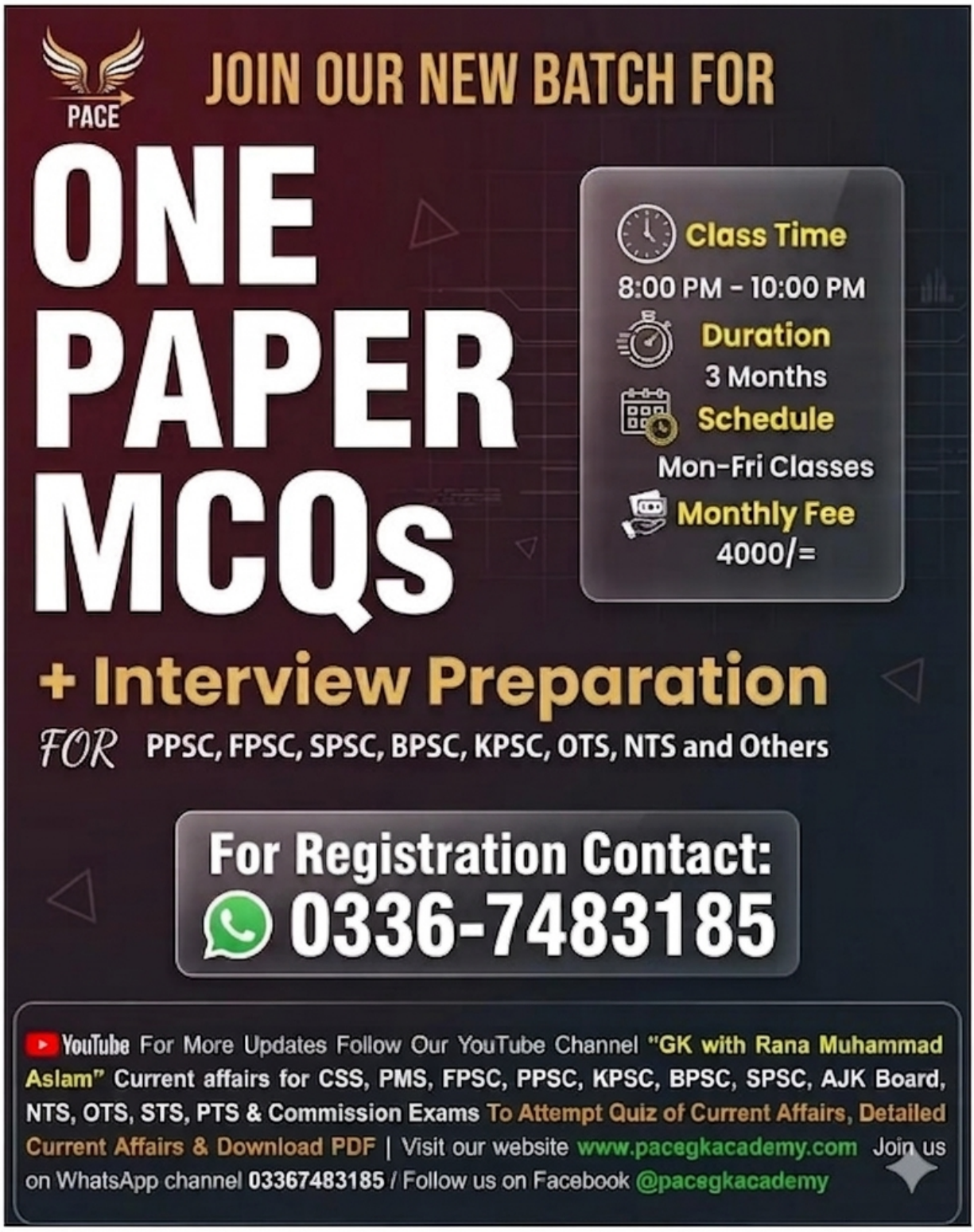
Agri. Engineering



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Q.1: Decibel is the unit of:
A. Viscosity of sound
B. **Intensity of sound**
C. Density of sound
D. Volume of sound

