

PED237 List of Questions

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Q1 The degree of agreement between the measured value and accepted true value of a quantity is referred to as

- ☐ Accuracy
- ☐ Precision
- ☐ Average
- ☐ Value

Q2 The unit of Electric potential difference is

- ☐ Ohm
- ☐ Volt
- ☐ Weber
- ☐ Tesla

Q3 The quantity of matter in an object refers to its

- ☐ Weight
- ☐ Mass
- ☐ Force
- ☐ Power

Q4 A set of measurements can be accurate but not precise, such measurement is

- ☐ The most desirable combination
- ☐ Sometimes acceptable
- ☐ Usually the result of consistent mistake
- ☐ Very useful

Q5 Which of the following statements about Weight is CORRECT?

- ☐ Weight is measured in Newton
- ☐ Weight of an object vary depending on the areas
- ☐ Weight is the quantity of matter in an object
- ☐ Weight is the force exerted by gravity on object

Q6 The unit of inductance is

- ☐ Farad
- ☐ Tesla
- ☐ Lumen
- ☐ Hertz

Q7 The degree of agreement between individual measured varies in series of measurements and the average is called

- ☐ Accuracy
- ☐ Precision
- ☐ Consistent
- ☐ Combination

Q8 The SI unit has ----- base units from which all other units are derived

- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 7

Q9 The unit of frequency is

- ☐ Farad
- ☐ Ohm
- ☐ Hertz
- ☐ Watt

Q10 The base unit for measuring lengths and distances in the metric system are the

- ☐ Metre
- ☐ Square metre
- ☐ Cubic metre
- ☐ Kilogram metre

Q11 The unit of Electric Capacitance is

- ☐ Hertz
- ☐ Tesla
- ☐ Farad
- ☐ Volt

Q12 A set of measurements can be precise but not accurate, such measurement is

- ☐ The most desirable combination
- ☐ Sometimes acceptable
- ☐ Usually the result of consistent mistake
- ☐ Very useful

Q13 The unit of magnetic flux is

- ☐ Weber
- ☐ Tesla
- ☐ Lumen
- ☐ Lux

Q14 The sum of measurements divided by the number of measurements that have been made is referred to as

- ☐ Accuracy
- ☐ Precision
- ☐ Average
- ☐ Value

Q15 The basic unit for measuring the mass of an object is

- ☐ Gram
- ☐ Kilogram
- ☐ Miligram
- ☐ Microgram

Q16 Which of the following statements about Mass is CORRECT?

- ☐ Mass is measured in Newton
- ☐ Mass of object vary depending on areas
- ☐ Mass is the quantity of matter in an object
- ☐ Mass is the force exerted by gravity on object

Q17 The two parts of measurement are ----- and -----

- ☐ Magnitude and unit
- ☐ Magnitude and size
- ☐ Magnitude and standard
- ☐ Magnitude and number

Q18 Which of the following statements is TRUE?

- ☐ The magnitude compares a measurement to a standard
- ☐ The magnitude is meaningful alone
- ☐ All quantities consist of magnitude and units
- ☐ Magnitude depends largely on unit

Q19 When a set of measurements is both accurate and precise, it is referred to as

- ☐ Very useful
- ☐ Sometimes acceptable
- ☐ The result of consistent mistake
- ☐ The most desirable combination

Q20 The most commonly used temperature scale is

- ☐ Celsius scale
- ☐ Fahrenheit scale
- ☐ Kelvin scale
- ☐ Absolute scale

Q21 What is the unit of measuring pressure?

- ☐ p

- ☐ m3
- ☐ ms-1
- ☒ atm

Q22 What is the symbol of candela?

- ☐ Cd
- ☐ A
- ☐ C
- ☐ d

Q23 What is the multiple of Giga?

- ☐ 10^9
- ☐ 10^{12}
- ☐ 10^{15}
- ☐ 10^{18}

Q24 What is the meaning of S.I.?

- ☒ International System
- ☐ System International
- ☐ Intertropical System
- ☐ Interim System

Q25 What is the essence of measurement of a quantity?

- ☒ Comparison with standard measure
- ☐ Comparison with local measure
- ☐ Comparison with sister country
- ☐ Comparison with international measure

Q26 What is the degree of agreement between measured value and accepted true value of a quantity?

- ☐ Precision
- ☐ Average
- ☐ Exact value
- ☒ Accuracy

Q27 What is the degree of agreement between individual measured values in a series of measurement and the average value?

