



TUTORIAL

RESOURCES

VOCABULARY



1) Persistent exposure to high temperature will indirectly cast a stress on:
A) Excretory homeostasis
B) Thermoregulatory homeostasis
C) Osmoregulatory homeostasis
D) Glucoregulatory homeostasis

- A B C D

2) The living control system has three components but any change in external environment is always detected by:
A) Hypothalamus C) Control center
B) Effectors D) Receptors

- A B C D

3) Lithotripsy is a technique to _____ stones:
A) Remove C) Dislocate
B) Locate D) Break up

- A B C D

4) By negative feedback we mean:
A) Cooling effector's response to warmth
B) Cooling effector's response to cold
C) Warming effector's response to warmth
D) Conserving water when body fluids becomes

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4) By negative feedback we mean:

- A) Cooling effector's response to warmth
- B) Cooling effector's response to cold
- C) Warming effector's response to warmth
- D) Conserving water when body fluids becomes hypotonic

A B C D

5) The control centre for temperature in human body is:

- A) Skin
- B) Pituitary
- C) Sweat glands
- D) Hypothalamus

A B C D

6) Urination is controlled by:

- A) Smooth muscles
- B) Striated muscles
- C) Skeletal muscles
- D) Sphincter muscles

A B C D

7) Distal tubules of nephrons empty into:

- A) Proximal tubules
- B) Loop of Henle
- C) Bowman's capsule
- D) Collecting duct

A B C D

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8) Homeostasis keeps the fluctuations in extracellular internal environment within:

- A) Narrow range
- B) Wider range
- C) Extremely narrow range
- D) Massive range

A B C D

9) The secretion of the tubular epithelium of nephron is associated with _____ of the pH of the urine:

- A) Increase
- B) Fluctuation
- C) Decrease
- D) Stabilization

A B C D

10) The most diverse reabsorption occurs in:

- A) Bowman's capsule
- B) Proximal convoluted tubule
- C) Collecting tubule
- D) Loop of Henle

A B C D

11) Efferent arterioles give rise to:

- A) Vasa recta

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11) Efferent arterioles give rise to:

- A) Vasa recta
- B) Afferent arteriole
- C) Peritubular capillary network
- D) Glomerulus

A B C D

12) Human kidney is adapted to conserve:

- A) Wastes
- B) Urea
- C) Water
- D) Heat

A B C D

13) Ureters drain the:

- A) Kidneys
- B) Renal Pelvis
- C) Ureters
- D) Urethra

A B C D

14) It is a hormone associated with kidneys and is secreted by a nearby gland:

- A) Aldosterone
- B) ADH
- C) Vasopressin
- D) Cortisol

A B C D

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15) The production of varied concentrations of urine depends on the availability of:

- A) Salts
- B) Ions
- C) Water
- D) Nitrogenous wastes

A B C D

16) Deficiency of antidiuretic hormone results in production of:

- A) Hypertonic urine
- B) Concentrated urine
- C) Acidic urine
- D) Hypotonic urine

A B C D

17) Part of Juxtamedullary nephron present in inner medulla is:

- A) Proximal convoluted tubule
- B) Distal convoluted tubule
- C) Bowman's capsule
- D) Loop of Henle

A B C D

18) Type of kidney stones having lowest incidence rate is:

- A) Oxalate
- B) Calcium phosphate

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18) Type of kidney stones having lowest incidence rate is:

- A) Oxalate
- B) Uric acid
- C) Calcium phosphate
- D) Calcium carbonate

A B C D

19) Persistent high level of urea in blood is an indication of:

- A) Kidney stones
- B) Gal stones
- C) Uremia
- D) Diabetes

A B C D

20) The filtrate appearing in Bowman's capsule is called:

- A) Bowman's filtrate
- B) Glomerulus filtrate
- C) Renal filtrate
- D) Kidney filtrate

A B C D

21) Glomerular capsule is another name for:

- A) Glomerulus
- B) Renal capsule
- C) Renal corpuscle
- D) Bowman's capsule

A B C D

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22) It is a capillary network within a glomerular capsule:

- A) Peritubular network
- B) Renal arterioles
- C) Glomerulus
- D) Vasa recta

A B C D

23) End stage renal disease leaves no option for:

- A) Kidney transplant
- B) Kidney surgery
- C) Lithotripsy
- D) Dialysis

A B C D

24) Blood before filtration enters the glomerulus through:

- A) Efferent arteriole
- B) Vasa recta
- C) Afferent arteriole
- D) Peritubular network

