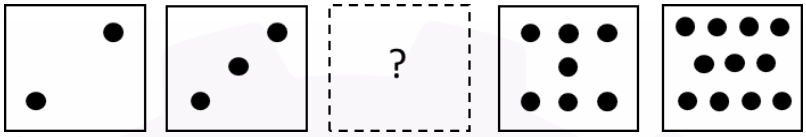
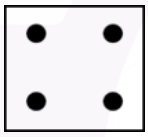
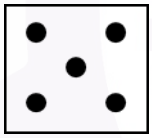
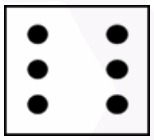
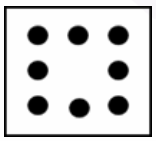
General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	"He often _____ the numbers. False claims are not going to help. Honesty _____ trust", said the manager. Choose the option with the correct order of words to fill the blanks.
(A)	exaggerates; engenders
(B)	excels; encourages
(C)	aggravates; alleviates
(D)	diminishes; eliminates

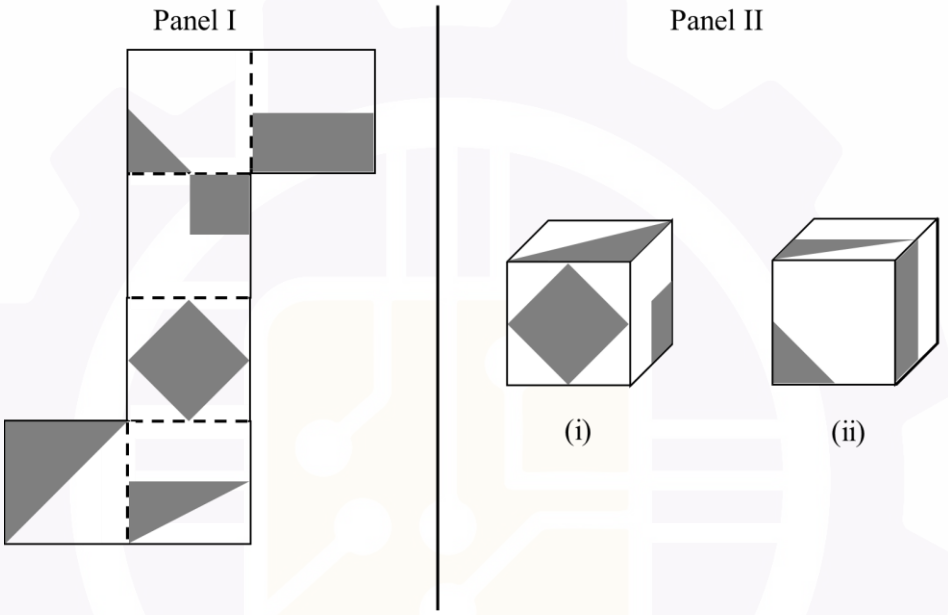
Q.2	In the sequence of tiles shown below, the missing tile indicated by the question mark should be 
(A)	
(B)	
(C)	
(D)	

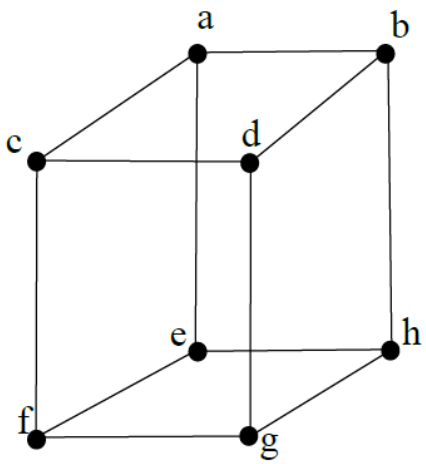
Q.3	A school has 100 students distributed among 1^{st} to 10^{th} standards. Based on this, which one of the following statements is always correct?
(A)	There are at least 10 students who belong to the same standard.
(B)	There is at least one student in each standard.
(C)	There are at most 10 students in 10^{th} standard.
(D)	The total number of students from 1^{st} to 5^{th} standards is at least 50.
Q.4	How many 3-digit numbers can be formed using three distinct single digit prime numbers?
(A)	64
(B)	24
(C)	12
(D)	4

Q.5	In a group of students, 10 students like Mathematics, 12 students like English, 4 students like both Mathematics and English, and 6 students like neither Mathematics nor English. The number of students in the group is ____
(A)	18
(B)	20
(C)	24
(D)	32

