

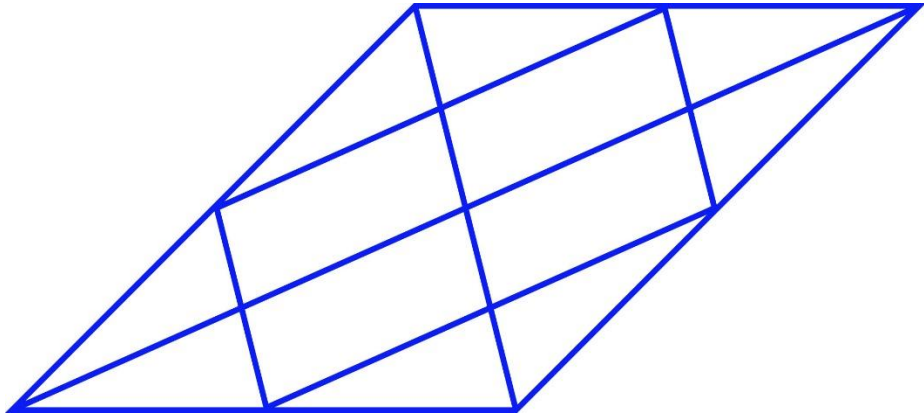
General Aptitude (GA)**Q.1 – Q.5 Carry ONE mark Each**

Q.1	Rafi told Mary, “I am thinking of watching a film this weekend.” The following reports the above statement in indirect speech: Rafi told Mary that he _____ of watching a film that weekend.
(A)	thought
(B)	is thinking
(C)	am thinking
(D)	was thinking

Q.2	Permit : _____ : : Enforce : Relax (By word meaning)
(A)	Allow
(B)	Forbid
(C)	License
(D)	Reinforce

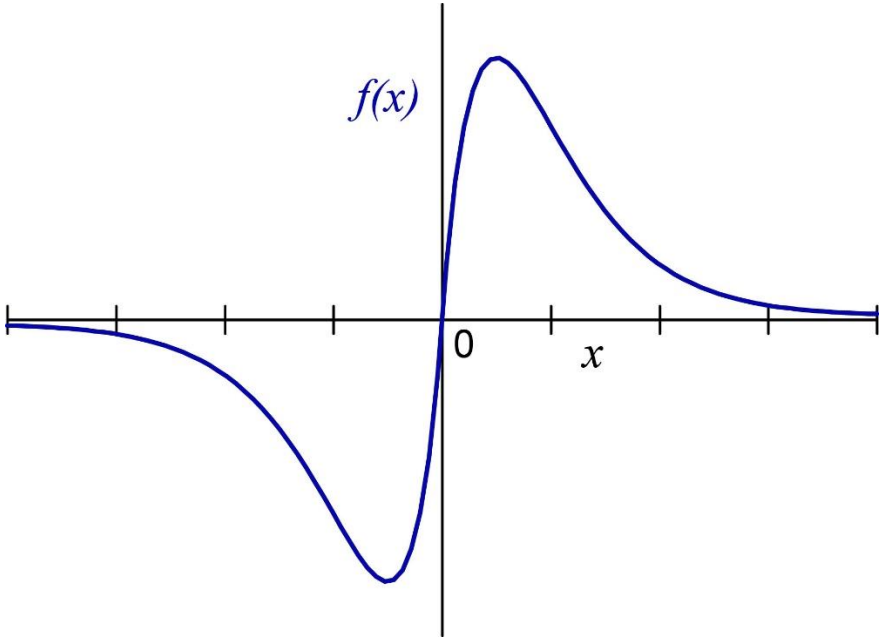
Q.3	Given a fair six-faced dice where the faces are labelled '1', '2', '3', '4', '5', and '6', what is the probability of getting a '1' on the first roll of the dice and a '4' on the second roll?
(A)	$\frac{1}{36}$
(B)	$\frac{1}{6}$
(C)	$\frac{5}{6}$
(D)	$\frac{1}{3}$

Q.4	A recent survey shows that 65% of tobacco users were advised to stop consuming tobacco. The survey also shows that 3 out of 10 tobacco users attempted to stop using tobacco. Based only on the information in the above passage, which one of the following options can be logically inferred with <i>certainty</i>?
(A)	A majority of tobacco users who were advised to stop consuming tobacco made an attempt to do so.
(B)	A majority of tobacco users who were advised to stop consuming tobacco did not attempt to do so.
(C)	Approximately 30% of tobacco users successfully stopped consuming tobacco.
(D)	Approximately 65% of tobacco users successfully stopped consuming tobacco.

Q.5	How many triangles are present in the given figure?
	
