

Name: \_\_\_\_\_

Max. Marks: 35

Encircle the correct option. There is only one answer correct in each question. Each question carries one mark except Q.31 & Q.32.

- The number of significant figures in  $2.05 \times 10^6$  is:  
\* 2  
\* **3**  
\* 4  
\* 5
- Which one of the following was written by Ibn-Al-Haitham?  
\* **Kitab ul Manazir**  
\* Kitab ul Qanoon Al Masoodi  
\* Al Shifa
- The author of Al-Qanoon Fil Tib was:  
\* Al Razi  
\* **Ibn e Sina**  
\* Omar Khayyam
- Candela is the unit of:  
\* **luminous Intensity**  
\* force  
\* mass  
\* velocity
- Laws of reflection and refraction are given by:  
\* Al Razi  
\* Al Beruni  
\* **Ibn Al Haitham**  
\* Ibn e Sina
- Screw & lever were invented by:  
\* Newton  
\* Al-Farabi  
\* **Archimedes**  
\* Galilo Galiei
- Ibn e Sine is famous for his work in the field of:  
\* Astronomy  
\* LASER Physics  
\* Optics  
\* **Medicine**
- Pin hole camera was designed by:  
\* Omar Khayyam  
\* **Ibn Al Haitham**  
\* Al Farabi  
\* Al Beruni
- 860.040 has \_\_\_\_\_ significant figures:  
\* 2  
\* 4  
\* **6**  
\* 7
- Who measured the circumference of the Earth?  
\* Bertrand Russel  
\* **Al Beruni**  
\* Ibn Al Haitham  
\* Sir Walter Lewin

11. If angular momentum has a formula  $L = mvr$ , where  $m$  is mass,  $v$  is velocity and  $r$  is radius then the dimension of angular momentum is:

- \*  $L^2M^2T^2$
- \*  $L^2M^2T$
- \*  $L^2MT$
- \*  $L^2MT^{-1}$

12. According to Bertrand Russel, Omar Khayyam was both:

- \* Poet and Philosopher
- \* Poet and Mathematician
- \* Mathematician and Philosopher
- \* none is correct

13.  $123 \text{ kg} = \text{_____ g}$

- \* 0.123 g
- \* 123000000 g
- \* 123000 g
- \* 0.00000123 g

14. Those quantities which are obtained from based quantities are called as:

- \* scalar quantities
- \* vector quantities
- \* special quantities
- \* derived quantities

15. Charge is a:

- \* base quantity
- \* derived quantity
- \* unit less quantity
- \* dimensionless quantity

16. Dimensions are defined as the relation between:

- \* unit less quantities
- \* scalar and vector quantities
- \* base and derived quantities
- \* physical and non-physical quantities

17. The unit of Planck's constant( $h$ ) is: (Hint:  $E = h\nu$ )

- \* Joule/second
- \* Newton/second
- \* Newton second
- \* Joule second

18. Intravenous injection by means of silver syringe was initially used by:

- \* Ibn-e-Sina
- \* Omar Khayyam
- \* Al-Beruni
- \* Jabir bin Hayyan

19. The only Pakistani who has won the Nobel Prize is:

- \* Dr. Abdul Qadeer Khan
- \* Dr. Saleem us Zaman Siddiqui
- \* Dr. Abdus Salam
- \* Dr. Samar Mubarak Mand

20. The dimension of Torque is:

- \*  $ML^2T$
- \*  $ML^2T^{-2}$
- \*  $ML^2T^2$
- \*  $MLT^{-2}$

21. The dimension of Force is:

- \* MLT
- \* **MLT<sup>-2</sup>**
- \* MLT<sup>2</sup>
- \* MLT<sup>-1</sup>

22. Light year is the unit of:

- \* time
- \* **distance**
- \* velocity
- \* intensity

23. The number of significant figures of  $7.050 \times 10^{-2}$  is:

- \* 2
- \* 3
- \* **4**
- \* 6

24. Ibn e Sina wrote \_\_\_\_\_ an encyclopedia of Philosophy.

- \* Kitab ul Qanoon
- \* Monographs
- \* **Al-Shifa**
- \* Kitab ul Manazir

25. The motion of a lid of a kettle observed by \_\_\_\_\_ enabled him to invent heat engine.

- \* **George Stephenson**
- \* Galileo
- \* Newton
- \* Kelvin

26. Johanne Kepler presented Kepler's law of:

- \* Solid State Physics
- \* **Planetary Motion**
- \* Screw & Lever
- \* General Relativity

27. The dimension of volume would be:

- \* L<sup>2</sup>
- \* **L<sup>3</sup>**
- \* L<sup>0</sup>
- \* L

28. The correct exponential form for 0.00003915 is:

- \*  $3.9 \times 10^{-5}$
- \*  $3.91 \times 10^{-5}$
- \*  **$3.915 \times 10^{-5}$**
- \*  $3.9150 \times 10^{-5}$

29. The correct standard form for  $2.103 \times 10^{-3}$  is:

- \* 0.002
- \* 0.0021
- \* 0.00210
- \* **0.002103**

30. Consider a simple harmonic oscillator having a spring mass system as shown in figure. For this we have a relation  $F = -kx$ . Where F is force, k is spring constant and x is amplitude (distance). The dimension of spring constant (k) would be? (Hint: Ignore the negative sign)

- \*  $ML^2T^{-2}$
- \*  $M^2L^2T^{-1}$
- \*  $MT^{-2}$
- \*  $M^2LT^{-2}$

31. Why energy and work are same quantities but not torque? Since they all have same dimensions. Comment (2 marks)

Although these quantities have same dimensions (i.e.  $ML^2T^{-2}$ ) but since energy and work are scalar quantities whereas torque is a vector quantity that is why we can't put them in same category.

32. The definition of Physics has concern with only three things they are: (3 marks)

- a) Matter
- b) Energy
- c) Interaction between both of them