Q.2: The weight of oxygen consumed by organic matter in a water sample is called:
A. Chemical organ demand
B. **Biochemical oxygen**
C. None of these
D. All of these

Q.3: The region or area in which water gets collected and drains towards a lake is called:
A. **Catchment area**
B. Water area
C. Water log area
D. None of these

Q.4: The kind of pesticide aimed at killing or repelling birds is called:
A. Pesticide
B. Wide cide
C. **Avicide**
D. Flexbiricide

Q.5: The residue left after the sugar and water have been extracted from the sugar cane is called:
A. Beryiosis
B. **Bagasse**
C. Byssionosis
D. None of these

Q.6: When Froude number is less than unity, then flow is termed as:
A. **Subcritical**
B. Critical
C. Supercritical
D. None of these

Q.7: When Froude number is equal to unity, the flow is said to be:
A. Subcritical
B. **Critical**
C. Supercritical
D. None of these

Q.8: The effect of gravity upon the state of flow is represented by the ratio of inertial force to the gravity forces. This ratio is termed as:
A. Reynolds number
B. **Froude number**
C. Weber number
D. Mach number

Q.9: Cross-sectional area of the water in the channel divided by the width of free surface is called:
A. Diameter
B. **Hydraulic depth**
C. Hydraulic area
D. None of these

Q.10: The effect of viscosity relative to inertia can be represented by:
A. **Reynolds number**
B. Froude number
C. Mach number
D. Weber number

Q.11: If the viscous force is weak relative to the inertial forces, the flow is termed as:
A. **Turbulent**
B. Laminar
C. Transitional
D. None of these

Q.12: If the viscous forces are so strong relative to inertial force, then flow will be:
A. Turbulent
B. Transitional
C. **Laminar**
D. None of these

Q.13: If depth changes abruptly over a comparatively short distance, it is termed as:
A. **Rapidly varied flow**
B. Rapidly steady flow
C. Gradually varied flow
D. None of these

Q.14: In a flow when water fluctuates from time to time while remaining parallel to the channel bottom is called:
A. Steady non-uniform
B. **Unsteady uniform**
C. Steady uniform
D. Unsteady non-uniform

Q.15: The depth of flow remains constant during the time interval under consideration. This type of flow is called:
A. **Steady**
B. Uniform
C. Steady uniform flow
D. Unsteady uniform flow

Q.16: In open channel flow if depth of flow is same at every section of the channel, the flow is called:
A. Steady section of the channel
B. **Uniform flow**
C. Continuous flow
D. Unsteady

Q.17: The ratio of difference between the moisture content and P.L. to the P.I. is called:
A. Consistency index
B. Relative plasticity index
C. **Liquidity index**
D. All of these

Q.18: The difference in moisture content or interval between liquid and plastic limits is termed as:
A. **Plasticity index**
B. Shrinkage index
C. Liquidity index
D. None of these

Q.19: The moisture content at which the cohesive soil mass becomes larger and somewhat stiffer:
A. Liquid limit
B. Shrinkage limit
C. **Plastic limit**
D. Liquid state

Q.20: The moisture content at which the plastic properties of the cohesive soil are lost is termed as:
A. Liquid limit
B. Plastic state
C. **Plastic limit**
D. Shrinkage limit

Q.21: The moisture content of the soil at which the soil transforms from the semisolid to solid state is termed as:
A. Liquid limit
B. Plastic limit
C. **Shrinking limit**
D. Plastic state

Q.22: The degree of cohesion between the soil particles:
A. Degree of saturation
B. Degree of compaction
C. **Soil consistency**
D. None of these

Q.23: We can measure the liquid limit by the method:
A. **Casagrande's Method**
B. Proctor soil compaction test
C. Penetrometer
D. None of these

Q.24: Ratio of actual decrease in volume of void in a soil to the maximum decrease in volume of void is called:
A. **Relative density**
B. Relative compaction
C. Consolidation
D. Packing