A B C D

25) A pair of human kidneys consists of _____ nephrons:

- A) Million
- B) More than a million
- C) Billion
- D) More than a billion

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26) The functional units of kidneys are:
A) Glomeruli C) Collecting ducts
B) Bowman's capsules D) Nephrons

- A B C D

27) The nephrons have extensive blood supply via:
A) Renal arteries C) Afferent arterioles
B) Renal veins D) Efferent arterioles

- A B C D

28) Urine is collected in a central cavity of kidney called:
A) Renal hilus C) Urinary Bladder
B) Renal pelvis D) Collecting tubule

- A B C D

29) Which one of the following is a source of hyperoxaluria?
A) Green vegetables and tomatoes
B) Hormonal imbalance
C) Infectious disorder
D) Kidney failure

- A B C D

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30) In restricted supply of water, the principal function of the body is:

- A) Conservation of water
- B) Concentration of water
- C) Production of hypotonic urine
- D) Diuresis

A B C D

31) It is gradually concentrated from cortical to medullary part:

- A) Urine in the kidney
- B) Interstitial fluid in the kidney
- C) Blood in the kidney
- D) Urea in the kidney

A B C D

32) It does not allow outflow of water from its filtrate:

- A) Proximal tubule
- B) Descending loop of Henle.
- C) Ascending loop of Henle
- D) Collecting duct

A B C D

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33) Excess water and wastes pass through the peritoneum:

- A) Into the body
- B) Into the blood
- C) Into the dialysis fluid
- D) Into the environment

A B C D

34) Which one is incorrect about dialysis:

- A) Carried out again and again
- B) It is of two types
- C) It is used as temporary measure
- D) It requires matching donor

A B C D

35) It is the central requirement in the maintenance of an organism:

- A) Homeostasis
- B) Osmoregulation
- C) Thermoregulation
- D) Excretion

A B C D

36) Kidney stones are formed in:

- A) Kidney
- B) Ureter

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36) Kidney stones are formed in:

- A) Kidney
- B) Ureter
- C) Gall bladder
- D) Gall bladder, ureter and kidney

A B C D

37) Urine is collected in the renal pelvis, following filtration of blood and further processing through:

- A) Loop of Henle
- B) Vasa recta
- C) Proximal and distal tubules
- D) Tubular system

A B C D

38) Sphincter muscles near the junction of the _____ and the _____ control the urine in the bladder:

- A) Ureter, bladder
- B) Pelvis, ureter
- C) Urethra, bladder
- D) Pelvis, bladder

A B C D

39) It/they intermingles with proximal and distal tubules of the nephrons

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39) It/they intermingles with proximal and distal tubules of the nephron:
A) Vasa recta C) Afferent arterioles
B) Peritubular capillaries D) Efferent arterioles
 A B C D

40) Blood is specially filtered in glomerulus, because glomerular walls are:
A) Ruptured C) Permeable
B) Selective D) Porous
 A B C D

41) As compared to hemodialysis, the exception in peritoneal dialysis is that of:
A) Dialysis fluid C) Peritoneal cavity
B) Goal D) Membrane
 A B C D

42) The process is repeated several times a day in case of:
A) Kidney surgery C) Hemodialysis
B) Peritoneal dialysis D) Lithotripsy
 A B C D

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43) It is used after kidney failure until a matching donor's kidney is transplanted:
A) Dialysis C) Lithotripsy
B) Surgery D) Kidney transplant

A B C D

44) The kidney stones can be removed, without breaking, by:
A) Lithotripsy C) Hydrotherapy
B) Chemotherapy D) Kidney surgery

A B C D

45) All of the following are responsible in production of concentrated urine except:
A) Restricted supply of water
B) Release of ADH
C) Concentration of filtrate
D) Reduction in reabsorption

A B C D

46) Glomerular filtrate contains following useful substances, EXCEPT:
A) Glucose C) Hemoglobin
B) Salts D) Amino acids

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47) The filtrate from glomerulus is processed in nephron ultimately for:

- A) Urea formation
- B) Deamination
- C) Urine formation
- D) Concentration

A B C D

48) The inner medulla of kidney is highly concentrated with the presence of:

- A) Urea
- B) Ammonia
- C) Uric acid
- D) Urine

A B C D

49) The effector of a thermoregulatory system may be:

- A) Thermosensors
- B) Hypothalamus
- C) Muscles
- D) Thermostat

A B C D

50) Detection of environmental changes and signaling for effector's response is called:

