Correct Option selected	Wrong Option selected	Correct Option	Full Marks	Not Answered

SOLUTION WILL BE AVAILABLE IN TEAMMCQ TEST SERIES

Section - I MT (Civil)

Q.No: 1 CV1123	A rectangular steel beam has the following properties: • Width, b=200 mm • Depth, d=400 mm • Yield stress of steel, fy = 250 MPa The plastic moment capacity of the beam section is:
A	**4000 kNm**

B	**2500 kNm**	
C	**2000 kNm**	
D	**1000 kNm**	

Q.No: 2 CV1004	Determine the general solution of y''- 9y=0.	y''- 9y=0 क
A	$y=C_1e^{3x}+C_2e^{-3x}$	$y=C_1e^{3x}+$
B	$y=C_1\sin x+C_2\cos x$	$y=C_1\sin x$
C	$y=C_1x+C_2$	$y=C_1x+C$
D	$y=e^{-9x}$	$y=e^{-9x}$

Q.No: 3 CV1026	Which method is used to determine the storage capacity of a reservoir based on cumulative inflows?	संचयी प्रव किया जात
A	**Soil moisture**	**मिट्टी की**
B	**Water quality**	**पानी की गु**
C	**Hydrographs only**	**केवल हाइड्**
D	**Mass curve analysis**	**मास वक्र**

Q.No: 4 CV1032	Which of the following pollutants is directly emitted into the atmosphere from its source?	निम्नलिखि
A	**Smog**	**स्मोग**
B	**Ozone**	**ओजोन**
C	**Sulphur dioxide (SO_2)**	**सल्फर डाइ**
D	**PAN (Peroxyacyl nitrates)**	**PAN (पेरो**

Q.No: 5 CV1030	Which contaminant in drinking water is most commonly associated with Methemoglobinemia in infants?	पीने के पा
A	**Carbon dioxide**	**कार्बन डाइ**
B	**Nitrate**	**नाइट्रेट**
C	**Chloride**	**क्लोराइड**
D	**Magnesium**	**मैगनीशिय**

Q.No: 6 CV1093	In aerial photography, the principal point on a photograph corresponds to which of the following?	हवाई फोटो
A	**Intersection of fiducial marks**	**प्रत्ययी चि**
B	**Camera mounting point**	**कैमरा माउं**
C	**Geometric center of the photograph**	**फोटोग्राफ**
D	**GPS ground control point**	**GPS ग्राउंड**

Q.No: 7 CV1035	Landfill gas generated from anaerobic decomposition of waste consists mainly of which gases?	कचरे के अ
A	**Oxygen and nitrogen**	**ऑक्सीजन**
B	**Hydrogen and sulfur dioxide**	**हाइड्रोजन**
C	**Ammonia and methane**	**अमोनिया**
D	**Methane and carbon dioxide**	**मीथेन औ**

Q.No: 8 CV1040	In surveying, which fundamental principle ensures accurate plotting of large areas?	सर्वेक्षण में
A	**Working from part to whole**	**भाग से पूरे**
B	**Using only angular observations**	**केवल कोण**
C	**Using only linear measurements**	**केवल रैखि**
D	**Working from whole to part**	**पूरे से भाग**

Q.No: 9 CV1017	According to Terzaghi, the ultimate bearing capacity of soil is the	टेरज़ागी के
A	**Sum of pore pressure and surcharge**	**छिद्र दबाव**

B	**Pressure at which shear failure occurs**	**दबाव जिस**
C	**Depth of foundation**	**नींव की ग**
D	**Pressure for zero settlement**	**शून्य निप**

Q.No: 10 CV1144	An airport located at high altitude with frequent summer temperatures above standard atmosphere observes that aircraft require longer take-off distances than design values. The primary reason for increasing runway length under such conditions is:	एक हवाई तापमान ऑफ दूरी
A	**Reduction in air density affecting engine thrust and lift**	**हवा के घ**
B	**Reduction in wind velocity**	**हवा की ग**
C	**Increase in aircraft weight**	**विमान क**
D	**Increase in pavement friction**	**फुटपाथ के**

Q.No: 11 CV1106	If events A,B are independent, which condition must hold?	यदि घटन
A	$P(A \cap B)=0$	$P(A \cap B)=$
B	$P(A \cup B)=P(A)+P(B)$	$P(A \cup B)=$
C	$P(A\|B)=P(A)$	$P(A\|B)=$
D	$P(A\|B)=P(B)$	$P(A\|B)=$

Q.No: 12 CV1126	Consider the following statements S1. SPT N-value represents resistance of soil to penetration. S2. Energy correction is applied to measured N-value. S3. SPT is unreliable in gravels. S4. SPT directly measures shear strength. Which of the above statements about the Standard Penetration Test (SPT) are correct or most accurate?	निम्नलिखि S1. SPT N S2. मापे S3. बजरी S4. SPT स

		मानक प्रव
A	**S2 and S4 only**	**केवल S2**
B	**S2 and S3 only**	**केवल S2**
C	**S1, S2 and S3 only**	**केवल S1,**
D	**S1 and S4 only**	**केवल S1**

Q.No: 13 CV1056	In a soil mass subjected to quicksand (boiling) condition, the effective stress becomes:	क्विकसैंड
A	**Zero**	**शून्य**
B	**Equal to total stress**	**कुल तनाव**
C	**Negative**	**नकारात्म**
D	**Maximum**	**अधिकतम**

Q.No: 14 CV1091	In a compass traverse, local attraction is indicated when the difference between the fore bearing and back bearing of a line is:	एक कम्प के असर के
A	**Magnetic dip increases**	**चुंबकीय झ**
B	**Equal to 180°**	**180° के ब**
C	**Declination changes**	**गिरावट में**
D	**Not equal to 180°**	**180° के ब**

Q.No: 15 CV1088	What is the primary structural failure mode of rigid (concrete) pavements under repeated traffic loading?	बार-बार य है?