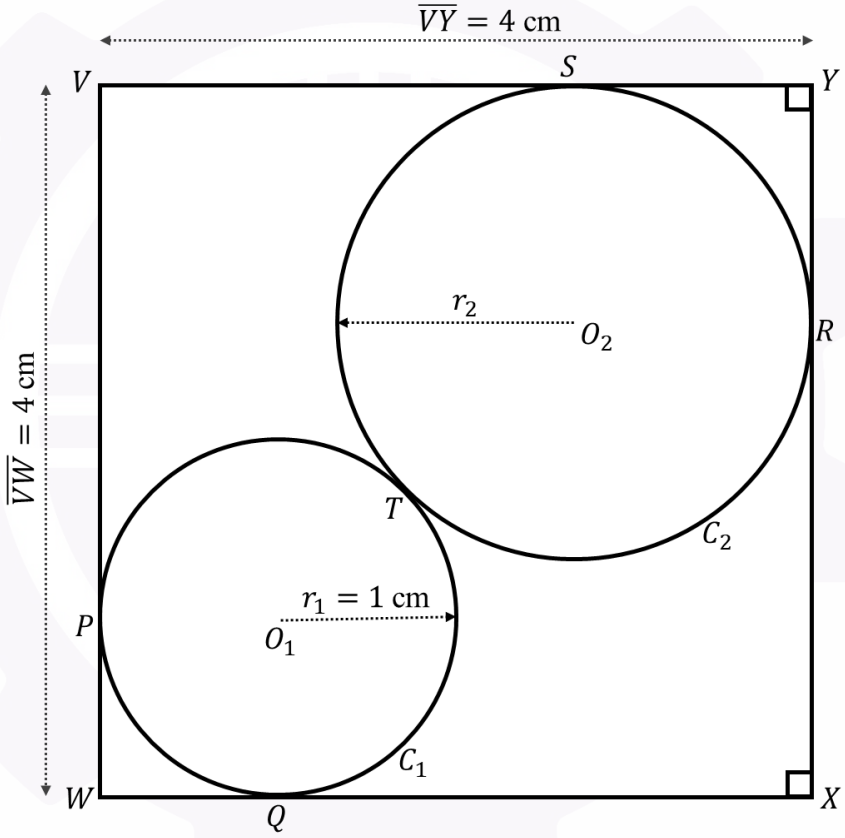
Q.6 – Q.10 Carry TWO marks Each

Q.6	Charity : P :: Retaliation : Q Choose the appropriate pair of words P and Q that fit the analogy.
(A)	P = Parsimonious; Q = Vengeful
(B)	P = Altruistic; Q = Amicable
(C)	P = Resentful; Q = Spiteful
(D)	P = Magnanimous; Q = Vindictive

Q.7	A paper shown in Panel I is folded along the dashed lines (- - -) to construct a cube. The shaded regions shown in Panel I appear on the outer surface of the cube. Referring to cubes shown in Panel II, which one of the options is correct? 
(A)	Only (i) can correspond to the unfolded cube in Panel I.
(B)	Only (ii) can correspond to the unfolded cube in Panel I.
(C)	Both (i) and (ii) can correspond to the unfolded cube in Panel I.
(D)	Neither (i) nor (ii) can correspond to the unfolded cube in Panel I.

Q.8	Consider the cube shown below with its 8 corners labelled a, b, c, d, e, f, g, and h. The figure is representative. All corners are to be colored such that any two corners that are connected by an edge must be of different colors. The minimum number of colors required to achieve this is _____ 
(A)	8
(B)	4
(C)	3
(D)	2

Q.9	Four hills H1, H2, H3, and H4 are present in an area. The following observations are made about them: i. Neither H2 nor H3 is the easternmost hill. ii. Neither H2 nor H3 is the westernmost hill. iii. Neither the easternmost hill nor the westernmost hill is the southernmost hill. iv. Two hills are located to the west of H2. v. The southernmost hill has at least two hills to its east. The southernmost hill is _____.
(A)	H1
(B)	H2
(C)	H3
(D)	H4

Q.10	As shown in the figure, circle C_1 with center O_1 and radius r_1 touches the square $VWXY$ at points P and Q while circle C_2 with center O_2 and radius r_2 touches the square $VWXY$ at points R and S. The two circles touch each other at T. Given $r_1 = 1$ cm and $\overline{VY} = \overline{VW} = 4$ cm, r_2 = _____ cm. 
(A)	$4 - 3\sqrt{2}$
(B)	$1 + 2\sqrt{2}$
(C)	$7 - 4\sqrt{2}$
(D)	$5 + 3\sqrt{2}$

