AAFAQ ACADEMY – KASUR

Paper: Physics **Chapter (1)** **Class: F.Sc. Part – I**

MEASUREMENTS

Name: _____ **Roll No: (in words)** _____

OBJECTIVE TYPE

Total Marks: 12 **Paper Code: _____** **Total Time: 10 Minutes**

NOTE: Write your **Roll No.** in space provided. Using lead pencil will result in loss of marks.

Q.No.1: You have four choices for each objective type question as A,B,C and D. The choice which you think is correct; fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

Sr. No.	QUESTION	A	B	C	D
1.	Number of significant figures in 0.0173 are:	3	4	5	2
2.	If $x_1 = 10.5 \pm 0.1$ cm and $x_2 = 26.8 \pm 0.1$ cm, then $X = X_2 - X_1$ is given as:	16.3 ± 0.1 cm	16.3 ± 0.2 cm	16.1 ± 0 cm	16.3 ± 0 cm
3.	Which of the following is least multiple	Pico	Femto	Nano	Atto
4.	The SI unit of pressure in terms of base units are	$kgm^{-1}s^{-2}$	$kgm^{-1}s^{-3}$	$kgms^{-2}$	kgm^{-2}
5.	Absolute uncertainty in a measuring instrument is equal to	Least count of the instrument	Fractional uncertainty	Accuracy	Percentage uncertainty
6.	The percentage uncertainty in the measurement of mass and velocity are 2% and 3% respectively. The maximum uncertainty in the measurement of kinetic energy is	11 %	8 %	6 %	1 %
7.	Smaller is the least count f the instrument, more is the measurement	Accurate	Precise	Accurate and precise	None of these
8.	$\left[M^0 L^0 T^{-1} \right]$ refers to quantity	Velocity	Time period	Frequency	Force
9.	Which of the following pair has same dimensions	Work and power	Momentum and energy	Work and torque	Power and pressure
10.	The angle made by ice cone at its edge is a	Plane angle	Solid angle	Critical angle	Abuse angle
11.					

SUBJECTIVE TYPE

Total Marks: 29 **Time Allowed: 0 Hours 50 Minutes**

SECTION – I (SHORT QUESTIONS)

2. Attempt any FIVE questions. **(5×2=10)Marks**

  i. Calculate the dimensions of pressure and work?
 ii. The period of simple pendulum is measured by a stop watch. What types of errors are possible in the time period?
iii. Differentiate between radian and steradian?
 iv. How many nanoseconds are in 1 year?
  v. Why do we find it useful to have two units for the amount of substance, the kilogram and the mole?
 vi. Distinguish between base units and derived units?
vii. Give the drawback to use the period of a pendulum as a time standard.

viii. What are the dimensions and units of gravitational constant G in the formula. $F = G \dfrac{m^1 m^2}{r^2}$

SECTION – II (ESSAY TYPE) Attempt given question

3. Do as directed...
  i. k (5)
 ii. r (3)

SECTION – III (Practical)

4. (a) Write answer of TWO questions. **(2×2=4)**
  i. a
 ii. c
iii. v
 iv. b

4. (b) Write procedure to determine the resistance of voltmeter by graph method. (3)

(OR)

Write procedure to find the unknown high resistance by using neon flash lamp. (3)

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4. 　　**(c) Answer the following questions on the basis of graph drawn between potential difference** (V) **and charge** (Q) . 　　　　　　　　　　　　　　　　　　　　　　(4)

  i.　　What you conclude from the graph?
  ii.　　Find the capacitance of capacitor from the graph.

Good Luck
Ch. Khalid Mahmood Ashraf