A	**Rutting**	**रटिंग**
B	**Fatigue cracking**	**फेटिज क्रे**
C	**Bleeding**	**ब्लिडिंग**
D	**Ravelling**	**रेवेलिंग**

Q.No: 16 CV1001	If B is a 4 x 4 matrix and det(B) = 3, then det(adj(B)) is:	यदि B, 4
A	**15**	**15**
B	**27**	**27**
C	**20**	**20**
D	**35**	**35**

Q.No: 17 CV1075	Sludge drying beds primarily dewater sludge through which processes?	कीचड़ सु
A	**Evaporation & drainage**	**वाष्पीकर**
B	**Aeration only**	**केवल वा**
C	**Centrifugal force**	**केन्द्रापस**
D	**Chemical oxidation**	**रासायनि**

Q.No: 18 CV1021	The momentum equation in mechanics is derived from which fundamental law?	यांत्रिकी मे
A	**Pascal's law**	**पास्कल क**
B	**Boyle's law**	**बॉयल का**
C	**Newton's second law**	**न्यूटन क**

D	**Hooke's law**	**हुक का नि**

Q.No: 19 CV1053	What is the main purpose of adding steel bars or mesh to concrete?	कंक्रीट में
A	**To increase tensile strength and durability**	**तन्य शक्ति**
B	**To make concrete waterproof**	**कंक्रीट वा**
C	**To accelerate setting time**	**सेटिंग सम**
D	**To reduce the weight of concrete**	**कंक्रीट का**

Q.No: 20 CV1024	A gradually varied flow profile in an open channel develops when:	एक खुले
A	**Water level drops suddenly**	**जलस्तर**
B	**Velocity is uniform**	**वेग एक स**
C	**Flow is steady and depth changes slowly along length**	**प्रवाह स्थि**
D	**Channel is horizontal only**	**चैनल केव**

Q.No: 21 CV1044	In geometric road design, the length of a simple circular curve depends on which parameters?	ज्यामिती
A	**Deflection angle and radius**	**विक्षेपण**
B	**Soil moisture**	**मिट्टी की**
C	**Temperature**	**तापमान**
D	**Angle of elevation**	**ऊंचाई का**

Q.No: 22 CV1105	A bag contains 5 red balls and 3 green balls. Two balls are drawn without replacement. What is the probability that the second ball is green given that the first ball drawn was red?	एक बैग में प्रायिकता
A	$\frac{3}{7}$	$\frac{3}{7}$
B	$\frac{5}{8}$	$\frac{5}{8}$
C	$\frac{3}{8}$	$\frac{3}{8}$
D	$\frac{2}{8}$	$\frac{2}{8}$

Q.No: 23 CV1005	A Boundary Value Problem (BVP) is defined as a differential equation along with:	एक बाउंड्री
A	**Conditions at two or more different points**	**दो या दो**
B	**Only derivative at start**	**शुरुआत**
C	**No condition**	**कोई शर्त**
D	**Only slope at a single point**	**केवल एक**

Q.No: 24 CV1059	The allowable bearing capacity of soil is generally obtained by dividing the ultimate bearing capacity by:	मिट्टी की
A	**Shape factor**	**आकार क**
B	**Shear strength**	**कतरनी त**
C	**Settlement**	**निपटान**
D	**Factor of safety**	**सुरक्षा का**

Q.No: 25 CV1061	How does hydrostatic pressure vary with depth in a fluid at rest?	हाइड्रोस्टेटि
A	**Cubic with depth**	**गहराई के**
B	**Linear with depth**	**गहराई के**
C	**Constant**	**स्थिर**
D	**Parabolic with depth**	**गहराई के**

Q.No: 26 CV1090	According to the linear Greenshields speed-density model, maximum traffic flow occurs at what fraction of jam density?	रैखिक ग्री पर होता है
A	**Zero density**	**शून्य घन**
B	**Half of jam density**	**जाम घन**
C	**Two-third jam density**	**दो-तिहाई**
D	**Jam density**	**जाम घन**

Q.No: 27 CV1065	In open channel flow, the primary effect of a hydraulic jump is:	खुले चैनल
A	**Energy gain**	**ऊर्जा लाभ**
B	**Increase in velocity**	**वेग में वृद्**
C	**Energy loss**	**ऊर्जा की ह**
D	**Laminar flow**	**लामिना**

Q.No: 28 CV1008	Use the Trapezoidal Rule with step size h= 1 to approximate the integral $\int_0^1 xdx$ using the formula $\frac{h}{2}[f(0)+f(1)]$. What is the approximate value?	अभिन्न करें $\frac{h}{2}[f(0$

A	**0.5**	**0.5**
B	**0.8**	**0.8**
C	**1.5**	**1.5**
D	**0.4**	**0.4**

Q.No: 29 CV1016	What does Mohr's circle graphically represent in the study of stresses at a point?	एक बिंदु प
A	**Relationship between normal stress and shear stress**	**सामान्य**
B	**Grain size distribution**	**अनाज क**
C	**Variation of density with void ratio**	**शून्य अनु**
D	**Variation of permeability**	**पारगम्यत**

Q.No: 30 CV1062	In boundary layer flow along a solid surface, the point where wall shear stress becomes zero just before the flow reverses is called:	एक ठोस पहले शून्य
A	**Stagnation point**	**ठहराव बि**
B	**Separation point**	**पृथक्करण**
C	**Critical point**	**महत्वपूर्ण**
D	**Vortex point**	**भंवर बिंदु**

Q.No: 31 CV1064	In open channel flow, critical flow occurs when which dimensionless number equals 1?	खुले चैनल
A	**Froude number**	**फ्रॉड नंबर**
B	**Euler number**	**यूलर नंबर**

C	**Mach number**	**मच नंबर**
D	**Reynolds number**	**रेनॉल्ड्स**

Q.No: 32 CV1092	Which surveying instrument integrates an electronic theodolite with an Electronic Distance Measurement (EDM) device?	कौन सा स एकीकृत
A	**Dumpy level**	**डम्पी स्त**
B	**Plane table**	**विमान की**
C	**Automatic level**	**स्वचालित**
D	**Total station**	**कुल स्टेश**

Q.No: 33 CV1042	Reciprocal levelling is primarily used when direct levelling is obstructed by_____.	पारस्परिक समतलीक
A	**Sight distances are very short**	**दृष्टि की**
B	**No benchmark is available**	**कोई बेंचम**
C	**Staff is not vertical**	**कर्मचारी**
D	**Water bodies or other obstacles**	**जल निक**

Q.No: 34 CV1119	Raw water from a river has high turbidity during monsoon but acceptable chemical quality. Pathogen removal is critical. Which treatment process combination is most appropriate?	मानसून है। रोगज़
A	**Coagulation → Sedimentation → Filtration → Disinfection**	**जमावट →**
B	**Filtration → Disinfection only**	**निस्पंदन**
C	**Aeration → Sedimentation → Disinfection**	**वातन →**