Q.11 – Q.17 Carry ONE mark Each

Q.11	Aman, Beena, Chiranjeevi and Dhiman are four siblings. Each of them is an expert in one of the performing arts, namely, dance, theatre, guitar and percussion, not necessarily in that order. The dancer is taller than the theatre expert. Aman is taller than Chiranjeevi. The percussionist is taller than Beena but shorter than Aman. Beena is shorter than the dancer. The guitarist is not the tallest. Dhiman is shorter than both, guitarist and Chiranjeevi. What is the expertise of Aman?
(A)	Dance
(B)	Theatre
(C)	Guitar
(D)	Percussion

Q.12	Let ΔABC be an isosceles triangle with the base AB of length 8 units. Let CD be a perpendicular of length 4 units drawn from the vertex C onto the base AB and $AC = BC$. Then, which of the following is the set of values of the angles (in degrees) CAB, ABC, BCA respectively?
(A)	45,45,90
(B)	100,40,40
(C)	90,45,45
(D)	40,40,100

Q.13	In the given passage, fill in the blanks with most suitable set of given words: The future must no longer be___ by the past. While, the effects of the past are still with us, each day is a new___. Therefore, one should ___from solely believing in destiny and crave towards charting their own path of success with grit and labour. Positive_____ is imperative.
(A)	Determined, beginning, refrain, anticipation
(B)	Fascinated, one, include, physiology
(C)	Explored, suffering, content, psychiatry
(D)	Marred, life, hinder, labyrinth

Q.14	Indian society is experiencing a boom in pet culture, where people are becoming responsible caretakers of pets rather than merely providing food and shelter. They no longer like to identify themselves as ‘pet-owners’ but rather as ‘pet-parents’. This means that there is an emotional transaction rather than a utilitarian one. Which of the following weaken(s) the argument presented in the given passage?
(A)	Some social media influencers are using their pets only for popularity.
(B)	Food, medicines and clothes for pets are becoming easily available.
(C)	Pet owners are expecting some provision for tax rebate.
(D)	In today’s stressful times, pets provide emotional support.

Q.15	Three statements, S1, S2 and S3 are given, followed with 4 conclusions, C1, C2, C3 and C4. S1: Hostel authorities organised a special lunch on 01-02-26 during 12 noon to 3 pm, for those residents of the Hostel, who paid hostel mess fees on time. S2: Hostel authorities issued a notice that, since elections for Mess Council is held during 4-5 pm of 01-02-26, residents of the Hostel who are contesting the elections need to stay away from the hostel since morning till 5 pm. S3: Hostel residents who were eligible to have special lunch, had it on 01-02-26. C1: Residents who did not have special lunch on 01-02-26, either did not pay hostel mess fees on time or were contesting elections. C2: Residents having special lunch on 01-02-26, were either not contesting elections or had paid hostel mess fees on time. C3: Residents who are contesting elections need not care about paying mess fees. C4: Residents who have paid hostel mess fees on time could join special lunch only if they are not contesting elections. Which of the conclusion(s) is/are incorrect?
(A)	Only one among C1, C2, C3 and C4 is incorrect.
(B)	C1 and C2 are incorrect.
(C)	C2 and C3 are incorrect.
(D)	C3 and C4 are incorrect.

Q.16	Six statements, S1 to S6, are given. S1: All GATE candidates are engineers. S2: Some GATE candidates are CAT candidates. S3: All GRE candidates are GATE candidates. S4: All engineers are GRE candidates. S5: Some CAT candidates are GRE candidates. S6: Some CAT candidates are engineers. Based on S1-S6, following options provide a set of three statements, followed by a fourth statement. Identify the option(s) where the fourth statement can be necessarily inferred from the set of three statements.
(A)	{S1, S2, S3} => S5
(B)	{S4, S1, S2} => S5
(C)	{S6, S1, S3} => S5
(D)	{S4, S3, S1} => S6

Q.17	Four couples M-N, O-P, R-L, S-E meet to have a dinner together on an eight-seater rectangular dining table with four seats each on opposite sides. The men are named as M, O, R, S. Two of the men, O, R, sit on the two corners of one side of the table and M sits beside R. Further, none of the couples occupy seats opposite to each other. However, a person sits adjacent to the seat opposite to his/her spouse. Based on the information, which of the following conclusions can be drawn?
(A)	R sits opposite to N and S sits opposite to P.
(B)	R sits opposite to P and O sits opposite to N.
(C)	S sits opposite to N and O sits opposite to L.
(D)	M sits opposite to L and O sits opposite to E.