- A) Feedback activation
- B) Feedback inhibition
- C) Thermoregulation
- D) Feedback mechanism

A B C D

Activate Windows
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51) Heat of reaction may be positive or negative which can be determined accurately by using:

- A) Calorimeter C) Spectrophotometer
B) Polarimeter D) Refractometer

A B C D

52) Zinc rod acts as anode in the Daniell cell but acts as cathode when coupled with aluminum electrode, this is because the standard reduction potential of:

- A) $Zn > Al$ C) $Zn < Al$
B) $Zn = Al$ D) $Zn = 0$

A B C D

53) Oxidation state of "S" in $S_2O_3^{2-}$ is:

- A) +2 C) +3
B) -2 D) -1

A B C D

54) All of the following are correct statements

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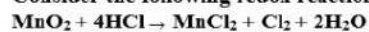


54) All of the following are correct statements EXCEPT:

- A) Na and K can displace hydrogen gas from acids
- B) SHE acts as cathode when connected with Cu electrode
- C) The standard oxidation potential of Zn is +0.76V
- D) A salt bridge is not required in lead storage cell

A B C D

55) Consider the following redox reaction



In this reaction

- I) HCl acts as a reducing agent
 - II) MnO_2 acts as an oxidizing agent
 - III) Cl⁻ in HCl is reduced to Cl_2 (zero oxidation state)
 - IV) Mn^{+4} in MnO_2 is reduced to Mn^{+2} (in MnCl_2)
- Which of the following statements is / are correct regarding this redox reaction?

- A) I and II only
- B) II and IV only
- C) I, II, and III
- D) I, II, and IV

A B C D

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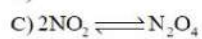
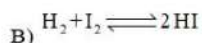
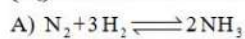


56) Which energy change corresponds to the enthalpy change of atomization of hydrogen at 298K?

- A) The bond energy of H-H bond
- B) Minus half the bond energy of H-H bond
- C) Half the bond energy of H-H bond
- D) Minus the bond energy of a H-H bond

A B C D

57) For which system does the equilibrium constant, (K_c) has no unit of concentration?



A B C D

58) Mark the incorrect statement:

- A) If $[H^+] > 10^{-7}$, solution is acidic i.e. $pH < 7$
- B) If $[H^+] = 10^{-7}$, solution is neutral i.e. $pH = 7$
- C) If $[H^+] < 10^{-7}$, solution is alkaline i.e. $pH > 7$
- D) If $[H^+] > 10^{-7}$, solution is neutral or basic i.e. $pH < 7$

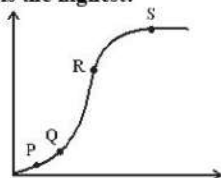
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- A) If $[H^+] > 10^{-7}$, solution is acidic i.e. $pH < 7$
- B) If $[H^+] = 10^{-7}$, solution is neutral i.e. $pH = 7$
- C) If $[H^+] < 10^{-7}$, solution is alkaline i.e. $pH > 7$
- D) If $[H^+] \geq 10^{-7}$, solution is neutral or basic i.e. $pH < 7$

A B C D

59) The graph shown plots the volume of hydrogen gas given off when magnesium ribbon is added to hydrochloric acid. At which point the speed of the reaction is the highest:



- A) Point P
- B) Point R
- C) Point Q
- D) Point S

A B C D

60) Which one of the following statements is incorrect

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60) Which one of the following statements is incorrect for acids that they?

- A) Liberate H^+
- B) Have high pH
- C) Accepts electrons
- D) Turns blue litmus red

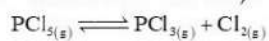
A B C D

61) The role of catalyst in a chemical reaction is to change:

- A) Enthalpy change
- B) Activation energy
- C) Concentration
- D) Equilibrium constant

A B C D

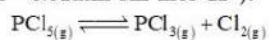
62) Equilibrium constant K_p at 500K is 1.0. Find K_c at the same temperature for the following reaction ($R = 0.01 \text{ atm dm}^3 \text{ mol}^{-1} \text{ K}^{-1}$):



- A) 0.2 mol dm^3
- B) 0.1 mol dm^3
- C) 0.3 mol dm^3
- D) 0.4 mol dm^3

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62) Equilibrium constant K_p at 500K is 1.0. Find K_c at the same temperature for the following reaction ($R = 0.01 \text{ atm dm}^3 \text{ mol}^{-1} \text{ K}^{-1}$):