D	**Sedimentation → Filtration → Disinfection**	**अवसादन**

Q.No: 35 CV1018	When the groundwater table rises near the foundation base, how is the effective stress in the soil affected?	जब भूजल
A	**Increases**	**बढ़ जाती**
B	**Decreases**	**घटता है**
C	**Remains constant**	**स्थिर रह**
D	**Becomes negative**	**नकारात्म**

Q.No: 36 CV1060	What is the effect on the ultimate bearing capacity of soil when the water table rises to the level of the footing base?	जब जल
A	**Effective stress increases**	**प्रभावी त**
B	**Surcharge increases**	**अधिभार**
C	**Ultimate bearing capacity decreases**	**अंतिम अ**
D	**Soil becomes stronger**	**मिट्टी म**

Q.No: 37 CV1038	The Marshall test for bituminous mixes is conducted to determine:	बिटुमिनस
A	**Aggregate shape index**	**कुल आक**
B	**Stability & flow values of mix**	**मिश्रण की**
C	**Los Angeles abrasion**	**लॉस एंजि**
D	**Bitumen viscosity**	**बिटुमेन**

Q.No: 38 CV1115	Consider the following statements S1. Stress is defined as force per unit area. S2. Hooke's law is valid only within elastic limit. S3. Modulus of elasticity is the slope of stress-strain curve in plastic range. S4. Strain is a dimensionless quantity. Which of the above statements are correct?	निम्नलि S1. प्रतिब S2. हुक क S3. प्रत्या S4. तनाव उपरोक्त
A	**S2 and S3 only**	**केवल S2**
B	**S1, S2 and S4 only**	**केवल S1,**
C	**S1 and S3 only**	**केवल S1**
D	**S1 and S2 only**	**केवल S1**

Q.No: 39 CV1019	The main objective of drilling boreholes in geotechnical investigations is to :	भू-तकनी
A	**Install drainage**	**जल निक**
B	**Increase groundwater level**	**भूजल स्त**
C	**Obtain soil samples and subsurface profile**	**मिट्टी के**
D	**Improve soil strength**	**मिट्टी की**

Q.No: 40 CV1101	If A is a non-singular 3X3 matrix and det(A^TA) = 16, the det(A) is equal to:	यदि A ए
A	**$\pm$12**	**$\pm$12**
B	**$\pm$16**	**$\pm$16**
C	**$\pm$4**	**$\pm$4**
D	**$\pm$8**	**$\pm$8**

Q.No: 41 CV1037	What is the primary purpose of providing superelevation (raising the outer rail) on a railway curve?	रेलवे वक्र
A	**To strengthen ballast**	**गिट्टी को**
B	**To increase sleeper spacing**	**स्लीपर रि**
C	**To reduce noise levels**	**शोर के स्त**
D	**To counter the outward force on a moving train**	**चलती ट्रेन**

Q.No: 42 CV1028	In gravity dams, which type of spillway is most commonly used for efficient flood discharge?	गुरुत्वाकर्ष जाता है?
A	**Shaft spillway**	**शाफ्ट स्पि**
B	**Side channel spillway**	**साइड चैन**
C	**Ogee spillway**	**ओजी स्पि**
D	**Siphon spillway**	**साइफन स्**

Q.No: 43 CV1047	A material obeying Hooke's law exhibits which relationship between stress and strain?	हुक के नि
A	**Zero Poisson's ratio**	**शून्य पॉइ**
B	**Stress linear with strain**	**तनाव के**
C	**Constant strain for all stresses**	**सभी तना**
D	**Stress proportional to square of strain**	**तनाव के**

Q.No: 44 CV1143	A highway curve satisfies stopping sight distance (SSD) but not overtaking sight distance (OSD). Traffic volume is high, but overtaking demand is low. The design is considered acceptable because:	एक राजम (OSD) को क्यों माना

A	**OSD is mandatory on all highways**	**सभी राज**
B	**OSD is required only on expressways**	**OSD केव**
C	**OSD governs vertical alignment**	**OSD ऊध्व**
D	**SSD is the minimum essential sight distance for safety**	**SSD सुरक्ष**

Q.No: 45 CV1046	If a bending moment diagram of a beam is parabolic, what is the shape of the corresponding shear force diagram?	यदि एक ि क्या है?
A	**Linear**	**रेखीय**
B	**Constant**	**स्थिर**
C	**Parabolic**	**परवलयि**
D	**Cubic**	**घनीय**

Q.No: 46 CV1087	In rigid (concrete) pavements, temperature variations primarily induce which type of stresses?	कठोर (ठो
A	**Edge cracking only**	**केवल एज**
B	**Shoving**	**धक्का दे**
C	**Warping stresses**	**ताना तन**
D	**Rutting**	**रटिंग**

Q.No: 47 CV1146	A highway pavement shows rutting during summer months under heavy traffic. The most likely deficiency in the bituminous mix is:	एक राजम मिश्रण में
A	**Poor adhesion with aggregates**	**एग्रीगेट के**

B	**Low ductility**	**कम लचीलापन**
C	**Excessive air voids**	**अत्यधिक**
D	**Insufficient stiffness at high temperature**	**उच्च ताप**

Q.No: 48 CV1058	The most critical condition for slope stability in soils generally occurs when the soil is:	मिट्टी में
A	**Rock slope**	**चट्टान ढ**
B	**Dry soil**	**सूखी मिट्**
C	**Over-consolidated soil**	**अधिक स**
D	**Fully saturated soil**	**पूरी तरह**

Q.No: 49 CV1076	Constructed wetlands are primarily used for:	निर्मित अ
A	**Increasing dam storage**	**बांध भंडा**
B	**Flood control in reservoirs**	**जलाशयों**
C	**Sludge disposal**	**कीचड़ नि**
D	**Nature-based sewage treatment**	**प्रकृति आ**

Q.No: 50 CV1113	Three concurrent forces act at a point. Two forces of 40 N and 60 N act at an angle of 60°.The approximate magnitude of the third force required to keep the system in equilibrium is:	तीन समव प्रणाली क
A	**95 N**	**95 N**
B	**87 N**	**87 N**
C	**97 N**	**97 N**

D	**78 N**	**78 N**

Q.No: 51 CV1002	Evaluate the integral $\int_0^{\pi} \mathbf{sinxdx}$.	अभिन्न
A	**0**	**0**
B	**2**	**2**
C	**1**	**1**
D	Π	Π