- ☐ Accuracy
- ☐ Average
- ☒ Precision
- ☐ Approximation

Q28 What is the decimal form of $8 \times 10^{-8}\text{m}$?

- ☐ 0.000000008m
- ☒ 0.00000008m
- ☐ 0.00008m
- ☐ 0.000008m

Q29 What is the boiling point of water?

- ☐ 0 °C
- ☒ 100 °C
- ☐ 98 °C
- ☐ =B14

Q30 What is the basic unit of temperature?

- ☐ Hotness
- ☐ Coldness
- ☒ Kelvin
- ☐ Molecules

Q31 What is Kelvin scale?

- ☒ An absolute temperature scale
- ☐ A normal temperature scale
- ☐ Freezing temperature
- ☐ Boiling temperature

Q32 What are scientists sought for whenever they take measurement?

- ☐ Magnitude
- ☐ Unit
- ☒ Value of the quantity
- ☐ Real measurement

Q33 The sum of measurements divided by the number of measurements is called what?

- ☒ Average
- ☐ Mode
- ☐ Deviation
- ☐ Median

Q34 The measure of hotness or coldness is what?

- ☐ Volume
- ☐ Density
- ☐ Freezing point
- ☒ Temperature

Q35 The magnitude of any measurement depends largely on which of the following.

- ☒ Unit
- ☐ kg
- ☐ direction
- ☐ size

Q36 How many parts has a measurement?

- ☐ 3
- ☐ 4
- ☒ 2
- ☐ 5

Q37 How many basic units do we have?

- ☐ Nine
- ☒ Seven
- ☐ Eight
- ☐ Ten

Q38 Find the average of the following loads, 101kg, 104kg, 0kg and 107kg

- ☐ 103kg
- ☐ 104
- ☐ 104kg
- ☒ 78kg

Q39 Express 7456kg in the form $A \times 10^n$.

- ☐ $7.456 \times 10^{-3}\text{kg}$
- ☐ 7.456×10^3
- ☒ $7.456 \times 10^3\text{kg}$
- ☐ $74.56 \times 10^3\text{kg}$

Q40 Express 0.000464 in the form $A \times 10^n$

- ☐ 4.64×10^{-3}
- ☒ 4.64×10^{-4}
- ☐ 46.4×10^{-4}
- ☐ 464×10^{-3}

Q41 What is the unit of speed?

- ☒ m/s
- ☐ ms
- ☐ ms²
- ☐ kg/s

Q42 Which of the following has derived unit?

- ☐ Time

- ☐ Mass
- ☐ Acceleration
- ☐ Length

Q43 What is the multiple of exa?

- ☐ 10 10
- ☐ 10 12
- ☐ 10 15
- ☐ 10 18

Q44 What is the other name for degree Celsius?

- ☐ Fahrenheit
- ☐ Centigrade
- ☐ Kelvin
- ☐ Absolute zero

Q45 What is the intensive property of an object that is often used to help identify substances?

- ☐ Volume
- ☐ Temperature
- ☐ Pressure
- ☐ Density

Q46 The two main types of uncertainties in scientific terms bother on

- ☐ Systematic and random
- ☐ Systematic and precision
- ☐ Accuracy and precision
- ☐ Accuracy and random

Q47 What is the density of a piece of metal that has a volume of 25ml and a mass of 125g?

- ☐ 50gcm
- ☐ 50g/cm³
- ☐ 5g/cm
- ☐ 500g/cm

Q48 A chemists pours 30ml of water in a graduated cylinder and then submerged a 127g piece of metal in the water. The water level rose to 52.2ml. What is the density of the metal?

- ☐ 5.92gml
- ☐ 5.72gml-l
- ☐ 5.72g
- ☐ 5.72ml

Q49 Normal body temperature is 37°C. What is the temperature on the Fahrenheit scale?

- ☐ 79.60°C
- ☐ 79.6k
- ☐ 79.60°F
- ☐ 79.6

Q50 A thermometer in a laboratory room registers 31 deg.C. What is the temperature on the deg.Fahrenheit scale?

- ☐ 58 degF
- ☐ 88 deg.F
- ☐ 85 deg.F
- ☐ 131deg.F

Q51 Vernier calipers are used for any one of the following.

- ☐ Small diameters
- ☐ Small thickness
- ☐ Distances and depth
- ☐ Length of diameters

Q52 What is the study of shapes and figures bounded by lines and curves?