Q.18 – Q.26 Carry TWO marks Each

Q.18	Me and my spouse have a big family, comprising 8 females and 6 males. We have two sons and two daughters, of whom the eldest is unmarried. Out of my two grandsons and three granddaughters, only one grandson is a single child. His mother is my younger daughter. Which of my children necessarily has two daughters?
(A)	None of my sons
(B)	One of my sons
(C)	One of my daughters
(D)	Elder daughter

Q.19	Given the first four terms $30, 105, 385, 1001$ in a sequence, which amongst the following is the fifth term of the sequence?
(A)	2341
(B)	2431
(C)	2571
(D)	2751

Q.20	Three players named Arun, Babita and Chandu play a game by tossing an unbiased coin in turn whose rules are as follows: Initially each player has 100 candies. If the tossing of this coin results in a 'head' then the player who tosses receives 10 candies from each of the other two players, whereas, if the toss results in a 'tail' then the player who tosses has to give away 20 candies to each of the other two players. A player with the highest number of candies at the end will be the winner. The game is started by Arun, followed by Babita and finally stopped after Chandu's turn. Given that Arun is the only winner, which of the following hold(s) true?
(A)	Arun has 90 candies more than Chandu
(B)	Both Babita and Chandu have the same number of candies
(C)	Arun has 90 candies more than Babita
(D)	Babita and Chandu together have 120 candies

Q.21	Choose the correct sequence of sentences so that they form a coherent paragraph: P. However, in the context of texts dealing with science or engineering, this condition may not be applicable. Q. One can infer, that there is something called discipline fidelity and within this aspect, content, language, structure and scope of a text may vary. R. In the meaning-making process of a text, it is not always logic that is central. S. Most of the times, it is the expression of the experience that supersedes the structure and argument. Which of the following options is/are correct and giving the most appropriate order and meaning to the sentence?
(A)	RSPQ
(B)	QRSP
(C)	RSQP
(D)	SPRQ

Q.22	Mental health is a global concern, especially among the youth. During the Covid-19 pandemic, when schools and colleges were operating online, students were left with no option but to stay at home leading to negligible social interaction. Several studies indicate that even when offline classes have now resumed post Covid-19 pandemic, these students are finding it difficult to establish social connect leading to mental health issues. To deal with this situation, schools and colleges are trying hard to implement different strategies to combat their student's mental health depending on their unique culture, overall strength, and resources. Which of the following conclusions can be drawn from the above passage?
(A)	India is a young nation.
(B)	Different schools and colleges will have their own way to tackle the issue of mental health.
(C)	A combination of online and offline class is good for students.
(D)	Social connect is important for mental health.

Q.23	On the basis of syntax and grammar, identify the incorrect sentence(s). I. Doctors have found high levels of cerebrospinal fluid in certain cases of cerebral palsy around the world. They also suggested its abnormal impact on speech and muscle movement. II. Doctors have found high levels of cerebrospinal fluid in certain cases of cerebral palsy around the world which suggests the abnormal impact on speech and muscle movement. III. Having found high levels of cerebrospinal fluid in certain cases of cerebral palsy around the world, doctors are suggesting abnormal impact on speech and muscle movement. IV. Having found high levels of cerebrospinal fluid in certain cases of cerebral palsy around the world, doctors suggested its abnormal impact on speech and muscle movement.
(A)	I
(B)	II
(C)	III
(D)	IV

Q.24	In a cricket match amongst 7 friends, named P1 – P7, P1 scored maximum individual runs of 25 and P7 scored minimum individual run of 0. No two friends had the same score. The median and average runs scored were 15 and 12.57, not necessarily in that order. Two players, P2 and P3, who scored more than median but less than maximum, scored less than 40 runs together. One player scored double the sum of non-zero scores of two players. What could be the possible value(s) of the second highest score?
(A)	18
(B)	20
(C)	21
(D)	22

Q.25	A police station has six personnel comprising an inspector (I) and five constables (C_1, C_2, C_3, C_4, C_5). Normally, a 'raid team' of two, three, or four members is formed depending upon the nature of the raid. As per rule, it is mandatory that the inspector is part of raid team. Number of distinct raid teams that can be formed is _____. (*Answer in integer*)
Q.26	A man visits four relatives on a day. He purchases some sweets and gives a part of it to the first relative. Next, he purchases the same number of sweets he is left with after he visited his first relative. He repeats this process while visiting his other relatives. Finally, he gives all the sweets to his fourth relative. It is known that he gives equal number of sweets to all the relatives and is left with no sweets after the fourth relative. Assuming that he initially purchased more than 20 sweets, the minimum number of sweets he gave to each relative is _____. (*Answer in integer*)