Q.25: Compaction increases the density of the soil, thus increasing its _____ and bearing capacity.
A. **Shear strength**
B. Permeability
C. Tendency
D. None of these

Q.26: The moisture content in percent of a soil by dry weight at the maximum dry density of that soil is called:
A. Soil moisture content
B. Porosity
C. Void ratio
D. **Optimum moisture content**

Q.27: The ratio of the field density to the standard laboratory density of the soil is called:
A. Unit weight
B. Uniformity
C. **Relative compaction**
D. Consolidation

Q.28: The increase in the density of the soil by the static load is called:
A. Packing
B. Compaction
C. Erosion
D. **Consolidation**

Q.29: The increase in the dry density of soil by the dynamic load is called:
A. Packing
B. **Compaction**
C. Consolidation
D. Erosion

Q.30: In the British system of units, unit weight of water is:
A. **62.4 lb/ft³**
B. 1000 lb/ft³
C. 1000 kg/m³
D. 1 ft/m³

Q.31: Weight of soil per unit of its volume is called:
A. Specific weight
B. Specific gravity
C. Unit gravity
D. **Unit weight**

Q.32: If coefficient of uniformity is greater than 15 then soil:
A. Uniform
B. Medium uniform
C. **Non-uniform**
D. None of these

Q.33: The sample finer than the size shown to the size which has 10% by weight material finer than these sizes is called:
A. Packing
B. **Coefficient**
C. Coefficient of resistivity
D. Degree of saturation

Q.34: The application of the laws of mechanics and hydraulics to engineering problems dealing with sediments and other consolidated accumulation of solid particles produced by mechanical and chemical disintegration of rocks regardless of whether or not they contain an admixture of organic constituents is called:
A. Fluid mechanics
B. **Soil mechanics**
C. Soil Science
D. Engineering mechanics

Q.35: The process by which moisture is returned to the air from liquid to gaseous state:
A. **Evaporation**
B. Transpiration
C. Evapotranspiration
D. None of these

Q.36: The product of the K.E. of the storm and maximum 30-min intensity is called:
A. Infiltration index
B. Rainfall index
C. Run off index
D. **Rainfall & runoff erosivity index**

Q.37: The removal of soil from the land by running water, including runoff from melted snow and ice:
A. Soil erosion
B. **Water erosion**
C. Wind erosion
D. None of these

Q.38: Select the formula which is used to determine the peak run off:
A. **q=KA^x\)**
B. Q=KA^x\)
C. q=K^xA\)
D. None of these

Q.39: The ratio of the peak run off rate to the rainfall intensity is called:
A. **Run off co-efficient**
B. Intensity co-efficient
C. Infiltration co-efficient
D. None of these

Q.40: Run off will occur only when the rate of _____ exceeds the rate at which water infiltrates in the soil.
A. **Precipitation**
B. Infiltration
C. Evaporation
D. None of these

Q.41: Uniform removal of soil in thin layer from sloping land:
A. **Sheet erosion**
B. Rill erosion
C. Gully erosion
D. Stream channel erosion

Q.42: The ratio of weight of water transpired to the weight of dry matter in the plant is called:
A. **Transpiration ratio**
B. Evapotranspiration ratio
C. Infiltration ratio
D. None of those

Q.43: To find the evaporation from reservoirs the calculated evaporation should be multiplied by:
A. **0.77**
B. 0.67
C. 7.7
D. 6.7

Q.44: The rate of evaporation has been found to _____ with _____ in the salt content of the water.
A. Increase, decrease
B. Decrease, increase
C. Decrease, decrease
D. **Both a & b**

Q.45: Infiltration rate is high; _____ water will pass through the soil surface and erosion will _____.
A. Less, increase
B. **More, reduce**
C. Less, reduce
D. More, increase

Q.46: The movement of water through the soil profile is called:
A. Infiltration
B. **Percolation**
C. Runoff
D. Transpiration

Q.47: Drizzle consists of quite uniform precipitation with drops less than _____ in diameter.
A. **0.5 mm**
B. 0.4 mm
C. 0.6 mm
D. 0.3 mm

