APPENDIX – I

WHO’S WHO – PEER NOMINATION FORM

Think about your classmates. Everyone is different! Read the questions below. In each space write the name of a classmate who best fits the description. You may write a name more than once and you may write your own name where you feel it fits.

1. If you were forming a committee to work on a project, whom would you choose to lead it?
   - Language arts _____________________
   - Math _____________________
   - Science _____________________
   - Social Studies ______________
   - Art _________________________
   - Other _____________________

2. If you need somebody to help you with your homework, which one of your classmates would you ask?

3. If your class was on a trip and became separated from the teacher, which one of your classmates would lead you back safely?

4. Whose stories do you enjoy listening to?

5. Who is the most exciting person in class?

6. Who has the best ideas for games and activities in and out of school?

7. Who is the best problem solver?

8. Who is the beset person to tell a story to?

9. Who is the best reader?

10. Who is the best writer?

11. Who likes to try new things?

12. Who uses good judgement?

13. Who would be a good friend?

14. Who has a good imagination?

15. Who has many interests?

Name ______________________
School _____________________
Date _______________________
APPENDIX – II

TEACHER NOMINATION FORM

1. Student _____________________ Teacher __________________________
2. Date of referral ________ School _________________________________
3. Grade ___________________________ Date of birth __________________
4. Average Grades for Current School Year

Language Arts ___________  
Social Studies ___________  
Arithmetic _______________  
Science _________________

5. Why do you think this student should be included in the Talent Pool? (You may wish to list examples of ideas, projects, creative endeavors, etc.)

______________________________________________________________

______________________________________________________________

______________________________________________________________

INTERESTS

Please indicate the areas of interest that the student has displayed in your class this year. If you’ve noticed other specific topics (interest in dinosaurs, computers, etc.), please note this in the column entitled “Other”.

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CURRICULAR STRENGTH AREAS

Please indicate the curricular areas in which the student has demonstrated proficiency and could possibly be considered for curriculum compacting.

Language Arts ___________  Mathematics ___________
Science _________________  Social Science __________
APPENDIX – III

SUB-TESTS

SUB-TEST 1
1. A particle is constrained to move on a straight line. It returns to the starting point after 10 seconds. The total distance covered by the particle during this time is 30m, which of the following statements about the motion of the particle is false. Justify your answer
   a) The displacement of the particle is zero
   b) Average velocity of the particle is zero
   c) Displacement of the particle is 30m
   d) Average speed of the particle is 3m/s

2.

Figure shows the displacement-time graph for a particle. Which of the following statement is correct. Justify your answer.
   a) Particle is moving on a straight line path for t<0
   b) The particle is moving in a curved path for t>0
   c) The velocity of the particle for t>0 is a constant
   d) The particle velocity is zero for t<0

3. A train starts from rest and acquires a speed “u” with uniform acceleration $\alpha$. Then it comes to stop with a uniform retardation $\beta$. What is the average velocity of the train. Justify your answer
   a) $\frac{u}{2}$
   b) $\frac{u + s}{\alpha + \beta}$
   c) $\frac{u}{4}$
   d) $v$
4. Which of the following velocity-time graph is possible (Hint: In one time two velocities are not possible). Justify your answer

![Velocity-Time Graphs](image)

5. A stone is tied to a string of Length L and is whirled in a vertical circle. What would be minimum velocity on the stone at the top of the circle so that string remains stretched. Justify your answer

- a) \(\sqrt{gl}\)
- b) \(2\sqrt{gl}\)
- c) \(3\sqrt{gl}\)
- d) None of these

6. First half of the distance covered by car with velocity \(v_1\) and second half with velocity with \(v_2\), what is the average velocity of car? Justify your answer.

- a) \(\frac{v_1+v_2}{2}\)
- b) \(\frac{v_1v_2}{v_1+v_2}\)
- c) \(\frac{2v_1v_2}{v_1+v_2}\)
- d) \(\frac{v_1v_2}{2(v_1+v_2)}\)

7. A particle covers equal distances around circular path in equal intervals of time. It has uniform non-zero rate of change of \(\text{-------------}\). Justify your answer.