Q.27 – Q.44 Carry ONE mark Each

Q.27	A is an $(n \times n)$ matrix. Consider the following two statements Statement 1: Columns of matrix A are linearly independent Statement 2: Inverse of matrix A exists Which one of the following statements is **TRUE**?
(A)	Statement 1 is true if and only if Statement 2 is true
(B)	Statement 1 and Statement 2 can be individually true or false
(C)	Statement 1 implies Statement 2 but not the other way round
(D)	Statement 2 implies Statement 1 but not the other way round
Q.28	Madhu's utility function is given by $U = \max(2C, 3F)$, where C represents the amount of cloth and F represents the amount of food. Her preferences **DO NOT** satisfy which one of the following axioms?
(A)	Completeness
(B)	Continuity
(C)	Convexity
(D)	Transitivity

Q.29	High powered money belongs to the
(A)	asset side of the central bank’s balance sheet
(B)	liability side of the central bank’s balance sheet
(C)	asset side of the commercial bank’s balance sheet
(D)	liability side of the commercial bank’s balance sheet

Q.30 Match **Column I** with **Column II**

Column I		Column II	
P	Amrit Bharat Station Scheme	1	To automate train protection system
Q	Bharatmala Pariyojna	2	To enhance the amenities at railway stations
R	Kavach	3	To develop the National Highways
S	Pradhan Mantri Bhartiya Janaushaudhi Kendras	4	To provide some specific facilities for passengers passing through railway stations

(A) (P→ 2), (Q→ 3), (R→ 1), (S→ 4)

(B) (P→ 4), (Q→ 3), (R→ 1), (S→ 2)

(C) (P→ 2), (Q→ 1), (R→ 3), (S→ 4)

(D) (P→ 4), (Q→ 1), (R→ 3), (S→ 2)

Q.31	Two players use the following procedure to divide a perfectly homogeneous and continuously divisible cake. First, Player 1 divides the cake into two pieces and then Player 2 chooses one of the pieces. Player 1 gets the remaining piece. Each player cares only about the size of the piece s/he gets. How is the cake divided in a sub-game perfect equilibrium if both the players are rational?
(A)	Player 1 gets the whole cake
(B)	Player 2 gets the larger piece
(C)	Each player gets half of the cake
(D)	The outcome cannot be decided based on the given information
Q.32	Which one of the following statements regarding externality is **TRUE**?
(A)	Cigarette smoking creates positive externality
(B)	A ban on smoking is Pareto optimal
(C)	Competitive market with a negative externality produces more than socially optimal output
(D)	Cigarette smoking does not create externality

Q.33	According to the theory of Keynesian Liquidity Preference, demand for money
(A)	is only for transaction purposes
(B)	does not depend on the interest rate
(C)	depends on income and interest rate
(D)	is only for precautionary purposes

Q.34	Unanticipated inflation rate, percentage change of output from full employment level, and the Okun's law yield (i) _____ and it represents (ii) _____ side of the economy. Which one of the following combinations of (i) and (ii) make the above sentence correct as per economic theory?
(A)	(i) Expectation augmented Phillips curve; (ii) supply
(B)	(i) Expectation augmented Phillips curve; (ii) demand
(C)	(i) Phillips-Okun's curve; (ii) supply
(D)	(i) Phillips-Okun's curve; (ii) demand
Q.35	In an economy, which one of the following relates private investment to the stock market?
(A)	Neo-classical theory of capital accumulation
(B)	Capital asset pricing model
(C)	Tobin's q
(D)	Investment accelerator model

Q.36	Suppose, a random variable X follows a Normal distribution with mean μ, and variance σ^2. The variance of the distribution is unknown. For testing $\mu = 10$ against the alternative $\mu > 10$, the distribution of the test statistic is
(A)	Standard Normal distribution
(B)	Student's *t* distribution
(C)	Normal distribution
(D)	*F* distribution
Q.37	The Factorization theorem of Neyman is used to identify
(A)	consistent statistic
(B)	efficient statistic
(C)	sufficient statistic
(D)	unbiased statistic

Q.38 Match **Column I** with **Column II**

Column I	Column II
P Rostow	1 Expanding variety model
Q Schumpeter	2 Rural-urban migration
R Harris-Todaro	3 Stages of development
S Grossman-Helpman	4 Creative-destruction

(A) (P→3), (Q→ 1), (R→ 2), (S→ 4)

(B) (P→ 3), (Q→ 4), (R→ 2), (S→ 1)

(C) (P→ 2), (Q→ 1), (R→ 3), (S→ 4)

(D) (P→ 2), (Q→ 4), (R→ 3), (S→ 1)