Q.48: The collection and storage of surface water as well as the recharge and orderly development of ground water supplies is called:
A. Moisture control
B. **Water resource development**
C. Drainage
D. Moisture conservation

Q.49: The application of modified tillage and crop management practices including natural and artificial mulching techniques is called:
A. Erosion control
B. Flood control
C. **Moisture conservation**
D. Water resource development

Q.50: The prevention of overflow on low land and the reduction of flow in streams during and after heavy storms are called:
A. Erosion control
B. Drainage
C. Irrigation
D. **Flood control**

Q.51: The application of water to land having a deficiency of moisture for optimum crop growth is called:
A. Drainage
B. **Irrigation**
C. Vegetation
D. Flood control

Q.52: The removal of excess water from wetland is called:
A. Irrigation
B. **Drainage**
C. Vegetation
D. Moisture conservation

Q.53: The engineering problems involved in soil and water conservation may be divided into the _____ phases.
A. **Six**
B. Five
C. Four
D. Two

Q.54: The application of engineering principles to the solution of soil and water management problem:
A. Fluid mechanics
B. Soil Mechanics
C. **Soil & water conservation engineering**
D. Engineering mechanics

Q.55: The discharge of an overflow spillway is given by the Weber equation:
A. **$Q=C_wLH^{3/2}$**
B. $Q=C_wL^{3/2}H$
C. $Q=C_w^{3/2}LH$
D. $Q=C_wLH^{3/2}$

Q.56: If pipes are in series what would occur?
A. **$Q=Q_1=Q_2=Q_3=\cdots$**
B. $h_L=h_{L1}+h_{L2}+h_{L3}+\cdots$
C. oth (a) and (b) relationships
D. None of these

Q.57: What is the Manning formula in MKS system?
A. $V=0.85\,C_{HW}R_h^{0.63}S^{0.54}$
B. **$V=\frac{1}{n}R_h^{2/3}S^{1/2}$**
C. $V=\frac{49}{n}R_h^{2/3}S^{1/2}$
D. $V=\frac{100}{n}R_h^{2/3}S^{1/2}$

Q.58: If in pipe friction equation D is replaced by Hydraulic Radius, then this equation is known as:
A. Darcy–Weisbach equation
B. Pipe friction equation
C. **Fanning equation**
D. None of these

Q.59: The visible formula is: $h_L=f\frac{L}{D}\frac{V^2}{2g}$
A. **Pipe friction equation**
B. Darcy Weisbach equation
C. Fanning equation
D. Bernoulli's equation

Q.60: Hydraulic radius for a full flowing circular pipe is:
A. Rh = D/4
B. Rh = r/2
C. Rh = $\pi r^2/2\pi r$
D. **All of these**

Q.61: What is the hydraulic radius?
A. Rh = P/A
B. Rh = A/d
C. **Rh = A/P**
D. Rh = D/A

Q.62: If there are n dimensional variables in a dimensionally homogeneous equation, described by m fundamental dimensions, they may be grouped in n−m dimensionless groups.
A. Rayleigh method
B. **Buckingham Theorem**
C. Both a & b
D. None of these

Q.63: A mathematical technique making use of the study of dimensions:
A. **Dimensional analysis**
B. Vector Analysis
C. Calculus
D. Mechanics

Q.64: What is the dimension of power?
A. MLT^{-2}
B. $ML^{-1}T^{-2}$
C. **ML^2T^{-3}**
D. ML^2T^{-2}

Q.65: What is the dimension of discharge?
A. L^2T^{-1}
B. L^2T^{-2}
C. **L^3T^{-1}**
D. L^3T

Q.66: The square root of the ratio of the inertial forces to the pressure forces is called:
A. Weber number
B. Mach number
C. **Euler number**
D. Froude number

Q.67: Select the correct formula of the Weber number:
A. **$We = \rho V^2 L/\sigma$**
B. V/C
C. $V/\sqrt{gL}$
D. $V/\sqrt{(2g(P/\gamma))}$