Q.No: 52 CV1012	Projects such as residential buildings, commercial complexes, and schools are classified under	आवासीय गया है
A	**Utility projects**	**उपयोगित**
B	**Transportation projects**	**परिवहन**
C	**Building construction projects**	**भवन नि**
D	**Industrial projects**	**औद्योगि**

Q.No: 53 CV1011	Which component of a concrete mix primarily governs its workability?	कंक्रीट मि
A	**Cement fineness**	**सीमेंट फि**
B	**Setting time**	**सेटिंग टा**
C	**Aggregate grading**	**अग्रीगेट**
D	**Water content**	**वाटर कंटे**

Q.No: 54 CV1010	In uniaxial loading, the elastic deformation of structural steel is primarily governed by:	एकअक्षीय
A	**Bulk modulus**	**बल्क माप**
B	**Shear modulus**	**शेयर माप**
C	**Poisson's ratio**	**पॉइसन क**
D	**Young's modulus**	**यंग का म**

Q.No: 55 CV1078	Pyrolysis is the thermal decomposition of organic matter in the absence of:	पायरोलिसि
A	**Heat**	**हीट**
B	**Oxygen**	**ऑक्सीजन**
C	**Moisture**	**मॉइस्चर**
D	**Pressure**	**प्रेशर**

Q.No: 56 CV1045	When a block is just about to slide, the friction force acting on it is called :	जब कोई व
A	**Zero**	**शून्य**
B	**Kinetic friction**	**गतिज घ**
C	**Viscous friction**	**चिपचिपा**
D	**Static friction (limiting)**	**स्थैतिक घ**

Q.No: 57 CV1141	In rural households using biomass for cooking, women and children show higher respiratory illness rates. The most effective mitigation measure is:	खाना पक संबंधी बी

A	**Increasing ventilation openings slightly**	**वेंटिलेशन**
B	**Increasing kitchen size**	**रसोई का**
C	**Installing chimneys only**	**केवल चि**
D	**Switching to clean fuels like LPG or biogas**	**एलपीजी**

Q.No: 58 CV1055	The zero-air voids line in a compaction curve is plotted between:	संघनन व
A	**Void ratio and effective stress**	**शून्य अनु**
B	**Dry density and moisture content**	**शुष्क घन**
C	**Water content and plasticity index**	**जल साम**
D	**Density and grain size**	**घनत्व औ**

Q.No: 59 CV1100	The eigen values of the matrix $A=\begin{bmatrix} 2 & 1 \\ 1 & 2 \end{bmatrix}$ are:	मैट्रिक्स A
A	**1,2**	**1, 2**
B	**3, 1**	**3, 1**
C	**0, 1**	**0, 1**
D	**2, 3**	**2, 3**

Q.No: 60 CV1036	Why is a slight cross slope (camber) provided on road pavements?	सड़क के प
A	**To help rainwater flow off the surface**	**वर्षा जल**
B	**To improve signboard visibility**	**साइनबोर्ड**
C	**To allow vehicles to accelerate faster**	**वाहनों को**

D	**To reduce pavement temperature**	**फुटपाथ क**

Q.No: 61 CV1149	Warning signs are generally placed sufficiently in advance mainly to:	चेतावनी
A	**Allow drivers adequate perception-reaction time**	**चालकों क**
B	**Enforce speed limits**	**गति सीम**
C	**Increase road capacity**	**सड़क की**
D	**Improve road aesthetics**	**सड़क सौं**

Q.No: 62 CV1014	The hydraulic gradient at which a soil layer loses all effective stress and quicksand condition occurs is called:	हाइड्रोलिक उसको कह
A	**Total gradient**	**कुल ढाल**
B	**Capillary gradient**	**केशिका ढ**
C	**Effective gradient**	**प्रभावी ढा**
D	**Critical gradient**	**महत्वपूर्ण**

Q.No: 63 CV1050	Which of the following gives the maximum shear stress in terms of the principal stresses σ_1 and σ_2 under plane stress condition?	निम्नलिखि अधिकतम
A	**$(\sigma_1 - \sigma_2)/2$**	**$(\sigma_1 - \sigma_2)$**
B	$\sigma_1 + \sigma_2$	$\sigma_1 + \sigma_2$
C	**$(\sigma_1 + \sigma_2)/2$**	**$(\sigma_1 + \sigma_2$**
D	$\sigma_1 \sigma_2$	$\sigma_1 \sigma_2$

Q.No: 64 CV1074	In water treatment, backwashing is primarily required in which of the following units?	जल उपच
A	**Slow sand filters**	**धीमी रेत**
B	**Sedimentation tanks**	**अवसादन**
C	**Aerators**	**वातकों**
D	**Rapid sand filters**	**तेजी से रे**

Q.No: 65 CV1080	Which air pollution control device removes SO_2 using a limestone slurry-based wet process?	कौन सा व प्रक्रिया?
A	**Wet scrubber (FGD)**	**वेट स्क्रबर**
B	**Spray dryer absorber**	**स्प्रे ड्रायर**
C	**Electrostatic precipitator**	**इलेक्ट्रोस्टै**
D	**Bag filter**	**बैग फिल्ट**

Q.No: 66 CV1086	Which of the following is primarily used to improve load transfer across transverse joints in rigid (concrete) pavements?	निम्नलिखि हस्तांतरण
A	**Tie bars in shoulders**	**टाई बरस**
B	**Bituminous binder**	**बिटुमिनस**
C	**Kerb stones**	**कर्ब स्टोन**
D	**Steel dowel bars**	**स्टील डॉवे**

Q.No: 67 CV1051	Which of the following is a primary requirement for industrial construction projects?	औद्योगि

A	**Specialized equipment & high-quality safety systems**	**विशिष्ट उ**
B	**No schedule control**	**कोई शेड्यू**
C	**Minimal coordination**	**न्यूनतम**
D	**High aesthetic design focus**	**उच्च सौंद**

Q.No: 68 CV1124	A soil sample has Water content = 18%, Void ratio = 0.75, Specific gravity of solids = 2.70. Find the degree of saturation.	एक मिट्टी संतृप्ति की
A	**61.8%**	**61.8%**
B	**68.8%**	**68.8%**
C	**66.8%**	**66.8%**
D	**64.8%**	**64.8%**