Q.39	Goods that come under the purview of "tragedy of commons" are (i)_____ and (ii)_____. Which one of the following combinations of (i) and (ii) makes the above sentence correct as per the economic theory?
(A)	(i) non-rivalrous; (ii) excludable
(B)	(i) rivalrous; (ii) excludable
(C)	(i) non-rivalrous; (ii) non-excludable
(D)	(i) rivalrous; (ii) non-excludable

Q.40	Consider a two-variable (x, y) linear regression model given in Equations (1) and (2) below. The error term, u_t, of Equation (1) is serially correlated as given in Equation (2). The error term, ε_t, of Equation (2) is white noise. All other assumptions of the Classical Linear Regression Model (CLRM) hold. Then, which of the following options is/are **FALSE**? $y_t = \alpha + \beta x_t + u_t$ (1) $u_t = \rho u_{t-1} + \varepsilon_t; 0 < \rho < 1$ (2)
(A)	Ordinary Least Squares estimators of the parameters in Equation (1) are biased
(B)	Ordinary Least Squares estimators of the parameters in Equation (1) are asymptotically normally distributed
(C)	Ordinary Least Squares estimators of the parameters in Equation (1) are efficient
(D)	Ordinary Least Squares estimators of the parameters in Equation (1) are consistent
Q.41	Suppose, a random variable X follows a Poisson distribution with parameter $\lambda = 25$. The coefficient of variation of the distribution is _____ (rounded off to two decimal places)
Q.42	You and three of your friends go to a restaurant for dinner. All four of you agree to divide the total bill equally amongst yourselves. One of your friends orders a dish worth INR 400. The marginal cost for ordering the dish for each one of you in INR is _____ (in integer)

Q.43	The inverse demand function for the first book on "Economics of Digital Public Infrastructure in India" is given by $p = 200 - 0.002Q$; where, p is the price of the book, and Q is the number of books purchased. The publisher's marginal cost is $60 + 0.0168Q$. The author's royalty is 25% of the total revenue. The optimal price of the book from the author's perspective is _____ (in integer)
Q.44	When the currency-deposit ratio is 0, and the reserve-deposit ratio is 0.5, then the value of the money multiplier is _____ (in integer)

Q.45 to Q.65 Carry TWO marks Each

Q.45	Two companies, Company 1 and Company 2, are playing a simultaneous-move game. They are selling competing devices, whose quantity demanded are given by x_1 and x_2, and their prices are p_1 and p_2, respectively. The demand equation for the device of Company 1 is $x_1 = 300(90 - 0.5p_1 + 0.25p_2)$, and that of Company 2 is $x_2 = 300(90 - 0.5p_2 + 0.25p_1)$. The cost of production of both devices is zero. Each company is interested in maximizing its own profit. Which one of the following price combinations constitutes the Nash equilibrium of the game?
(A)	$p_1 = 90, p_2 = 90$
(B)	$p_1 = 120, p_2 = 120$
(C)	$p_1 = 45, p_2 = 45$
(D)	$p_1 = 105, p_2 = 75$

Q.46 Match **Column I** with **Column II**

Column I	Column II
P e-Nam	1 Working capital loan
Q PM Micro Food Processing Scheme	2 A seed capital of INR 40,000, and 50% branding/marketing grant
R Adivashi Mahila Sashaktikaran Yojna	3 Loan up to INR 2 lakhs at 4% interest
S Swayam Shakti Sahakar Yojna	4 Innovative agricultural technologies and price discovery mechanism

(A) (P→ 3), (Q→ 2), (R→ 4), (S→ 1)

(B) (P→ 4), (Q→ 2), (R→ 3), (S→ 1)

(C) (P→ 1), (Q→ 2), (R→ 4), (S→ 3)

(D) (P→ 4), (Q→ 1), (R→ 2), (S→ 3)

Q.47 Suppose that X_1, X_2, X_3 and X_4 are independent random variables with common distribution $N(4, 12)$. Observations $x_1 = 6$, $x_2 = 3$, $x_3 = 1$, and $x_4 = 10$ correspond to X_1, X_2, X_3 and X_4, respectively. What is the sample mean and its sampling distribution?

