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 60%)

FOR THE YEAR 2025-26 Class- B.Sc.-I SEMESTER

Sl. No	Reg. No	Name of the student	% of marks (puc-II year)
1	U15NU25S0013	Umesh	44.5%
2	U15NU25S0039	Subhas Talikoti	49%
3	U15NU25S0008	Illas Naikodi	52%
4	U15NU25S0029	Manikant Saraganachari	53.33%
5	U15NU25S0028	Sangamesh.Navadagi	53.85%
6	U15NU25S0043	Vinayak Biradar	54%
7	U15NU25S0020	Mahammadarif. Shekha	55.4%
8	U15NU25S0030	Bhimanagouda Chincholi	56%
9	U15NU25S0045	Muttanna Chittaragi	59%

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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 2025-26 Class- B.Sc.-I SEMESTER

SL.No	Reg. No	Name of the Students	% of marks (puc-II year)
1	U15NU25S0032	Ashwini Hanamasagar	90.5%
2	U15NU25S0110	Aishwarya Dasharath	91%
3	U15NU25S0136	Danamma Hebbal	91.16%
4	U15NU25S0139	Ravi Patil	93.0%
5	U15NU25S0033	Basamma Patil	93%
6	U15NU25S0140	Mallikarjun Ballolli	95%
7	U15NU25S0101	Sahana Tumbagi	95.5%

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DEPARTMENT OF PHYSICS

NOTICE

Date: 04.09.2025

The following students of B.Sc. I Semester selected for remedial classes are here by informed to attend the classes commencing from 08-09-2025 without fail.

Sl. No	Reg. No	Name of the student
1	U15NU25S0013	Umesh
2	U15NU25S0039	Subhas Talikoti
3	U15NU25S0008	Illas Naikodi
4	U15NU25S0029	Manikant Saraganachari
5	U15NU25S0028	Sangamesh.Navadagi
6	U15NU25S0043	Vinayak Biradar
7	U15NU25S0020	Mahammadarif.Shekha
8	U15NU25S0030	Bhimanagouda Chincholi
9	U15NU25S0045	Muttanna Chittaragi

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Department of Physics

Statement of Remedial Class Time Table for Slow Learners

for the year 2025-26

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 2025-26

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

Headlines of Topics dealing in Remedial Classes

FOR

SLOW LEARNERS Year 2025-26

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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NOTICE

Date: 25.09.25

The students of B.Sc. I Semester (Slow learners) are here by informed to attend the Test on 28-09-2025 without fail.

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DEPARTMENT OF PHYSICS

QUESTION PAPER FOR SLOW LEARNERS 2025-26

Class: B.Sc.-I semester | Date: 28-09-2025

Time: 4.00 to 5.00 PM | Max marks: 20Marks

Answer the following questions (each question carries 4mark)

1. Explain the torque act on rigid body.
2. Explain the concept of work.
3. Explain law of Conservation of linear momentum of a two particle.
4. Explain center of mass frame of reference.
5. State and explain Law of conservation of Energy.

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DEPARTMENT OF PHYSICS

STATEMENT OF TEST MARKS (SLOW LEARNERS)

FOR THE YEAR 2025-26

Class- B.Sc-I SEMESTER

Sl. No	Reg. No	Name of the students	Max marks	Marks obtained
1	U15NU25S0013	Umesh	20	17
2	U15NU25S0039	Subhas Talikoti	20	18
3	U15NU25S0008	Illas Naikodi	20	18
4	U15NU25S0029	Manikant Saraganachari	20	17
5	U15NU25S0028	Sangamesh.Navadagi	20	18
6	U15NU25S0043	Vinayak Biradar	20	17
7	U15NU25S0020	Mahammadarif.Shekha	20	18
8	U15NU25S0030	Bhimanagouda Chincholi	20	18
9	U15NU25S0045	Muttanna Chittaragi	20	19

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MATOSHRI GANGAMMA VEERAPPA CHINIWAR

ARTS, COMMERCE & SCIENCE COLLEGE MUDDEBIHAL.