Q.No: 69 CV1094	In remote sensing, radiometric resolution refers to which of the following?	रिमोट सेंसि
A	**Number of spectral bands**	**वर्णक्रमीय**
B	**Sensitivity to brightness differences**	**चमक के**
C	**Revisit time**	**समय पर**
D	**Pixel size**	**पिक्सेल**

Q.No: 70 CV1006	Fourier coefficients in a Fourier series are obtained using the:	फूरियर श्रृं
A	**Taylor expansion**	**टेलर विस्**
B	**Orthogonality of sine and cosine**	**साइन औ**

C	**Matrix inversion**	**मैट्रिक्स व**
D	**L'Hospital's rule**	**L'अस्पता**

Q.No: 71 CV1020	Active earth pressure on a retaining wall develops when the:	एक बनाए
A	**Wall moves toward the soil**	**दीवार मि**
B	**Wall is rigid and unmoving**	**दीवार कठ**
C	**Wall moves away from the soil**	**दीवार मि**
D	**Water table rises**	**जल स्तर**

Q.No: 72 CV1145	A vehicle travels at 80 km/h, Reaction time = 2.5 s Coefficient of friction = 0.35 Stopping Sight Distance(SSD) (approx.) is:	एक वाहन घर्षण गुण स्टॉपिंग स
A	**105 m**	**105 मीटर**
B	**115 m**	**115 मीटर**
C	**127 m**	**127 मीटर**
D	**145 m**	**145 मीटर**

Q.No: 73 CV1027	In irrigation engineering, duty of water is defined as:	सिंचाई इंज
A	**Discharge passing through canal**	**नहर से गु**
B	**Area irrigated per unit discharge**	**प्रति इकाइ**
C	**Percolation loss**	**परकोलेश**

D	**Depth of water required by crops**	**फसलों के**

Q.No: 74 CV1148	A highway section experiences an hourly traffic volume of 1200 vehicles per hour, and the maximum 15-minute flow is 360 vehicles. The Peak Hour Factor (PHF) for this section is approximately:	एक राजम वाहन है।
A	**1.00**	**1.00**
B	**0.83**	**0.83**
C	**0.75**	**0.75**
D	**0.90**	**0.90**

Q.No: 75 CV1025	The continuous movement of water through the atmosphere, land, and oceans is known as :	वायुमंडल
A	**Runoff cycle**	**रानअफ**
B	**Water budget**	**वाटर बड्**
C	**Groundwater recharge**	**ग्राउंडवाट**
D	**Hydrologic cycle**	**हाईड्रोलो**

Q.No: 76 CV1022	Turbulent flow in fluids is primarily characterized by:	तरल पदा
A	**Random motion & eddies**	**रैंडम मोश**
B	**No velocity gradients**	**कोई वेग**
C	**Smooth streamlines**	**चिकनी स**
D	**Low shear stress**	**कम कतर**

Q.No: 77 CV1009	The force method of structural analysis, which treats forces as unknowns, is also called:	संरचनात्म
A	**Flexibility method**	**लचीलापन**
B	**Stiffness method**	**कठोरता**
C	**Displacement method**	**विस्थापन**
D	**Slope method**	**ढलान वि**

Q.No: 78 CV1043	In GIS, what does topology primarily describe?	GIS में, टो
A	**Database indexing**	**डेटाबेस अ**
B	**Rules describing spatial relationships (adjacency, connectivity)**	**स्थानिक**
C	**Image resolution**	**छवि संक**
D	**Data compression**	**डेटा संपीड़**

Q.No: 79 CV1013	In slender columns subjected to axial compressive load, failure occurs mainly due to_____.	अक्षीय सं
A	**Buckling**	**बकलिंग**
B	**Torsion**	**मरोड़**
C	**Shrinkage**	**संकोचन**
D	**Thermal expansion**	**थर्मल वि**

Q.No: 80 CV1079	As per the Indian National Air Quality Index (NAQI), the 'Severe' category begins when AQI exceeds:	भारतीय रा हो जाता है
A	**400**	**400**

B	**300**	**300**
C	**100**	**100**
D	**200**	**200**

Q.No: 81 CV1125	Consider the following statements related to the Unified Soil Classification System (USCS): S1. If more than 50% of the soil particles pass the 0.075 mm sieve, the soil is classified as fine-grained. S2. For fine-grained soils, the plasticity chart (A-line) is used to distinguish between clays and silts. S3. Soils plotting above the A-line on the plasticity chart are classified as silts. S4. A soil with liquid limit less than 50% is classified as having low plasticity. Which of the above statements are correct?	एकीकृत S1. यदि के रूप में S2. महीन रेखा) का S3. प्लास् S4. जिस किया जा उपरोक्त
A	**S1 and S3 only**	**केवल S1**
B	**S4 and S3 only**	**केवल S4**
C	**S2, S3 and S4 only**	**केवल S2,**
D	**S1, S2 and S4 only**	**केवल S1,**

Q.No: 82 CV1081	Stopping Sight Distance always increases with:	रुकने की
A	**Decrease in coefficient of friction**	**घर्षण के**
B	**Decrease in reaction time**	**प्रतिक्रिया**
C	**Decrease in gradient**	**ढाल में क**
D	**Decrease in speed**	**गति में क**

Q.No: 83 CV1096	Vertical curves are designed as parabolic curves primarily because:	ऊर्ध्वाधर
A	**They minimize earthwork**	**वे मिट्टी**
B	**Rate of change of gradient is constant**	**प्रवणता**
C	**They are easy to set out**	**उन्हें स्था**
D	**They reduce sight distance**	**वे दृष्टि दू**

Q.No: 84 CV1063	Which force acts on a body fully immersed in a stationary fluid due to pressure distribution?	दबाव वि
A	**Buoyant force**	**उत्प्लाव**
B	**Lift force**	**लिफ्ट ब**
C	**Both drag and lift**	**खींचें और**
D	**Drag force**	**बल खींचें**

Q.No: 85 CV1031	The primary purpose of sludge digestion in wastewater treatment is to:	अपशिष्ट
A	**Stabilize organic matter**	**जैविक प**
B	**Increase BOD**	**BOD बढ़ा**
C	**Increase moisture**	**नमी बढ़ा**
D	**Produce toxic gases**	**जहरीली**

Q.No: 86 CV1095	Which GIS data model is most commonly used to represent continuous surface data such as elevation?	किस GIS किया जा

A	**Network**	**नेटवर्क**
B	**Attribute table**	**एट्रिब्यूट**
C	**Vector**	**वेक्टर**
D	**Raster**	**रैस्टर**

