M. G.V.C. ARTS, COMMERCE AND SCIENCE COLLEGE MUDDEBIHAL

DEPARTMENT OF PHYSICS

LIST OF SLOW LEARNERS

(Identified on the basis of PUC-II year result- below 75%)

FOR THE YEAR 2024-25 Class- B.Sc.-I SEMESTER

Sl. No	Reg. No	Name of the student	% of marks (puc-II year)
1	U15NU24S0104	Abdullatif. Nadaf	59.2%
2	U15NU24S0115	Sangamesh. Wadawadagi	71.3%
3	U15NU24S0012	Siddu. Hullur	71.7%
4	U15NU24S0075	Sagar. Bidarakundi	72.3%
5	U15NU24S0002	Sahana. Patil	72.5%
6	U15NU24S0121	Santhosh. Sangam	73.0%
7	U15NU24S0096	Hinakousar. Nadaf	73.3%
8	U15NU24S0123	Amruta. Bavikatti	74.5%
9	U15NU24S0006	Saraswati Bagewadi	74.8%

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DEPARTMENT OF PHYSICS

NOTICE

Date: 02.09.2024

The following students of B.Sc. I Semester selected for remedial cases are here by informed to attend the classes commencing from 05-09-2024 without fail.

Sl. No	Reg. No	Name of the student
1	U15NU24S0104	Abdullatif. Nadaf
2	U15NU24S0115	Sangamesh. Wadawadagi
3	U15NU24S0012	Siddu. Hullur
4	U15NU24S0075	Sagar. Bidarakundi
5	U15NU24S0002	Sahana. Patil
6	U15NU24S0121	Santhosh. Sangam
7	U15NU24S0096	Hinakousar. Nadaf
8	U15NU24S0123	Amruta. Bavikatti
9	U15NU24S0006	Saraswati Bagewadi

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Headlines of Topics dealing in Remedial Classes

FOR

SLOW LEARNERS Year 2024-25

1.Conservation Laws

- Law of conservation of linear momentum (statement).
- Centre of mass & Expressions for position vector, velocity, acceleration & force of Centre of mass.
- Distinction between laboratory frame of reference and Centre of mass frame of reference.
- Concept of elastic and inelastic collisions.
- Derivation of final velocities in case of elastic collision in (i) laboratory frame of reference (ii) Centre of mass frame of reference.

2. Principle of rocket

- Derivation for equation of motion for single stage rocket.
- Necessity of multistage rocket (Qualitative).
- Basics of angular momentum and torque, relation between angular momentum & torque (qualitative).
- Law of conservation of angular momentum with examples.
- Law of conservation of energy. Work energy Principle.

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Department of Physics

Statement of Remedial Class Time Table for Slow Learners

for the year 2024-25

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4.00 PM To 5.00 PM	Physics SSH	-	Physics ABK	-	Physics SNP	-
5.00 PM To 6.00 PM	-	Physics SMN	-	-	-	-

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Strategies for Slow learners 2024-25

1. Conducting Special classes
2. Supplying Study materials
3. Revising the concepts
4. Conducting tests

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NOTICE

Date: 25.09.24

The students of B.Sc. I Semester (Slow learners) are here by informed to attend the Test on 28-09-2024 without fail.

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DEPARTMENT OF PHYSICS

QUESTION PAPER FOR SLOW LEARNERS 2024-25

Class: B.Sc.-I semester

Date: 28-09-2024

Time: 4.00 to 5.00 PM

Max marks: 20Marks

Answer the following questions (each question carries 4mark)

1. Explain Elastic and inelastic Collison.
2. State and explain Work-energy principle.
3. State and Explain law of Conservation of linear momentum of a single particle.
4. Distinguish between laboratory frame of reference and Centre of mass frame of reference.
5. State and explain Law of conservation of Angular momentum.

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DEPARTMENT OF PHYSICS

STATEMENT OF TEST MARKS (SLOW LEARNERS)

FOR THE YEAR 2024-25 **Class- B.Sc.-I SEMESTER**

Sl. No	Reg. No	Name of the students	Max marks	Marks obtained
1	U15NU24S0104	Abdullatif.Nadaf	20	17
2	U15NU24S0115	Sangamesh.Wadawadagi	20	18
3	U15NU24S0012	Siddu. Hullur	20	18
4	U15NU24S0075	Sagar. Bidarakundi	20	17
5	U15NU24S0002	Sahana. Patil	20	18
6	U15NU24S0121	Santhosh. Sangam	20	17
7	U15NU24S0096	Hinakousar. Nadaf	20	18
8	U15NU24S0123	Amruta. Bavikatti	20	18
9	U15NU24S0006	Saraswati Bagewadi	20	19

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MATOSHRI GANGAMMA VEERAPPA CHINIWAR

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DEPARTMENT OF PHYSICS

ATTENDANCE OF SLOW LEARNERS FOR THE YEAR 2024-25

Sl.No	Name of the Students	01/08/24	02/08	03/08	08/08	09/08	10/08	11/08	12/08	15/08	16/08	17/08	18/08	19/08	20/08	21/08	22/08	23/08	24/08	25/08	26/08	28/08 Test
1.	Abdullatif. Nadaf																					
2.	Sangamesh. Wadawadagi																					
3.	Siddu. Hullur																					
4.	Sagar. Bidarakundi																					
5.	Sahana. Patil																					
6.	Santhosh. Sangam																					
7.	Hinakousar. Nadaf																					
8.	Amruta. Bavikatti																					
9.	Saraswati Bagewadi																					