Q.68: The square root of the ratio of the inertial forces to surface tension is called:
A. **Weber number**
B. Mach number
C. Froude number
D. Euler number

Q.69: Select the correct formula of Froude number:
A. DV/ν
B. LV/ν
C. **$V/\sqrt{gL}$**
D. None of these

Q.70: Square root of the ratio of the inertial force to the gravity force is called:
A. **Froude number**
B. Reynolds number
C. Mach number
D. Weber number

Q.71: Reynolds number R is equal to:
A. **LV/ν**
B. V^2/gL
C. LV/ν^2
D. V/C

Q.72: The ratio of inertia forces to viscous forces is called:
A. Mach number
B. Froude number
C. Weber number
D. **None of these**

Q.73: Model ratio should be:
A. **1:20**
B. 20:1
C. 10:1
D. 1:10

Q.74: Scale ratio is equal to the:
A. **Lp/Lm**
B. Lm/Lp
C. Lp/Lr
D. Ln/λ

Q.75: The geometric similarity, which means that the model and its prototype be identical in shape but _____ only size:
A. Same
B. **Differ**
C. May be same or may be differ
D. None of these

Q.76: The ratio of the area of the jet to the area of the orifice or the opening is called:
A. **Cc**
B. Cv
C. Co
D. None of these

Q.77: Write the correct formula of the total head and Bernoulli's theory:
A. **$P/\gamma + Z + V^2/2g$**
B. $P/2\gamma + Z/2 + V^2/g$
C. $P/2\gamma + Z + V^2/2g$
D. All of these

Q.78: The sum of the pressure head, elevation head and velocity head is called:
A. Volume flow rate
B. Weight flow rate
C. **Head**
D. Mass flow rate

Q.79: If the flow is steady, the fluid may possess an acceleration by virtue of a change in velocity with change in position. This type of _____.
A. **Convective acceleration**
B. Local acceleration
C. Tangential acceleration
D. Normal acceleration

Q.80: If the flow is such that all streamlines are plane curves and are identical in a series of parallel planes, it is called:
A. Uniform flow
B. Uniform unsteady flow
C. **Two dimensional flow**
D. Laminar flow

Q.81: Select the continuity equation that applies to incompressible fluids for both steady and unsteady flow within fixed boundaries:
A. **$Q = A_1V_1 = A_2V_2$**
B. $M = \rho_1A_1V_1 = \rho_2A_2V_2$
C. $G = \gamma_1A_1V_1 = \gamma_2A_2V_2$
D. None of these

Q.82: Select the equations of continuity:
A. $Q = A_1V_1 = A_2V_2$
B. $\rho_1A_1V_1 = \rho_2A_2V_2 = M$
C. $\gamma_1A_1V_1 = \gamma_2A_2V_2 = G$
D. **All of these**

Q.83: What is the formula of volume flow rate?
A. **$Q = AV$**
B. $G = \gamma AV$
C. $M = \rho AV$
D. $N = AV$

Q.84: In the uniform flow remain same:
A. Depth
B. Velocity
C. Temperature
D. **Depth and velocity**

Q.85: The buoyant force on any body is equal to _____ of fluid displaced.
A. Mass
B. **Weight**
C. Volume
D. b and c both

Q.86: Differential manometers are used to measure:
A. Viscosity
B. Volume
C. Temperature
D. **Pressure**

Q.87: A fluid for which the constant of proportionality (i.e. the viscosity) does not change with rate of deformation is said to be a:
A. Real fluid
B. Ideal fluid
C. **Newtonian fluid**
D. Compressional fluid

Q.88: Kinematic viscosity is usually measured in cm^2/s which is also called:
A. Poise
B. Joule
C. Pascal
D. **Stoke**

Q.89: The unit of viscosity is poise which is equal to:
A. **$0.1\ N{\cdot}s/m^2$**
B. $0.1\ m\ N{\cdot}s/m^2$
C. $N{\cdot}s/m^2$
D. All of these