Q.No: 87 CV1041	In levelling, how is the reduced level of a point determined using the Height of Instrument method?	समतलीक जाता है?
A	**Subtracting Fore Sight from Height of Instrument**	**उपकरण**
B	**Subtracting Back Sight from Height of Instrument**	**उपकरण**
C	**Adding Fore Sight to Height of Instrument**	**उपकरण**
D	**Adding Intermediate Sight to Reduced Level**	**मध्यवर्ती**

Q.No: 88 CV1033	Flue-gas desulphurization (FGD) is primarily used to control emissions of which pollutant?	फ्ल्यू-गैस लिए किय
A	**O_3**	**O_3**
B	**SO_2**	**SO_2**
C	**NO_x**	**NO_x**
D	**CO**	**CO**

Q.No: 89 CV1054	The most common governing mode of failure of bolted steel tension members among the following is ____	निम्नलिखि
A	**Block shear failure**	**ब्लॉक कत**
B	**Tension yielding**	**तनाव पैद**

C	**Crushing**	**कुचल**
D	**Local buckling**	**स्थानीय**

Q.No: 90 CV1029	Dissolved oxygen (DO) in water is essential primarily for_____	पानी में घु
A	**Aquatic life survival**	**जलीय जी**
B	**Hardness removal**	**कठोरता ह**
C	**Algae growth**	**शैवाल की**
D	**Coagulation**	**जमावट**

Q.No: 91 CV1034	In the waste minimization strategy, the "3 R's" include Reduce, Reuse, and_____.	अपशिष्ट
A	**Recycle**	**पुनर्चक्रण**
B	**Regenerate**	**पुन: उत्प**
C	**Remove**	**निकालना**
D	**Redistribute**	**पुनर्वितर**

Q.No: 92 CV1003	If $z = x^2+y^2$ and $x = 2t$,$y = t^2$, then $\frac{dz}{dt}$ is	यदि $z = x$
A	$3t^3+t^5$	$3t^3+t^5$
B	$8t+4t^3$	$8t+4t^3$
C	$2t^3+5t^5$	$2t^3+5t^5$
D	$4t^4+6t^3$	$4t^4+6t^3$

Q.No: 93 CV1015	Consolidation in saturated soils refers to the process of _____ under sustained load.	संतृप्त मि
A	**Compression due to expulsion of air**	**हवा के नि**
B	**Volume change under constant water content**	**निरंतर पा**
C	**Increase in permeability under load**	**भार के त**
D	**Volume decrease due to expulsion of water from voids**	**रिक्तियों**

Q.No: 94 CV1023	Which instrument is commonly used to measure the discharge of water in an open channel?	खुले चैनल
A	**Pressure gauge**	**प्रेशर गोज**
B	**Weir**	**वीयर**
C	**U-tube**	**U-ट्यूब**
D	**Manometer**	**मेनोमीटर**

Q.No: 95 CV1107	Evaluate $\int x^3 dx$ using Simpson's 1/3 rule with n=2.	n=2 के स
A	**7**	**7**
B	**4**	**4**
C	**2**	**2**
D	**6**	**6**

Q.No: 96 CV1007	For $u(x,y)=e^{-x}$ siny, evaluate $u_{xx}+u_{yy}$.	$u(x,y)=e^{-}$
A	**0**	**0**
B	**-2**	**-2**

C	**1**	**1**
D	**2**	**2**

Q.No: 97 CV1057	In geotechnical earthquake engineering, the pseudo-static method is used to compute:	भू-तकनी
A	**Capillarity**	**केशिका**
B	**Flow net**	**प्रवाह जा**
C	**Earth pressure during earthquake**	**भूकंप के**
D	**Settlement of foundations**	**नींव का**

Q.No: 98 CV1089	In traffic engineering, the Peak Hour Factor (PHF) is defined as :	ट्रैफिक इं
A	**Ratio of peak flow to average flow**	**औसत प्र**
B	**Volume in the peak 15 minutes**	**चरम 15**
C	**Product of speed and density**	**गति और**
D	**Ratio of hourly volume to peak 15-min volume**	**प्रति घंटा**

Q.No: 99 CV1071	Which parameter is primarily used to indicate the level of organic pollution in water?	किस पैरा है?
A	**Hardness**	**कठोरता**
B	**BOD**	**BOD**
C	**Chlorides**	**क्लोराइड**
D	**TDS**	**TDS**

Q.No: 100 CV1077	The primary purpose of sanitary landfill liners is to prevent:	सैनिटरी
A	**Odour nuisance**	**गंध उपद्र**
B	**Methane escape**	**मीथेन प**
C	**Leachate contamination of groundwater**	**भूजल क**
D	**Traffic issues**	**यातायात**

Section - II (General Aptitude)

Q.No: 101 GA1074	What is the cube root of 5832?	5832 का
A	**19**	**19**
B	**17**	**17**
C	**16**	**16**
D	**18**	**18**

Q.No: 102 GA1062	What is the square root of 729?	729 का व
A	**7**	**7**
B	**37**	**37**
C	**27**	**27**
D	**17**	**17**

Q.No: 103 GA1063	Find the Highest Common Factor (HCF) of 13, 26 and 104.	13, 26 औ
A	**22**	**22**

B	**13**	**13**
C	**10**	**10**
D	**26**	**26**

Q.No: 104 GA1077	The marked price of a watch is Rs. 5410. It is sold for Rs. 5000 after allowing a discount. What is the discount percentage?	एक घड़ी क्या है?
A	**8.69%**	**8.69%**
B	**6.33%**	**6.33%**
C	**5.55%**	**5.55%**
D	**7.57%**	**7.57%**

Q.No: 105 GA1065	Compute the compound interest when the principal amount is Rs.100,the rate of interest is 20% per annum compounded half-yearly and the time period is 1.5 years.	जब मूलध समयावधि
A	**Rs. 60.4**	**60.4 रुप**
B	**Rs. 44.5**	**44.5 रुप**
C	**Rs. 27.3**	**27.3 रुप**
D	**Rs. 33.1**	**33.1 रुप**

Q.No: 106 GA1064	Find the Least Common Multiple (LCM) of 18, 78 and 90.	18, 78 औ
A	**120**	**120**
B	**90**	**90**
C	**1170**	**1170**
D	**1200**	**1200**