- a) Linear displacement
- b) Angular displacement
- c) linear velocity
- d) Angular velocity
8. A simple pendulum hangs from the roof of a train. The string is inclined towards the rear of the train. What is the nature of the motion of the train? Justify your answer
   a) Uniform
   b) Accelerated
   c) Retarded
   d) At rest

9. Average velocity of a particle moving in a straight line with constant acceleration \( a \) and uniform velocity \( u \). Justify your answer
   a) \( u + \frac{1}{2}at \)
   b) \( u + at \)
   c) \( \frac{u + at}{2} \)
   d) \( \frac{u}{2} \)

10. Velocity-time graph of one dimensional motion which of the following characteristics of the particle is represented by the shaded area. Justify your answer

   ![Velocity-time graph]

   a) Momentum
   b) Acceleration
   c) Distance covered
   d) Speed

11. Two bodies of Mass \( M_1 \) and \( M_2 \) are dropped from height \( H_1 \) and \( H_2 \) respectively. They reach the ground after time \( T_1 \) and \( T_2 \) respectively. Which of the following relations are correct. Justify your answer.

   a) \( \frac{T_1}{T_2} = \sqrt{\frac{H_1}{H_2}} \)
   b) \( T_1/T_2 = H_1H_2 \)
   c) \( T_1/T_2 = \sqrt{\frac{M_1}{M_2}} \)
   d) \( T_1/T_2 = M_1/M_2 \)
12. A body is projected upwards, a graph is drawn as shown in the figure with time along X-axis. What quantity should be along Y-axis? Justify your answer.

\[ \text{Time} \to \]

a) Displacement
b) Acceleration
c) Velocity
d) Distance Traveled
SUB-TEST 2

1. The work done on a body does not depend on......................(Justify your answer)
   a) Force applied  
   b) displacement  
   c) Initial Velocity  
   d) angle at which the force is inclined to displacement

2. When the force retards, Then the motion of the body is ----------------(Justify your answer)
   a) Zero  
   b) Negative  
   c) positive  
   d) Positive and Negative depending upon the magnitude of force and Displacement

3. The water is falling on the blades at of a turbine of length 50m, 100kg of water pours on the blade on one second. Assuming that entire energy is transferred to turbine. What is the power delivered to turbine? Justify your answer
   a) 100KW  
   b) 50KW  
   c) 25KW  
   d) 10KW

4. The momentum of the particle is numerically equal to Kinetic energy. What is the velocity of the particle? Justify your answer
   a) 1m/s  
   b) 2m/s  
   c) 4m/s  
   d) Momentum cannot be equal to K.E

5. A fan is rotating with angular velocity $2\pi$ rad/s the radius of the wing is 1m. the mass of the fan is 2kg. Then the work done Justify your answer
   a) 4J  
   b) 6J  
   c) Zero  
   d) None of these

6. A cable pulls a box with a force of 5KN and raises its rate by 2m/s. What is the power of the engine providing tension to the cable. Justify your answer
   a) 2kW  
   b) 205kW  
   c) 5kW  
   d) None of these

7. The momentum of the body doubled when kinetic energy of the body...................(Justify your answer)
   a) double  
   b) four times  
   c) eight times  
   d) unchanged
8. A uniform chain of Length L and mass M is lying on a smooth table. One fourth of its length L is vertically down over the edge of the table. How much the work need to be done to pull the hanging part back to the table. Justify your answer

a) MgL  
b) MgL/2  
c) MgL/8  
d) MgL/16

9. The unit of power in the SI (Watt) is equivalent to

a) Kg m/s²  
b) Kg m²/s²  
c) Kg m²/s³  
d) None of these

10. Kinetic energy is always a .............................................(Justify your answer)

a) Positive quantity  
b) Both Negative and positive quantity  
c) Negative quantity  
d) Zero

11. A body is under the action of two equal and opposite forces, each of 3N. The body is displaced by 2m. The work done is .............................................(Justify your answer)

a) +6J  
b) zero  
c) -6J  
d) None of these

12. A heavy weight is suspended from the spring. A Person raises the weight till the spring becomes slack. The work done by him is W. The energy stored in a stretched spring was E. What will be the gain in gravitational P.E ? Justify your answer

a) W  
b) E  
c) d) W+E  
e) W-E
Figure show the F-X graph, Where F is the force and x is the distance covered by the body along a straight line path. Given that F is Newton and x in meter. What is the work done? justify your answer

a) 10J  b) 20J  c)30J  d)40J
# APPENDIX – IV

## ANSWER KEY

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