symmetric mode.

a) higher than

b) lower than

c) lowest than

d) zero

31) The trajectory of a particle entering an electric field in a direction perpendicular to  $\vec{E}$  is -----

a) straight line parallel to  $\vec{E}$

b) parabola

c) hyperbola

d) circle

32) If  $\phi$  is scalar potential function then following equation represent Laplace's equation

a)  $\nabla^2 \phi = 0$

b)  $\nabla^2 \phi = \rho/\epsilon_0$

c)  $\nabla \phi = 0$

d)  $\nabla \phi = \rho/\epsilon_0$

33) Mathematical formulation of empirical laws in electricity and magnetism are known as ---

a) Lagrangian's equations

b) Maxwell's equations

c) Lorentz's equations

d) Newton's equations

34) The equation of continuity is in accordance with the law of conservation of -----

a) energy

b) momentum

c) charge

d) angular momentum

35) Electric dipole moment per unit volume of polarized medium is called -----

a) Displacement vector D

b) Polarization vector P

c) Magnetization M

d) Electric intensity vector E

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.

a) twice

b)  $\mu_0$  times

c)  $\mu_0/2$  times

d)  $\mu_0/4$  times

37) The electromagnetic energy crossing unit area in unit time is called -----

a) Poynting vector

b) polarization vector

c) energy density

d) current density

38) In electromagnetic fields -----

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 constant, uniform magnetic field is -----

a) straight line

b) parabola



- c)hyperbola  
d)circle
- 40) The trajectory of charged particle in crossed, uniform and constant electric and magnetic field is --  
-----
- 0x ✓ a) Cycloid  
c) hyperbola
- 41) X-rays are the ..... waves
- 2 ✓ a) electromagnetic  
c) mechanical
- 42) Characteristic X-rays depend on .....
- 2 ✓ a) target material  
c) frequency
- 43) The energy released per fission of uranium is about .....
- ✓ a) 100 MeV  
c) 400 MeV
- 2 44) ..... is the source of stellar energy
- 0x ✓ a) Nuclear fusion  
c) chain reaction
- 45) The Carbon-Nitrogen cycle contribution about ..... percentage to the total solar energy
- 0x a) 5                      ✓ b) 25                      c) 10                      d) 20
- 46) In microphone ..... converts into electrical energy
- 2 ✓ a) sound                      b) light  
c) laser energy                      d) magnetic field
- 47) The 'S' energy levels are always .....
- 0x a) double                      ✓ b) triple  
c) single                      d) multiple
- 48) Doublet separation ..... with increase of atomic number
- 0x a) increases                      b) decreases  
c) remain same                      d) becomes zero
- 49) Principal quantum number 'n' defines the position of electron in .....
- 0x a) Shell                      b) Subshell  
c) nucleus                      ✓ d) outermost orbit
- 50) Normal Zeeman effect is observed when atom is placed in ..... field
- 2 ✓ a) Weak magnetic                      ✓ b) strong magnetic  
c) weak electric                      d) strong electric







a)  $\sum F_i \cdot \delta r_i = 0$

c)  $\sum F_i \cdot \delta v = 0$

b)  $\sum F_i^{(a)} \cdot \delta r_i = 0$

d)  $F_i \cdot \delta r_i = 0$

2L ✓ 26) A constraint is ----- on the freedom of motion of a system of particles

a) restriction

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d) none of these

2L ✓ 27) Hamilton's principle is ----- principle

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b) integral

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OX 29) ----- of a particle is same in the fixed and the rotating system

a) velocity

e) angular acceleration

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a) higher than

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b) lower than

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- 24/ 40) The trajectory of charged particle in crossed, uniform and constant electric and magnetic field is --  
-----  
a) Cycloid b) parabola  
c) hyperbola d) circle
- 0X 41) X-rays are the ..... waves  
a)electromagnetic b)longitudinal  
c)mechanical d)elastic
- 24/ 42) Characteristic X-rays depend on .....  
a) target material b) wavelength  
c) frequency d) energy of cathode rays
- 0X 43) The energy released per fission of uranium is about .....  
a)100 MeV b)200 MeV  
c)400 MeV d) 150MeV
- 0X 44) .....is the source of stellar energy  
a)Nuclear fusion b)Nuclear fission  
c) chain reaction d)heavy water
- 0X 45) The Carbon-Nitrogen cycle contribution about ..... percentage to the total solar energy  
a)5 b) 25 c) 10 d) 20
- 24/ 46) In microphone .....converts into electrical energy  
a)sound b)light  
c)laser energy d) magnetic field
- 24/ 47) The 'S' energy levels are always .....  
a)double b)triple  
c)single d)multiple
- 0X 48) Doublet separation ..... with increase of atomic number  
a)increases b)decreases  
c)remain same d)becomes zero
- 24/ 49) Principal quantum number 'n' defines the position of electron in .....  
a)Shell b)Subshell  
c)nucleus d)outermost orbit
- 24/ 50) Normal Zeeman effect is observed when atom is placed in .....field  
a)Weak magnetic b)strong magnetic  
c)weak electric d)strong electric





Mr. Amey Sunil Zapke

Roll No. 7167

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Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College (Autonomous), Kolhapur.

Department of Physics

Quiz Contest 2021-22

56  
100  
July

**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  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)  $a_1 v_1 = a_2 v_2$   b)  $a_1^2 v_1 = a_2^2 v_2$    
c)  $a_1 v_1^2 = a_2 v_2^2$   d)   $a_1^2 v_1^3 = a_2^3 v_2^2$
- 5) Ultrasonic waves are ..... waves  
a) Light  b) sound   
c)  electromagnetic  d) matter
- 6) In Huygen's eyepiece lenses are .....  
a)  Plano Concave  b) Convex   
c) 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   
c) an obtuse angle  d) always zero
- 9) At what temperature do the Celsius and the Fahrenheit scales coincide?  
a)  $30^\circ$   b)   $-30^\circ$   
c)  $40^\circ$   d)  $-40^\circ$
- 10) Which of the following is the expression 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)  $(P_1 - P_2)/P_1$
- 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)  $\text{mm}/\mu\text{A}$  b)  $\text{cm}/\mu\text{A}$   
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Quiz Contest 2021-22

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