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DEPARTMENT OF PHYSICS

LIST OF ADVANCE LEARNERS

(Identified on the basis of PUC-II year result- above 90%)

FOR THE YEAR 2024-25 Class- B.Sc.-I SEMESTER

SL.No	Reg. No	Name of the Students	% of marks (puc-II year)
1	U15NU24S0085	Anuradha Badiger	91%
2	U15NU24S0003	Sangamma. Managuli	91.3%
3	U15NU24S0117	Gangadhar	92.3%
4	U15NU24S0064	Kavita	92.7%
5	U15NU24S0026	Shilpa. Kuri	92.8%
6	U15NU24S0019+	Devamma. Nalatwad	93.5%
7	U15NU24S0100	Prashant. Mural	94%
8	U15NU24S0015	Pooja. Panchangmath	94.3%
9	U15NU24S0070	Shrusti. Waggar	95%
10	U15NU23S0108	Madhumati. Choudri	95.7%

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STUDENT'S NAME		TOTAL MARKS OBTAINED
CLASS	SUBJECT	
ROLL NO.	DATE	

Name :- Saraswati Bagwadi
Reg. NO :- U15NV24S0006

19/20

1. Elastic collision :
The collisions in which both the momentum and kinetic energy of the system remains conserved are called elastic collision.
ex : Collison of atoms.

Inelastic collision :
The collisions in which both the momentum & kinetic energy of the system is not conserved are called Inelastic collision.
ex : Ball bouncing.

2) Work energy Principle : It states that the work done by a body is equal to the change in the energy. Consider a body of mass 'm' being acted upon by force F be moving with a velocity v. According to Newton's second law of motion.

$$F = ma = m\frac{dv}{dt}$$

Where dv is the accerlation of particle. The coork done by the force in displ - acing the body.

$$W = \int F\,dr = \int m\frac{dv}{dt}\,dr = \int m\frac{dr}{dt}\,dv$$

$$= \int_{v_1}^{v_2} mv\,dv$$

$$= m\left[\frac{v^2}{2}\right]_{v_1}^{v_2} = \frac{1}{2}mv_2^2 - \frac{1}{2}mv_1^2 = \text{change in kinetic energy.}$$

3) Statement : it States that "the momentum neither be created be nor be destroyed" i.e If two bodies collide on another the momentum remains constant. It is said to be momentum is conserved.

1) Law of momentum conservation of momentum of a single particle.

Let 'm' be the mass 'v' be the velocity of a particle the momentum.

P = mass x velocity $\Rightarrow P = mv$

According to Newton's Second law the rate of change of momentum is directly proportional to the external force act on it.

$$F = \frac{d(mv)}{dt} \Rightarrow F = \frac{dv}{dt}$$

If the external force applied to a particle be zero we have

$$\frac{dP}{dt} = 0 \Rightarrow P = \text{constant}$$

Showing that in the absence of an extern - al force, the momentum of the particle

STUDENT'S NAME		TOTAL MARKS OBTAINED
CLASS	SUBJECT	
ROLL NO.	DATE	

remains constant.

4) Laboratory frame of Refrence :

It is a frame of refrence centred on the laboratory in which the experiment is done. This is the refrence frame in which the laboratory is at reset Also this is usualy the frame of refrence in which measurements are made since they are presumed to be made by laboratory instruments.

→ centre of mass frame of Refrence :

If we attach an inertial frame of with the centre of mass of mgy particle system the centre of mass in the frame of refrence would be at rest are $v_{cm} = 0$ & such type of refrence frames are known as centre of mass frame of refrence.

Since in absence of any external force the centre of mass any system moves with constant velocity in inertial frame of refrence Therefore for a many particle system centre of mass frame of refrence is an inertial frames of refrence.

5) Law of conservation of angular momentum states when the total external torque a system of Particle is zero then.

angular momentum of the system remains constant.

The angular momentum of particle about any point o is given by.

$$\vec{J} = \vec{r} \times \vec{p} \quad \text{--- (1)}$$

$$r \times p \neq p \times r$$

The moment of force or torque about the point o is given by

$$\vec{C} = \vec{r} \times \vec{F} = r \times \frac{dp}{dt} \quad \left(\because F = \frac{d}{dt}(mv) = \frac{dp}{dt} \right)$$

$$C = r \times \frac{d}{dt}(mv) \quad \text{--- (2)}$$

$$\frac{d}{dt}(r \times p) = \frac{d}{dt}(r \times mv)$$

$$\frac{dL}{dt} = \frac{dr}{dt} \times mv + r \times \frac{d}{dt}(mv) = m(v \times v) + r \times \frac{d}{dt}(mv)$$

$$= 0 + r \times \frac{d}{dt}(mv) \quad \because v \times v = 0 \quad \text{--- (3)}$$

from eqn (2) & (3)

$$\frac{dJ}{dt} = C$$

If torque act on a body is zero

$$\frac{dJ}{dt} = 0$$

$$J = \text{constant}$$

Hence, the angular momentum of particle is conserved.