(A) 4 and $N(4, 3)$

(B) 5 and $N(4, 3)$

(C) 4 and $N(5, 12)$

(D) 5 and $N(4, 12)$

Q.48	Which one of the following combinations of simultaneous policy actions is **NOT** possible?
(A)	Country A allows full international capital mobility, conducts an independent monetary policy, and follows a floating exchange rate regime
(B)	Country A allows full international capital mobility, conducts an independent monetary policy, and follows a fixed exchange rate regime
(C)	Country A allows full international capital mobility, cannot conduct an independent monetary policy, and follows a fixed exchange rate regime
(D)	Country A does not allow full international capital mobility, conducts an independent monetary policy, and follows a fixed exchange rate regime

Q.49 Match **Column I** with **Column II**

Column I	Column II
P Infant Industrialization	1 When a firm charges lower prices in the export market than in the domestic market
Q High Performing Asian Economy	2 Industrialized not via import substitution but via export promotion of manufactured goods
R National Procurement	3 New industries need a temporary period of protection from foreign companies
S Dumping	4 Government or publicly regulated firms are directed to purchase expensive domestic goods than cheap imports

(A) (P→ 3), (Q→ 2), (R→ 1), (S→ 4)

(B) (P→ 3), (Q→ 2), (R→ 4), (S→ 1)

(C) (P→ 3), (Q→ 1), (R→ 4), (S→ 2)

(D) (P→ 4), (Q→ 2), (R→ 1), (S→ 3)

Q.50	Consider a Solow growth model with the production function $Y_t = K_t^{\alpha} N_t^{1-\alpha}$; $0 < \alpha < 1$; where, Y_t is aggregate output at time t; K_t is aggregate capital stock at time t; N_t is the number of workers at time t. There is population growth but no technology growth. Let $0 < s < 1$ be the savings rate, $0 < n < 1$ be the population growth rate, and $0 < \delta < 1$ be the rate of depreciation of capital stock. What is the growth rate of aggregate output at steady state?
(A)	n
(B)	$s + n$
(C)	$n + \delta$
(D)	0

Q.51	Consider the following IS-LM model where, C_0 is autonomous consumption, c is marginal propensity to consumption, T_0 is the autonomous tax, t is the tax rate on income Y, b is the interest sensitivity of investment to real interest rate r, M^S is exogenously determined nominal money supply, P is the aggregate price level, l_1 is the income sensitivity of money demand to income, l_2 is the interest sensitivity of money demand Consumption function: $C = C_0 + cY^d; 0 < c < 1$ Disposable Income: $Y^d = Y - T$ Tax function: $T = T_0 + tY; 0 < t < 1$ Investment function: $I = I_0 - br; b > 0$ LM equation: $\frac{M^S}{P} = l_1 Y - l_2 r;\ l_1 > 0, l_2 > 0$ Closed economy without government: $Y = C + I$ Which one of the following options gives the investment multiplier $\left(\frac{\partial Y}{\partial I_0}\right)$?
(A)	$\frac{1}{1 - c(1-t)}$
(B)	$\frac{1}{[1 - c(1-t)] + \left(\frac{l_1}{l_2}\right) b}$
(C)	$\frac{1}{(1-c) + \left(\frac{l_1}{l_2}\right) b}$
(D)	$1 - c(1-t) + \left(\frac{l_1}{l_2}\right) b$

Q.52	The estimated energy demand is given in the Equation below, where, $\hat{y}_t$ is the estimated value of the log of energy demand at time t. The numbers in the parentheses are the values of the t-statistic of the corresponding coefficients. $\hat{y}_t = \underset{}{1.24} + \underset{(10.73)}{0.56}\ \ln(\text{GDP}_t) - \underset{(7.28)}{0.03}\ \underset{(5.28)}{\ln(\text{energyprice}_t)}$ Which one of the following statements is **CORRECT**?
(A)	Demand for energy is price inelastic
(B)	Demand for energy is price elastic
(C)	Demand for energy is unit elastic
(D)	Sufficient information has not been provided to calculate price elasticity
Q.53	In terms of the general relations among total cost, average cost and marginal cost, which of the following statements is/are **FALSE?**
(A)	When the total cost is rising, the marginal cost is also rising
(B)	When the marginal cost is rising, average cost is also rising
(C)	When the total cost is rising, the marginal cost is positive
(D)	When the marginal cost remains unchanged, the average cost also remains unchanged

Q.54	Which of the following statements concerning Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) is/are **CORRECT**?
(A)	MDGs had 8 enumerated goals, and SDGs have 17
(B)	The MDGs are considered less comprehensive compared to the SDGs in terms of the range of issues covered
(C)	Both MDGs and SDGs are meant exclusively for developing countries
(D)	SDGs were introduced after the world achieved the targets specified by the MDGs
Q.55	Nominal exchange rate is defined as the amount of domestic currency that can fetch one unit of foreign currency. Suppose that there is a fall in nominal exchange rate. Which of the following statements is/are **TRUE**?
(A)	Appreciation of domestic currency with respect to foreign currency
(B)	Depreciation of domestic currency with respect to foreign currency
(C)	Fall in the price of foreign currency in terms of domestic currency
(D)	Rise in the price of foreign currency in terms of domestic currency