- A) 0.2 mol dm^{-3} C) 0.3 mol dm^{-3}
 B) 0.1 mol dm^{-3} D) 0.4 mol dm^{-3}

A B C D

63) ΔH_c° of graphite at 25°C is $-393.51 \text{ kJ mol}^{-1}$ and that of diamond is $-395.41 \text{ kJ mol}^{-1}$. The enthalpy change for graphite is:

- A) -1.91 C) -2.1
 B) $+2.1$ D) $+1.91$

A B C D

64) Bond energy depends on all of the following factors EXCEPT:

- A) Atomic size C) Electronegativity
 B) Ionization energy D) Temperature

A B C D

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65) Which reaction has a enthalpy change equal to the standard enthalpy change of formation of propane?

- A) $3C_{(g)} + 4H_{2(g)} \rightarrow C_3H_{8(g)}$
- B) $3C_{(s)} + 4H_{2(g)} \rightarrow C_3H_{8(g)}$
- C) $3C_{(g)} + 8H_{(g)} \rightarrow C_3H_{8(g)}$
- D) $3C_{(s)} + 4H_{2(g)} \rightarrow C_3H_{8(l)}$

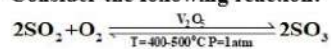
A B C D

66) Mark the incorrect statement about products of electrolysis using inert electrode of platinum:

Options	Electrolyte	Cathode	Anode
A)	PbBr ₂ (molten)	Pb _(s)	Br _{2(g)}
B)	NaCl (molten)	Na _(s)	Cl _{2(g)}
C)	KNO _{3(aq)}	K _(s)	O _{2(g)}
D)	NaOH _(aq)	H _{2(g)}	O _{2(g)}

A B C D

67) Consider the following reaction:



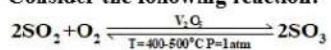
The unit of K_c for this reaction is:

- A) mol dm³
- C) mol⁻² dm³

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67) Consider the following reaction:



The unit of K_c for this reaction is:

- A) mol dm^3 C) $\text{mol}^{-2}\text{dm}^3$
 B) $\text{mol}^{-1}\text{dm}^3$ D) $\text{mol}^{-2}\text{dm}^{-6}$

A B C D

68) Mark the incorrect statement:

- A) Slow step in a reaction is always rate determining step
 B) Order of reaction cannot be in fraction
 C) Law of mass action always give theoretical rate of reaction
 D) Actual rate of reaction is given by rate law depends on order of reaction

A B C D

69) Mark the incorrect statement about the electrochemical series:

- A) Greater is the E°_{red} value, better is the oxidizing agent
 B) Greater is the E°_{red} value, better is the reducing agent

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69) Mark the incorrect statement about the electrochemical series:

- A) Greater is the E°_{red} value, better is the oxidizing agent
- B) Greater is the E°_{red} value, better is the reducing agent
- C) Every top metal acts as anode while lower one acts as cathode
- D) Every top metal can displace lower one in chemical reaction but lower one cannot

A B C D

70) All of the following statement about oxidation reduction are correct EXCEPT:

Options	Oxidation	Reduction
A)	Gain of oxygen	Loss of oxygen
B)	Loss of electrons	Gain of electrons
C)	Loss of hydrogen	Gain of hydrogen
D)	Decrease in oxidation state	Increase in oxidation state

A B C D

71) There are two methods to determine rate of

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71) There are two methods to determine rate of reaction i.e. physical and chemical method. In which of the following physical methods rate of reaction is directly proportional to concentration of an ionic species:

- A) Spectrometry C) Dilatometry
B) Electrical conductivity D) Refractometry

A B C D

72) What is the pH of 1.0 mol dm^{-3} of NH_4OH which is 1% dissociated?

- A) 12 C) 11
B) 10 D) 13

A B C D

73) All of the following are exothermic processes EXCEPT:

- A) Freezing of water C) Condensation
B) Evaporation D) Combustion

A B C D

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74) The direction of a reaction is predicted by:

- A) Law of mass action C) Rate law
B) Le-Chatelier's principle D) K_c value

A B C D

75) If pK_a value for aqueous NaOH at 25°C is 6.8. What is the correct pK_b value for the NaOH solution at this temperature?

- A) +7.2 C) +6.2
B) -7.2 D) -6.2

A B C D

76) Which of the following is an example of first order reaction?