Q.No: 107 GA1066	In a box, there are 7 red balls, 8 blue balls and 6 green balls. One ball is picked up randomly. What is the probability of getting green ball?	एक डिब्बे गेंद मिल
A	**1/3**	**1/3**
B	**2/7**	**2/7**
C	**3/8**	**3/8**
D	**1/6**	**1/6**

Q.No: 108 GA1078	If the average of four consecutive odd numbers is 14, what is the smallest number among them?	यदि चार
A	**21**	**21**
B	**19**	**19**
C	**11**	**11**
D	**15**	**15**

Q.No: 109 GA1071	Kavana deposited Rs. 16,700 in a bank which pays interest at a rate of 25% per annum. What will be the simple interest earned by Kavana after 4 years?	कवाना ने बाद कवा
A	**Rs. 16,400**	**16,400 ₹**
B	**Rs. 16,500**	**16,500 ₹**
C	**Rs. 17,100**	**17,100 ₹**
D	**Rs. 16,700**	**16,700 ₹**

Q.No: 110 GA1075	Find the Least Common multiple (LCM) of $3^1 \times 6^1$, $3^2 \times 6^2$ and $3^3 \times 6^2$.	$3^1 \times 6^1$, 3
A	**326**	**326**

B	**488**	**488**
C	**972**	**972**
D	**820**	**820**

Q.No: 111 GA1069	Evaluate: (10 + 200 + 28) - (150 ÷ 5)	(10 + 20
A	**233**	**233**
B	**211**	**211**
C	**225**	**225**
D	**208**	**208**

Q.No: 112 GA1080	Evaluate: 4236 + 52 - 66 ÷ 3	मूल्यांक
A	**4237**	**4237**
B	**4247**	**4247**
C	**4266**	**4266**
D	**4289**	**4289**

Q.No: 113 GA1070	A book was bought for Rs. 50 and sold for Rs. 76. What is the profit percentage?	एक कित
A	**41%**	**41%**
B	**34%**	**34%**
C	**45%**	**45%**
D	**52%**	**52%**

Q.No: 114 GA1068	If the ratio of A:B = 2:3 and A = 12, then what is the value of B?	यदि A:B
A	**2**	**2**
B	**18**	**18**
C	**14**	**14**
D	**8**	**8**

Q.No: 115 GA1073	Which number is the square root of 10201?	10201 क
A	**121**	**121**
B	**111**	**111**
C	**131**	**131**
D	**101**	**101**

Q.No: 116 GA1072	Find the Highest Common Factor (HCF) of 101, 123 and 151.	101, 123
A	**51**	**51**
B	**11**	**11**
C	**1**	**1**
D	**101**	**101**

Q.No: 117 GA1079	R, S and T enter into a partnership, investing Rs. 8000. S invests Rs. 3000 and R and T invests in the ratio of 2:3 respectively. Find the profit of S, when the annual profit is Rs. 4000.	R, S और है और R रुपये हो।
A	**Rs. 1000**	**1000 रुप**
B	**Rs. 1800**	**1800 रुप**

C	**Rs. 1500**	**1500 रु**
D	**Rs. 2100**	**2100 रु**

Q.No: 118 GA1061	Find the simple interest when the principal amount is Rs. 2600, the rate of interest is 4% per annum and the time period is 3 years.	जब मूलध कीजिए।
A	**Rs. 246**	**246 रुपये**
B	**Rs. 178**	**178 रुपये**
C	**Rs. 312**	**312 रुपये**
D	**Rs. 435**	**435 रुपये**

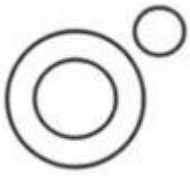
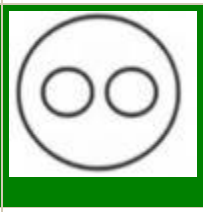
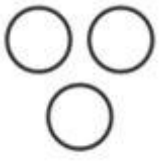
Q.No: 119 GA1076	A toy was bought for Rs. 2510 and sold for Rs. 1590. What was the loss percentage?	एक खिल
A	**38.69%**	**38.69%**
B	**22.33%**	**22.33%**
C	**35.5%**	**35.5%**
D	**36.65%**	**36.65%**

Q.No: 120 GA1067	What is the cube of 44?	44 का घ
A	**85184**	**85184**
B	**89294**	**89294**
C	**85199**	**85199**
D	**88016**	**88016**

Q.No: 121 GA1053	In a certain language, if 'TORTOISE' is coded as 'VQTVQKUG', then how is the word 'ELEPHANT' coded in that language?	अगर कि को कैसे व
A	**GNGRJCVP**	**GNGRJC**
B	**GNGJRCVP**	**GNGJRC**
C	**JRGNGCVP**	**JRGNGC**
D	**GNGRJCPV**	**GNGRJC**

Q.No: 122 GA1055	Observe the following images. Three of them are similar based on a common pattern. Choose the image that is different.  	निम्नलि हैं। वह छ 
A	**C**	**C**
B	**D**	**D**
C	**A**	**A**
D	**B**	**B**

Q.No: 123 GA1046	Study following arrangement and answer the question. 4 5 7 # 6 % 7) 9 1 @ 7 ' ; 7 \ | 7 4 1 6 & 7 $ In the above arrangement how many times the number 7 is repeated?	निम्नलि 4 5 7 # 6 उपरोक्त
A	**5**	**5**
B	**4**	**4**
C	**3**	**3**
D	**6**	**6**

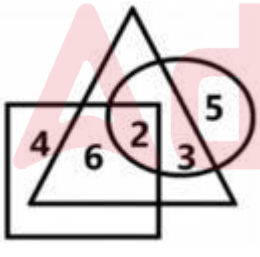
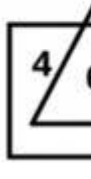
Q.No: 124 GA1060	Which of the following Venn diagrams best represents the relationship between Vegetables, Radish and Onion?	निम्नलि से दर्शाता
A		
B		
C		
D		

Q.No: 125 GA1058	Study the following arrangement and answer the question: A $ Y R T # & B E K L U T D # H Y How many Vowels of an English alphabet are there in the above arrangement?	निम्नलि A $ Y R T इस व्यव
A	**3**	**3**
B	**5**	**5**
C	**4**	**4**
D	**2**	**2**

Q.No: 126 GA1049	A man walks 3 km towards the North. Then he turns to his right and walks 6 km. He again turns to his left and walks 3 km. Then he turns to his right and walks 2 km. What is the shortest distance from the starting point?	एक आद वह फिर किमी च