Q.56	Which of the following statements is/are **INCORRECT**?
(A)	According to the Periodic Labour Force Survey 2023-24, the agricultural sector remains dominant in providing employment
(B)	The share of female workforce in agriculture has significantly increased in the financial year 2023-24 relative to the financial year 2017-18
(C)	The male participation in the agriculture employment decreased in the financial year 2023-24 relative to the financial year 2017-18
(D)	The share of industry and service sector saw an increment in the employment share in the financial year 2023-24 relative to the financial year 2017-18
Q.57	Which of the following statements is/are **CORRECT**?
(A)	India’s total exports (merchandise and services) have shown positive growth in the first nine months of the financial year 2024-25
(B)	India’s merchandise imports grew by 5.2% during April to December 2024, and this increase was largely due to a rise in non-oil, non-gold imports
(C)	India’s service sector exports declined in the first nine months of the financial year 2024-25
(D)	The recent rise in India’s current account deficit can be attributed to an increase in the service trade deficit

Q.58	In the town of Belapur, 5000 used cars are available for sale. The cars vary in quality and only the car owners know the true worth of their car. All used cars look the same to potential buyers. If a car is of quality x, then the original owner is ready to sell it for any price greater than or equal to x. For a buyer, the expected worth of a car is equal to half of the number of cars selling in the market. As the buyer does not know the exact quality of the car, he is willing to pay a price that is equal to 1000 more than the expected worth of the car. At the equilibrium, the number of cars that remain **unsold** in the market is _____ (in integer)
Q.59	Suppose that Ritwick owns two plants, Plant X and Plant Y. Both plants produce the same industrial good. The marginal cost to produce at Plant X is $4 + 2Q_X$; where, Q_X is the quantity produced in Plant X, and the marginal cost to produce at Plant Y is $40 + Q_Y$; where, Q_Y is the total quantity produced in Plant Y. If Ritwick plans to produce 15 units of this good, the amount of the good produced in Plant Y is _____ (in integer)
Q.60	Consider the function $G(x, y, z) = 0$. This function allows us to implicitly define each of three variables as a function of the other two variables. Assume that all partial derivatives of the function $G(x, y, z)$ exist everywhere. Then, the value of $\left(\frac{\partial z}{\partial x} \times \frac{\partial x}{\partial y} \times \frac{\partial y}{\partial z}\right)$ is _____ (in integer)
Q.61	The market for torch is perfectly competitive. The market demand function for torch is given by $X^d = \min(400 - p, 0), p \geq 0$, where p is the price of a torch. The market supply for the same good is $X^s = \max\left(0, (\frac{p}{7} - \frac{80}{7})\right), p \geq 0$. If a specific tax of 40 is imposed on the purchase of each unit of torch, the corresponding decrease in the consumer surplus is _____ (rounded off to one decimal place)
Q.62	An individual lives for two periods, Period 1 and Period 2. In Period 1, her income is 210, and in Period 2, her income is 0. She saves in Period 1 and earns a real interest rate of 10% on these savings in Period 2. She does not save anything in Period 2. She consumes equal amounts in both the time periods. Her consumption in the current period is _____ (in integer)

Q.63

The money demand function is $\frac{M}{P} = 800 + 0.3Y - 2000i$; where, M is nominal money supply, P is the aggregate price level, Y is the real GDP, and i is the nominal interest rate. Suppose that $Y = 2000$, and $i = 0.20$.

The velocity of money is _____ (in integer)

Q.64

Consider the estimated regression Equation below, where, $\hat{y}_t$ is the estimated value of the log (to the base e) of real GDP at time t. The numbers in the parentheses are the value of the t-statistic of the corresponding coefficients.

$$\hat{y}_t = \underset{(10.25)}{6.20} + \underset{(4.62)}{0.05}\ t$$

The growth rate of real GDP (in %) is _____ (rounded off to the nearest integer)

Q.65

Table 1

P1/P2	X	Y	Z
A	2,1,2	0,0,2	1,2,3
B	0,3,1	2,2,4	3,1,0
C	1,1,1	3,2,1	2,2,2

Table 2

P1/P2	X	Y	Z
A	2,1,3	1,0,3	1,0,4
B	1,2,1	3,3,3	1,1,1
C	1,2,1	1,0,0	2,1,2

Table 1 and Table 2 represent a 3-player game. The payoff (a, b, c), in each cell, represents Player 1, Player 2, and Player 3's payoffs respectively. Player 1 (P1) decides to play either A, B, or C. Player 2 (P2) decides to play either X, Y, or Z. Player 3 (P3) decides between Table 1 and Table 2.

The number of Nash equilibrium in pure strategy in this game is _____ (in integer)