- A) $2\text{N}_2\text{O}_5 \longrightarrow 2\text{N}_2\text{O}_4 + \text{O}_2$
B) $\text{NO} + \text{O}_3 \longrightarrow \text{NO}_2 + \text{O}_2$
C) $2\text{FeCl}_3 + 6\text{KI} \longrightarrow 2\text{FeI}_2 + 6\text{KCl} + \text{I}_2$
D) $\text{CHCl}_3 + \text{Cl}_2 \longrightarrow \text{CCl}_4 + \text{HCl}$

A B C D

77) Identify the incorrect statement about zero order

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77) Identify the incorrect statement about zero order reaction:

- A) The rate of reaction remains constant throughout course of reaction
- B) The unit of k in zero order reaction is $\text{mol}^{-2}\text{dm}^{-6}\text{s}^{-1}$
- C) Half-life of zero order is directly proportional to initial concentration
- D) Photosynthesis of glucose is an example of zero order reaction

A B C D

78) Consider the following reaction:



What would not happen when we add more ethanol?

- A) The concentration of ethanol is increased
- B) According to Le-Chatelier's principle, some of the ethanol must be removed to reduce the concentration of the added ethanol
- C) The position of equilibrium shifts to the left
- D) More ethanol reacts with ethanoic acid and more ethyl ethanoate and water are formed

A B C D

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79) In many chemical reactions, a 10°C rise in temperature?

- A) Halves the rate of reaction
- B) Doubles the time for the reaction to complete
- C) Halves the mass of reactants used
- D) Doubles the rate of reaction

A B C D

80) All of the following statements about exothermic and endothermic are correct EXCEPT:

Options	Exothermic reaction	Endothermic reaction
A)	It is one where energy (heat) is given out	It is one where energy (heat) is taken in
B)	It occurs when chemical bonds are made	It occurs when chemical bonds are broken
C)	It results in temperature fall in the surrounding	It results in temperature rise in the surrounding
D)	Exothermic reactions are more than that of endothermic reactions	Endothermic reactions are less than exothermic reactions

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D)	Exothermic reactions are more than that of endothermic reactions in nature	Endothermic reactions are less than exothermic reactions in nature
----	----------------------------------------------------------------------------	--------------------------------------------------------------------

- A B C D

81) If $Fe^{2+}/Fe = -0.44V, Br_2/2Br^- = 1.08V$, then the value of E° cell is:

- A) +1.52V C) +0.64V
B) -1.52V D) -0.64V

- A B C D

82) The word 'standard' in standard molar enthalpy means:

- A) 1 molar concentration only
B) Temperature 298K only
C) Pressure 1 atm only
D) 1 molar concentration, temperature 298K and pressure 1 atm

- A B C D

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83) According to Bronsted-Lowry concept:

- An acid is proton donor
- A base is proton acceptor

All of the following acids and their conjugate bases are correctly matched EXCEPT:

Options	Acid	Conjugate base
A)	HCl	Cl ⁻
B)	H ₂ SO ₄	HSO ₄ ⁻
C)	C ₆ H ₅ OH	C ₆ H ₅ O ⁻
D)	NH ₃	NH ₄ ⁺

- A B C D

84) Identify the incorrect statement about activation energy:

- A) It depends on the chemical nature of reactants
- B) If it has smaller value, faster is the rate of reaction
- C) Its value changes with the change of temperature
- D) It is always positive

- A B C D

85) A pipe is carrying sulphuric acid. The rate at which it corrodes can be decreased by:

- A) Raising the temperature

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A B C D

85) A pipe is carrying sulphuric acid. The rate at which it corrodes can be decreased by:

- A) Raising the temperature
- B) Using a narrower pipe
- C) Painting the outside of the pipe
- D) Diluting the acid

A B C D

PREVIOUS

FINISH TEST

NEXT

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86) Resistance of a given wire is obtained by measuring current flowing through it and potential difference across it. If percentage uncertainties in the measurement of current and potential difference are 3% and 4% respectively, then uncertainty in resistance:

- A) 3%
- B) 4%
- C) 7%
- D) 12%

A B C D

87) If $x_1 = 10.5 \pm 0.1$ cm and $x_2 = 26.8 \pm 0.1$ cm, then $x_2 - x_1$ is given by:

- A) 16.3 ± 0.1 cm
- B) 16.1 ± 0 cm
- C) 16.3 ± 0.2 cm²
- D) 16.3 ± 0.2 cm

A B C D

88) The possible error in the measurement of time period of simple pendulum:

- A) Systematic error
- B) Random error
- C) Both A & B
- D) Zero error

A B C D

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89) The error in a measurement may occur due to:

- A) Inexperience of a person C) The faulty apparatus
B) Inappropriate method D) All of these

A B C D

90) If the kinetic energy of a body becomes four times of the initial value, then new momentum will:

- A) Become twice its initial value
B) Become four times its initial value
C) Become half of its initial value
D) Remain same

A B C D

91) A car is moving with a speed of 15 m s^{-1} . If the mass of the car is 1000 kg, then its kinetic energy is:

- A) 112.5 kJ C) 7.5 kJ
B) 225 kJ D) 15 kJ

A B C D

92) Light and heavy bodies have equal kinetic energies. Which one has greater momentum?

