

MODEL ENTRANCE TEST PAPER

BRITISH SECTION SUBJECT: PHYSICS

Grade: 9

TOTAL MARKS: 25

I. Choose the correct answer: **[10 × 1 = 10 Marks]**

1. The SI unit of pressure is
A. Newton B. Pascal C. Hertz D. Farad
2. Which change would make a sound louder?
A. decreasing the amplitude of the wave
B. increasing the amplitude of the wave
C. decreasing the wavelength
D. increasing the wavelength
3. Which of the following is a unit of density?
A. cm^3/g B. g/cm^2 C. g/cm^3 D. kg/m^2
4. Which statement is correct about the speed of electromagnetic waves in vacuum?
A. ultra violet waves have the greatest speed
B. visible light waves have the greatest speed
C. infra red waves have the greatest speed
D. all electromagnetic waves have the same speed
5. Temperature is measured by using
A. barometer B. thermometer C. multimeter D. ammeter
6. Which type of wave cannot travel through a vacuum?
A. infrared radiation B. Micro waves C. Sound waves D. X rays
7. The SI unit of Force is
A. Pascal B. Farad C. Hertz D. Newton
8. A long thin bar of copper is heated evenly along its length. What happens to the bar?

- A. It becomes lighter
- B. It becomes longer
- C. It becomes shorter
- D. It bends at the ends

9. A plastic rod is rubbed with a dry cloth and becomes positively charged. Why has the rod become positively charged?

- A. it has gained electrons
- B. It has gained neutrons
- C. it has lost electrons
- D. It has lost neutrons

10. Two forces act on an object. In which situation is it impossible for the object to be in equilibrium?

- A. The two forces act in the same direction
- B. The two forces act through the same point
- C. The two forces are of the same type
- D. The two forces are the same size

II. Fill in the blanks: **[5 × 1 = 5 Marks]**

1. The SI unit of frequency is
2. The is the point through which the whole mass of the object seems to act?
3. Rate of doing work is called
4. Ultra sound have a frequency of above Hz.
5. An electric current in a metal is moved by the

III. Match the following: **[5 × 1 = 5 Marks]**

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|-------------------|-----------------------|
| (i) Pitch | (a) longitudinal wave |
| (ii) Work | (b) thermometer |
| (iii) Temperature | (c) loudness |
| (iv) Sound | (d) frequency |
| (v) amplitude | (e) Joules |

IV. Answer the following questions: **[5 Marks]**

1. What is meant by crest and trough of a wave? Explain with a diagram. **[1 M]**

2. Water wave fronts which are approaching a small gap in a wall. Draw the pattern of wave fronts of diffraction. [1 M]
3. Write down an equation, in words or in symbols that would be used to work out the specific heat capacity of an object. [1 M]
4. The path that one molecule, in a gas always take sharp changes of direction. Explain why the path has a sudden sharp changed of direction. [1 M]
5. Name the type of radiation that has (a) lighter frequency than ultraviolet (b) a longer wavelength than visible light. [1 M]