Q.90: In SI unit pressure is expressed in:
A. Joule
B. **N/m^2**
C. $N{\cdot}m$
D. N/m^3

Q.91: Specific weight of air (molecular weight = 29.0) at 20°C and 1013 mbar (abs) with g = 9.81 m/s² is:
A. **0.012 kN/m³**
B. 10.1 kN/m³
C. 9.81 kN/m³
D. 8.5 kN/m³

Q.92: For air the value of gas constant R is:
A. 462 N·m/(kg·K)
B. **287 N·m/(kg·K)**
C. 728 N·m/(kg·K)
D. None of these

Q.93: Specific weight of water at 20°C (1013 m.bar, abs) with g = 9.8 m/s² is:
A. 10.1 kN/m³
B. **9.81 kN/m³**
C. 8.5 kN/m³
D. 9.1 kN/m³

Q.94: The measure of fluid's resistance to shear or angular deformation:
A. Normality
B. **Viscosity**
C. Molarity
D. Compressibility

Q.95: An ideal fluid may be defined as one in which there is no _____.
A. Pressure
B. Volume
C. **Friction**
D. Temperature

Q.96: The typical value of modulus of elasticity of cold water at 0°C and pressure 100 kPa is:
A. **2130 MN/m²**
B. 2530 MN/m²
C. 2830 MN/m²
D. 2730 MN/m²

Q.97: The compressibility of a liquid is _____ to its volume modulus of elasticity.
A. **Inversely proportional**
B. Directly proportional
C. Equal
D. None of these

Q.98: Specific weight (γ) has unit:
A. **N/m³**
B. kg/m³
C. m³/N
D. N·s²/m⁴

Q.99: Specific weight of fluid is:
A. Mass per unit volume
B. **Weight per unit volume**
C. Density per unit weight
D. Weight per unit density

Q.100: A gas having temperature and pressure very near to the liquid phase:
A. Steam
B. **Vapour**
C. Compressed gas
D. Fluid

Q.101: The combining of classical hydrodynamics with the study of real fluid is related to the science, called:
A. Soil mechanics
B. Mechanics of material
C. **Fluid mechanics**
D. Engineering mechanics

Q.102: The mechanics of liquids and gases which is based on the same fundamental principles that are employed in the mechanics of solids is called:
A. Soil mechanics
B. **Fluid mechanics**
C. Mechanics of material
D. Engineering mechanics

Agri. Engineering (Answer Key)

1. **B**	2. **B**	3. **A**	4. **C**	5. **B**	6. **A**	7. **B**	8. **B**	9. **B**	10. **A**
11. **A**	12. **C**	13. **A**	14. **B**	15. **A**	16. **B**	17. **C**	18. **A**	19. **C**	20. **C**
21. **C**	22. **C**	23. **A**	24. **A**	25. **A**	26. **D**	27. **C**	28. **D**	29. **B**	30. **A**
31. **D**	32. **C**	33. **B**	34. **B**	35. **A**	36. **D**	37. **B**	38. **A**	39. **A**	40. **A**
41. **A**	42. **A**	43. **A**	44. **D**	45. **B**	46. **B**	47. **A**	48. **B**	49. **C**	50. **D**
51. **B**	52. **B**	53. **A**	54. **C**	55. **A**	56. **A**	57. **B**	58. **C**	59. **A**	60. **D**
61. **C**	62. **B**	63. **A**	64. **C**	65. **C**	66. **C**	67. **A**	68. **A**	69. **C**	70. **A**
71. **A**	72. **D**	73. **A**	74. **A**	75. **B**	76. **A**	77. **A**	78. **C**	79. **A**	80. **C**
81. **A**	82. **D**	83. **A**	84. **D**	85. **B**	86. **D**	87. **C**	88. **D**	89. **A**	90. **B**
91. **A**	92. **B**	93. **B**	94. **B**	95. **C**	96. **A**	97. **A**	98. **A**	99. **B**	100. **B**
101. **C**	102. **B**								