- A) Heavy body

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92) Light and heavy bodies have equal kinetic energies. Which one has greater momentum?

- A) Heavy body
- B) Light body
- C) Both have same momentum
- D) None of these

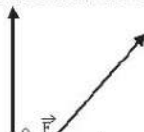
A B C D

93) A force of $3\hat{i} + 8\hat{j} + 8\hat{k}$ N gives displacement of $5\hat{i} + 6\hat{k}$ m. The work done is:

- A) 63 J
- B) 53 J
- C) 88 J
- D) 74 J

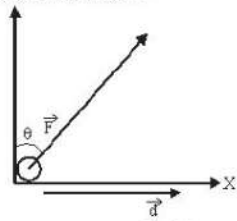
A B C D

94) Consider the figure in which a force "F" acts on a body through a distance "d". For which value of "θ" work is said to be maximum?



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94) Consider the figure in which a force "F" acts on a body through a distance "d". For which value of "θ" work is said to be maximum?



- A) 30°
- B) 90°
- C) 60°
- D) 0°

A B C D

95) Plank's Constant has same units as those of:
Spring Constant

- A) Force \times time
- B) Linear momentum
- C) Area \times time
- D) Angular momentum

A B C D

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96) Two measurements have fractional uncertainties 0.03 and 0.02, which measurement will be more accurate?

- A) Measurement with 0.03 uncertainty
- B) Measurement with 0.02 uncertainty
- C) Both are equally accurate
- D) Can't be predicted

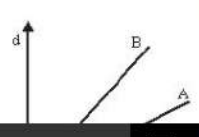
A B C D

97) The time for 25 vibrations of simple pendulum is recorded by a stop watch of least count 0.1 s is 54.6 s. The uncertainty in time period will be:

- A) 0.002 s
- B) 0.004 s
- C) 0.005 s
- D) 0.003 s

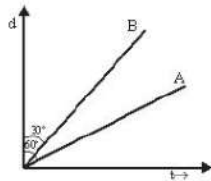
A B C D

98) The displacement time graphs of two bodies A and B are shown in figure. The ratio of $\frac{v_B}{v_A}$ is :



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98) The displacement time graphs of two bodies A and B are shown in figure. The ratio of $\frac{v_B}{v_A}$ is :



A) $\frac{1}{3}$

C) $\frac{1}{\sqrt{3}}$

B) 3

D) $\sqrt{3}$

- A B C D

99) A constant force acting on a body of mass 5 kg changes its speed from 4 m s^{-1} to 24 m s^{-1} in 5 s, the direction of motion of the body remaining unchanged. Find the magnitude of force:

A) 5 N

C) 20 N

B) 10 N

D) 50 N

- A B C D

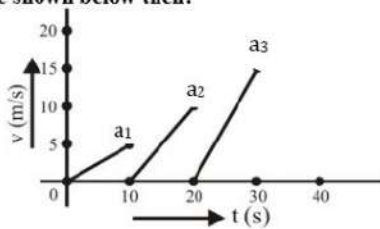
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100) A body of mass 2 kg collides with a wall with speed of 10 m s^{-1} and rebounds with the same speed. If the time of contact is $\frac{1}{500}$ s, the force exerted on the wall is:

- A) 8 N
- B) $2 \times 10^4 \text{ N}$
- C) 4 N
- D) 10^4 N

A B C D

101) The a_1 , a_2 and a_3 are accelerations produced in the three different particles whose velocity-time graphs are shown below then:

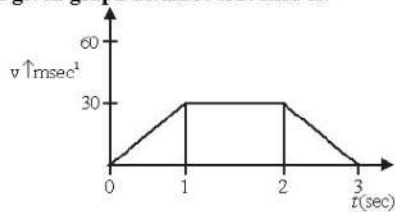


- A) $a_1 > a_2 > a_3$
- B) $a_1 < a_2 < a_3$
- C) $a_1 = a_2 = a_3$
- D) $a_1 = a_2 > a_3$

A B C D

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102) In the given graph distance travelled is:



- A) 60 m
- B) 30 m
- C) 15 m
- D) 100 m

A B C D

103) Two kids weighing 10 kg and 20 kg are trying to balance a see-saw of total length 5.0 m, with pivot at the centre. If 10 kg kid is sitting at one end, where must other kid sit (from pivot) on other side of pivot to establish equilibrium?