- ☐ Geometry
- ☐ Calculus
- ☐ Measurement

- ☐ Trigonometry

Q53 What is the shortest line between any two points?

- ☐ Line
- ☐ A straight line
- ☐ A curve
- ☐ Oblique line

Q54 Compute 640.562cm to four significant figures.

- ☐ 640
- ☐ 640.6cm
- ☐ 0.5620cm
- ☐ 6400cm

Q55 How many milligrams are there in 3.41g?

- ☐ 3410mg
- ☐ 34.1mg
- ☐ 0.00341mg
- ☐ 0.342mg

Q56 Convert 600F to Celsius degree. Convert 16 deg.C to deg.F

- ☐ 60 deg. F
- ☐ 160C
- ☐ 160 deg.F
- ☐ 16k

Q57 What is the quantity that is more related to mass and volume?

- ☐ Temperature
- ☐ Pressure
- ☐ Density
- ☐ Speed

Q58 What is the unit of density?

- ☐ g/m
- ☐ g/cm³
- ☐ g/cm
- ☐ Gcm²

Q59 The voltage on a generator is measured in what unit?

- ☐ Kilovolts
- ☐ Ampere
- ☐ Volts
- ☐ Coulombs

Q60 A group of pupils measures the length of a door bench using a 30cm ruler calibrated in millimeters. The following results were obtained: 4.90cm, 4.95cm, 4.92cm, 4.96cm, 4.93cm and 4.91cm. What is the length of the bench?

- ☐ 4.93
- ☐ 4.93cdm
- ☐ 0.03cm
- ☐ 4.96cm

Q61 Which of the following instruments is used for precise measurements of wavelenth of light?

- ☐ Venier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q62 The number of significant figure in the number 4800 is

- ☐ Four
- ☐ Three
- ☐ Two
- ☐ One

Q63 The two main types of uncertainties in scientific terms are ----- and -----

- ☐ Systematic and random
- ☐ Systematic and precision
- ☐ Accuracy and precision
- ☐ Accuracy and random

Q64 Which of the following instruments is used for precise measurements of length?

- ☐ Vernier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q65 Which of the following instruments is used for precise measurements of small distances?

- ☐ Vernier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q66 Which of the following instruments is used for precise measurements of depth?

- ☐ Vernier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q67 Which of the following instruments is used for precise measurements of distances?

- ☐ Vernier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q68 Medical hypothermic syringes are usually graduated in

- ☐ Cubic centimeters
- ☐ Cubic metres
- ☐ Cubic milliliters
- ☐ Cubic decimeters

Q69 Which of the following instruments is used for precise measurements of diameters?

- ☐ Vernier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q70 The number of significant figures in the number 4.720 is

- ☐ one
- ☐ Two
- ☐ Three
- ☐ Four

Q71 Which of the following units is a basic unit?

- ☐ Ohm
- ☐ Volt
- ☐ Second
- ☐ Newton

Q72 Which of the following instruments is used for precise measurements of thickness?

- ☐ Vernier Calipers
- ☐ Micrometer
- ☐ Traveling microscope
- ☐ Spectrometer

Q73 All digits are significant EXCEPT

- ☐ Zeros at the beginning of a number
- ☐ Zeros at the middle of a number

- ☐ Zeros of a given number
- ☐ Zeros at the end of a number

Q74 Which of the following units is a derived unit?

- ☐ Mole
- ☐ Ampere
- ☐ Candela
- ☒ Pascal

Q75 Which of these are among the causes of uncertainties in measurement? I. No instrument is exactly precise II. Sometimes instruments are read wrongly III. Changes in instrument adjustment

- ☐ I & II
- ☐ I & III
- ☐ II & III
- ☒ I, II & III

Q76 The number of significant figures in the number 3.504 is

- ☐ one
- ☐ Two
- ☐ Three
- ☒ Four

Q77 Which of the following units is a basic unit?

- ☐ Pascal
- ☐ Coulomb
- ☒ Kelvin
- ☐ Joule

Q78 End zeros are significant if -----

- ☐ The numbers are all significant
- ☒ The number contains a decimal point
- ☐ The beginning zeros are significant
- ☐ The number does not contain a decimal part

Q79 The temperature scale use in the international system is/are: I. Kelvin II. Fahrenheit III. Celsius

- ☐ I & II
- ☐ II & III
- ☐ II only
- ☒ I only

Q80 The most familiar metric system unit of volume is the

- ☐ Square metre
- ☐ Metre
- ☒ Litre
- ☐ Cubic metre