DEPARTMENT OF PHYSICS

ATTENDANCE OF SLOW LEARNERS FOR THE YEAR 2025-26

Sl.No	Name of the Student	8/09/25	09/09/25	10/09/25	11/09/25	12/09/25	13/09/25	14/09/25	15/09/25	16/09/25	17/09/25	18/09/25	19/09/25	20/09/25	21/09/25	22/09/25	23/09/25	24/09/25	01/10/25	06/10/25	07/10/25	31/10/25
1	Umesh																					
2	Subhas Talikoti																					
3	Illas Naikodi																					
4	Manikant Saraganachari																					
5	Sangamesh. Navadagi																					
6	Vinayak Biradar																					
7	Mahammadarif.Shekha																					
8	Bhimanagouda Chincholi																					
9	Muttanna Chittaragi																					

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STUDENT'S NAME | TOTAL MARKS OBTAINED

ಮಾತೋಶ್ರೀ ಗಂಗಮ್ಮ ವೀರಪ್ಪ ಚಿವಿಪಾರ
ಪದವಿ ಪೂರ್ವ ವಿದ್ಯಾಲಯ, ಮುದ್ದೇಬಿಹಾಳ.

ಸಂ: 2025-20 20

ಆಸನ ಸಂಖ್ಯೆ: U15NU25S0008 ದಿನಾಂಕ: 28/09/25

ವಿಷಯ: Physics ಪತ್ರ ಸಂಖ್ಯೆ: .....

ಶಿಕ್ಷಕರ ಸಹಿ: ..... ಪರೀಕ್ಷಕರ ಸಹಿ: .....

18/20

① Torque on a rigid body

Angular momentum of a rigid body about an axis is given by,

$\vec{J} = I \times \vec{\omega}$

Torque $\tau = \frac{dJ}{dt} = \frac{d}{dt}(I\omega)$

$= I \times \frac{d\omega}{dt}$

$= I\alpha$

Where $\frac{d\omega}{dt}$ is the rate of change of angular velocity called angular acceleration.

Hence the torque on a rigid body is the product of moment of inertia and angular acceleration.

If torque act on a rigid body is zero

$I \times \frac{d\omega}{dt} = 0$

But moment act on of inertia I can be zero

but $\frac{d\omega}{dt} = 0$ or ω = constant

During the rotation of a rigid body about an axis, its angular velocity remains constant hence the angular velocity is conserved.

2) Work :-

Work is said to be done by a force when the point of application of application of a force is desplaced. Work done is measured by the product of the force applied and the desplacement of the point of application of the force in the direction of the force.

$$W = FS$$

3) Law of Conservation of Linear Momentum of Two Particles :-

Consider two particle of mass m_1 & m_2 moving with velocities v_1 & v_2 respectively along straight line in opposite direction. According to Newton's third law "For every action there is equal & opposite reaction"

$$F_{12} = -F_{21}$$

Where F_{12} is the force act on first due to second. F_{21} is the force act on second by the first

According to Newton's second law

$$\frac{dp_1}{dt} = \frac{dp_2}{dt}$$

$$\frac{d}{dt}(p_1 + p_2) = 0$$

$$p_1 + p_2 = \text{constant}$$

$$\text{i.e. } m_1v_1 + m_2v_2 = \text{constant}$$

"Total linear momentum of the two particles remains constant or conserved"

4) Centre of Mass frame of Reference

If we attach an inertial frame of reference with the centre of mass of many particle system then centre of mass

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

an that frame of reference would be at rest or $V_{cm} = 0$ & such type of reference frames are known as centre of mass frame of reference.

Total linear momentum of a many particle system is zero in centre of mass frame of reference. $P_{cm} = MV_{cm} = 0$. Therefore centre of mass frame of reference are also known as zero momentum reference frames

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

5) Work energy principle

It states that the work done by a body is equal to the change in its 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 $\frac{dv}{dt}$ is the acceleration of particle

the work done by the force in displacing the body.

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

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

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

$$= m \left[\frac{v^2}{2} \right]_{v_1}^{v_2}$$

$$= \frac{1}{2} m v_2^2 - \frac{1}{2} m v_1^2$$

$\therefore$ change in kinetic energy.