- A) 1.50 m
- B) 2.25 m
- C) 1.25 m
- D) 2.50 m

A B C D

104) Two balls are thrown at angles of θ and $(90^\circ - \theta)$ with

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104) Two balls are thrown at angles of θ and $(90^\circ - \theta)$ with the horizontal with same speed. Ratio of their time of flights is:

- A) $\tan^2 \theta : 1$ C) $\tan \theta : 1$
B) $1 : \tan \theta$ D) $1 : 1$

A B C D

105) If $x = at + \frac{1}{2}ct^2$, where "x" is distance and "t" is time, then the units of "a" and "c" must be:

- A) $m\ s^{-2}$ and $m\ s^{-1}$ C) $m\ s^{-1}$ and $m\ s^{-1}$
B) $m\ s^{-1}$ and $m\ s^{-2}$ D) $m\ s^{-1}$ and m

A B C D

106) How many petaseconds are there in one nanosecond?

- A) 10^{24} C) 10^{-27}
B) 10^{-24} D) 10^{27}

A B C D

107) Diameter of a wire is measured by screw gauge.

Which of following can be the possible value?

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TUTORIAL

RESOURCES

VOCABULARY



107) Diameter of a wire is measured by screw gauge. Which of following can be the possible value?

- A) 2.1 mm
- B) 2.12 mm
- C) 2.125 mm
- D) 2.1250 mm

A B C D

108) A force of 2000 N acts on a body of mass 20 kg such that it's velocity changes from v_i to v_f in 10 s, then the change in momentum will be equal to:

- A) 2000 N s
- B) 20000 N s
- C) 200 N s
- D) None of these

A B C D

109) A projectile is thrown at an angle θ with Y-axis, during its upward flight the angle of velocity vector with Y-axis:

- A) Increases
- B) Decreases
- C) Remains same
- D) Un predictable

A B C D

110) Two equal and opposite forces acting on the body at same point form a/an:

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110) Two equal and opposite forces acting on the body at same point form a/an:

- A) Couple
- B) Torque
- C) Impulse
- D) None of these

A B C D

111) Two cars A and B are going around concentric circular paths of radii R_A and R_B respectively. If the two cars complete the circular paths in the same time, then the ratio of angular speeds of A and B is

- A) Unity
- B) $\frac{R_A}{R_B}$
- C) $\frac{R_B}{R_A}$
- D) Zero

A B C D

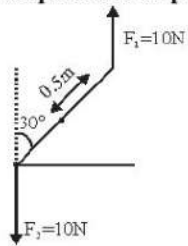
112) The angular displacement covered by second hand of a clock while moving for 45 seconds is:

- A) $\frac{\pi}{2}$ rad
- B) π rad
- C) $\frac{3\pi}{2}$ rad
- D) 2π rad

A B C D

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113) What will be torque due to couple as shown in figure:



- A) 5 N m C) 20 N m
B) 10 N m D) 15 N m

A B C D

114) A massive body of mass " m_1 " moving with velocity v_1 collides with a light body of mass m_2 at rest. The velocity of later body before collision will be _____ if collision is perfectly elastic.

- A) Zero C) $2v_1$
B) v_1 D) $-v_1$

A B C D

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115) For same change in momentum, which will hurt you more among following situations?

- a) kicking a stone (with time of impact = 0.01 s)
- b) kicking a football (with time of impact = 0.1 s)
- A) Situation a
- B) Situation b
- C) Equally hurt in both situations
- D) Can't be predicted

A B C D

PREVIOUS

FINISH TEST

NEXT

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116) Directions: Read each sentence and determine the meaning of the word using cross sentence clues or your prior knowledge.

The police are trying to find the culprit who is responsible for this _____ calamity.

- A) Appalling
- B) Appealing
- C) Ploughing
- D) Pleading

A B C D

117) His current appointment is serving as a _____ for his family.

- A) Bone
- B) Boon
- C) Bound
- D) Bane

A B C D

118) I was studying in my room alone where no one could _____ me from my work.