A	**15 km**	**15 किमी**
B	**13 km**	**13 किमी**
C	**10 km**	**10 किमी**
D	**14 km**	**14 किमी**

Q.No: 127 GA1050	If M stands for '+', N stands for '-', O stands for 'x' and P stands for '÷', then what will be the value of '76 P 2 M 6 O 4 N 9'?	अगर M N 9' का
A	**56**	**56**
B	**53**	**53**
C	**55**	**55**
D	**10**	**10**

Q.No: 128 GA1052	In the given Venn diagram, circle represents Engineers, triangle represents Environmentalists and square represents Legal experts.  Which number represents Environmentalists are both Engineers and Legal experts?	दिए गए है।  वह कौन
A	**8**	**8**
B	**7**	**7**
C	**6**	**6**
D	**2**	**2**

Q.No: 129 GA1051	In a class, Ramya ranked 61st from the top and 24th from the bottom. Find the total number of students in the class.	एक कक्षा कीजिए।
A	**85**	**85**
B	**88**	**88**
C	**86**	**86**
D	**84**	**84**

Q.No: 130 GA1059	In a queue of boys, A is 26th from the backward and 46th from the front. Find the total number of boys in the queue.	लड़कों की ज्ञात की
A	**80**	**80**
B	**71**	**71**
C	**78**	**78**
D	**70**	**70**

Q.No: 131 GA1056	In a certain code language, 'REPUBLIC' is coded as '130'. How is the word 'CULCUTTA' coded in the same code language?	एक विशि 'CULCUT
A	**112**	**112**
B	**115**	**115**
C	**120**	**120**
D	**118**	**118**

Q.No: 132 GA1057	There are Five boys namely P, Q, R, S and T are standing in a row. P is standing to the immediate right of Q. T is to the immediate left of Q and to the right of R. P is to the left of S. Then who is standing second from the left end?	एक पंक्ति ठीक बाईं खड़ा है?
A	**T**	**T**

B	**Q**	**Q**
C	**S**	**S**
D	**P**	**P**

Q.No: 133 GA1047	Find the missing number in the following series: 2, 5, ___, 17, 26, 37.	निम्नलि 2, 5, ___
A	**3**	**3**
B	**10**	**10**
C	**7**	**7**
D	**9**	**9**

Q.No: 134 GA1054	Which flower is referred as the National flower of India if the following substitutions are made? • 'Hibiscus' is called 'Poppy' • 'Poppy' is called 'Lily' • 'Lily' is called 'Lotus' • 'Lotus' is called 'Sunflower'.	अगर ये • 'हिबिस • 'पॉपी' • 'लिली' • 'लोटस
A	**Lily**	**लिली**
B	**Rose**	**रोज़**
C	**Sunflower**	**सन्फ्लाउ**
D	**Poppy**	**पॉपी**

Q.No: 135 GA1048	In a certain language, if 'CARD' is coded as 'DCAR', then how is 'NOPE' coded in that language?	अगर कि जाएगा?
A	**PMNO**	**PMNO**
B	**ENOP**	**ENOP**

C	**MLNO**	**MLNO**
D	**PNOP**	**PNOP**

Q.No: 136 GA1012	Choose the correct meaning of the given idiom/phrase from the options. "Dead in the water"
A	**You are not very good at something. You could definitely not do it professionally**
B	**Being Inquisitive can lead you into an unpleasant or dangerous situation**
C	**Plan or project that has ceased/failed to function and is not expected to re-activate**
D	**Don't make plans for something that might not happen**

Q.No: 137 GA1014	Convert the following sentence to Passive Voice: Rita is learning Bharatanatyam this year.
A	**Bharatanatyam was being learnt by Rita this year.**
B	**Bharatanatyam is being learnt by Rita this year.**
C	**Rita learnt Bharatanatyam this year.**
D	**Bharatanatyam is yet to be learnt by Rita this year.**

Q.No: 138 GA1007	Which sentence is in the past continuous tense?
A	**My parents arrived yesterday.**
B	**My parents will finish soon.**
C	**The children were playing in the garden.**
D	**My parents are playing now.**

Q.No: 139 GA1009	Choose the correct spelling that complete the sentence meaningfully. He was immediately released from his _____.

A	**Confenement**
B	**Confainement**
C	**Confinement**
D	**Confinment**

Q.No: 140 GA1002	Fill in the blank with the correct option. Pramila is _____ principal of this school.
A	**a**
B	**an**
C	**the**
D	**No Article Required**

Q.No: 141 GA1015	Which of the following is the Antonym of the word "Visible"?
A	**Clear**
B	**Bright**
C	**Apparent**
D	**Hidden**

Q.No: 142 GA1011	Complete the sentence using the correct preposition: Let's put that work _____ the agenda for next week.
A	**on**
B	**at**
C	**of**
D	**for**

Q.No: 143 GA1006	Convert the following sentence to Indirect Speech. He said, "I have arrived."
A	**He said that he has been arrived.**
B	**He said that he had arrived.**
C	**He asked that he had arrived.**
D	**He informed that he has arrived.**

Q.No: 144 GA1010	Identify the proper noun in the sentence. Shravani and her friends are lying on the ground.
A	**Shravani**
B	**Her**
C	**Ground**
D	**Lying**

Q.No: 145 GA1003	Which of the following is a proper noun?
A	**Company**
B	**River**
C	**France**
D	**Animal**

Q.No: 146 GA1008	Choose the correct part of speech for the underlined word in the sentence given below. The movie starts in one hour.
A	**Pronoun**
B	**Noun**
C	**Verb**

D	**Preposition**

Q.No: 147 GA1004	Complete the sentence using the correct preposition: The fruits were distributed _____ the children.
A	**in**
B	**of**
C	**among**
D	**at**

Q.No: 148 GA1001	What is the synonym of the word "Amazing"?
A	**Wrathful**
B	**Initiate**
C	**Courageous**
D	**Incredible**

Q.No: 149 GA1005	Choose the correct Part of speech for the underlined word. Ashoka was a wise King.
A	**Preposition**
B	**Pronoun**
C	**Noun**
D	**Adverb**

Q.No: 150 GA1013	Pragya is drinking the milk. Here, "milk" is a/an-
A	**Countable noun**

B	**Proper Noun**
C	**Collective Noun**
D	**Uncountable Noun**