- A) Contract
- B) Abstract
- C) Distract
- D) Distort

A B C D

119) Directions: Choose the most suitable answer that identifies the homophones in the sentence.

The pious old man was looking like an _____.

- A) Avenge
- B) Angle
- C) Angel
- D) Revenge

A B C D

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120) The rider couldn't hold onto the _____ of the horse and fell.

- A) Brink
- B) Brittle
- C) Bridal
- D) Bridle

A B C D

121) The eardrum is a _____ inner organ which shouldn't be pricked.

- A) Sensitive
- B) Sensible
- C) Sanitized
- D) Sentimental

A B C D

122) Directions: Choose the word that is most nearly SIMILAR in the meaning of the following word.

ABRUPTLY

- A) Brusquely
- B) Burlesque
- C) Abidingly
- D) Invariably

A B C D

123) **CURIOUS**

- A) Querulous
- B) Inquisitive
- C) Hideous
- D) Jealous

A B C D

124) **DRUMMED**

- A) Dramatized
- B) Pulsated
- C) Swarmed
- D) Sworn

A B C D

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125) ENCOURAGED

- A) Boosted
- B) Downcast

A B C D

- C) Savaged
- D) Corrugated

126) OCCASIONALLY

- A) Frequency
- B) Frequently

A B C D

- C) Infrequently
- D) Provisionally

127) PLOPPED

- A) Plume
- B) Whipped

A B C D

- C) Slashed
- D) Splashed

128) QUENCH

- A) Trench
- B) Quiver

A B C D

- C) Sate
- D) Saturn

129) REPRIMANDED

- A) Astounded
- B) Scolded

A B C D

- C) Condensed
- D) Intended

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130) Directions: Choose the word that is most **OPPOSITE** in the meaning of the following word.

BASHFUL

A) Confident

B) Reproachful

C) Bewilderment

D) Judgmental

- A B C D

131) **MASS**

A) Volume

B) Consolation

C) Dissolution

D) Mess

- A B C D

132) **PRACTICALLY**

A) Frantically

B) Fanatically

C) Erratically

D) Theoretically

- A B C D

133) **PATH**

A) Blockage

B) Bandage

C) Encourage

D) Discourage

- A B C D

134) **QUOTATION**

A) Qualification

B) Mutation

C) Refusal

D) Proposal

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- A
- B
- C
- D

135) QUIVER
A) Quibble
B) Veracity

- C) Willingness
- D) Stillness

- A
- B
- C
- D

PREVIOUS

FINISH TEST

Activate Windows
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YOUR STEP
TOWARDS A
BRIGHTER FUTURE!

Biology Answer Key

Q.#	Ans	Q.#	Ans	Q.#	Ans	Q.#	Ans	Q.#	Ans
1	C	11	C	21	D	31	B	41	C
2	D	12	C	22	C	32	C	42	B
3	D	13	B	23	D	33	C	43	A
4	A	14	A	24	C	34	D	44	D
5	D	15	C	25	B	35	A	45	D
6	D	16	D	26	D	36	A	46	C
7	D	17	D	27	A	37	D	47	C
8	A	18	B	28	B	38	C	48	A
9	D	19	C	29	A	39	B	49	C
10	B	20	B	30	A	40	D	50	D

Chemistry Answer Key

Q.#	Ans	Q.#	Ans	Q.#	Ans	Q.#	Ans
51	A	61	B	71	B	81	A
52	A	62	A	72	A	82	D
53	A	63	D	73	B	83	D
54	B	64	B	74	D	84	C
55	D	65	B	75	A	85	D
56	C	66	C	76	A		
57	B	67	B	77	B		
58	D	68	B	78	C		
59	B	69	B	79	D		
60	B	70	D	80	C		

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Physics Answer Key

60 B 70 D 80 C

Physics Answer Key

Q.#	Ans	Q.#	Ans	Q.#	Ans
86	C	96	B	106	B
87	D	97	B	107	B
88	C	98	B	108	B
89	D	99	C	109	A
90	A	100	B	110	D
91	A	101	B	111	A
92	A	102	A	112	C
93	A	103	C	113	A
94	B	104	C	114	A
95	C	105	B	115	A

English Answer Key

Q.#	Ans	Q.#	Ans
116	A	126	C
117	B	127	D
118	C	128	C
119	C	129	B
120	D	130	A
121	A	131	C
122	A	132	D
123	B	133	A
124	B	134	C
125	A	135	D

MDCAT Test Session (Test # 12)

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