(A)	12
(B)	16
(C)	20
(D)	24

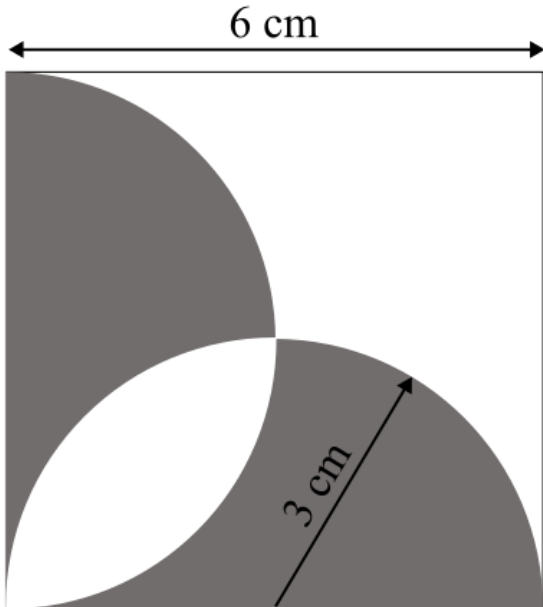
Q.6 – Q.10 Carry TWO marks Each

Q.6	Students of all the departments of a college who have successfully completed the registration process are eligible to vote in the upcoming college elections. However, by the time the due date for registration was over, it was found that suprisingly none of the students from the Department of Human Sciences had completed the registration process. Based only on the information provided above, which one of the following sets of statement(s) can be logically inferred with <i>certainty</i>? (i) All those students who would not be eligible to vote in the college elections would certainly belong to the Department of Human Sciences. (ii) None of the students from departments other than Human Sciences failed to complete the registration process within the due time. (iii) All the eligible voters would certainly be students who are not from the Department of Human Sciences.
(A)	(i) and (ii)
(B)	(i) and (iii)
(C)	only (i)
(D)	only (iii)

Q.7	Which one of the following options represents the given graph?
	
(A)	$f(x) = x^2 2^{- x }$
(B)	$f(x) = x 2^{- x }$
(C)	$f(x) = x 2^{-x}$
(D)	$f(x) = x 2^{-x}$

Q.8	Which one of the options does NOT describe the passage below or follow from it? We tend to think of cancer as a ‘modern’ illness because its metaphors are so modern. It is a disease of overproduction, of sudden growth, a growth that is unstoppable, tipped into the abyss of no control. Modern cell biology encourages us to imagine the cell as a molecular machine. Cancer is that machine unable to quench its initial command (to grow) and thus transform into an indestructible, self-propelled automaton. [Adapted from <i>The Emperor of All Maladies</i> by Siddhartha Mukherjee]
(A)	It is a reflection of why cancer seems so modern to most of us.
(B)	It tells us that modern cell biology uses and promotes metaphors of machinery.
(C)	Modern cell biology encourages metaphors of machinery, and cancer is often imagined as a machine.
(D)	Modern cell biology never uses figurative language, such as metaphors, to describe or explain anything.

Q.9	The digit in the unit's place of the product $3^{999} \times 7^{1000}$ is _____.
(A)	7
(B)	1
(C)	3
(D)	9

Q.10	A square with sides of length 6 cm is given. The boundary of the shaded region is defined by two semi-circles whose diameters are the sides of the square, as shown. The area of the shaded region is _____ cm^2.
	
(A)	6π
(B)	18
(C)	20
(D)	9π

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11 – Q.17 Carry ONE mark Each

Q.11	Which word below best describes the idea of being both <i>Spineless</i> and <i>Cowardly</i> ?
(A)	Pusillanimous
(B)	Unctuous
(C)	Obsequious
(D)	Reticent
Q.12	Choose the right preposition to fill up the blank: The whole family got together ____ Diwali
(A)	of
(B)	at
(C)	in
(D)	till

Q.13	Select the correct option to fill in all the blanks to complete the passage: The (i)_____ factor amid this turbulence has been the (ii)_____ of high-octane, action-oriented films such as RRR, K.G.F: Chapter 2 and Pushpa from film industries in the south of the country. Traditionally, films made in the south have done well in their own (iii) _____. But increasingly, their dubbed versions have performed well in the Hindi heartland, with collections (iv)_____ those of their Bollywood counterparts.
(A)	(i) disheartening (ii) failure (iii) channels (iv) matching
(B)	(i) redeeming (ii) outperformance (iii) geographies (iv) eclipsing
(C)	(i) shocking (ii) underperformance (iii) cinemas (iv) below
(D)	(i) humbling (ii) bombing (iii) theatres (iv) falling behind

Q.14	The following passage consists of 6 sentences. The first and sixth sentences of the passage are at their correct positions, while the middle four sentences (represented by 2, 3, 4, and 5) are jumbled up. Choose the correct sequence of the sentences so that they form a coherent paragraph: 1. Most obviously, mobility is taken to be a geographical as well as a social phenomenon. 2. Much of the social mobility literature regarded society as a uniform surface and failed to register the geographical intersections of region, city and place, with the social categories of class, gender and ethnicity. 3. The existing sociology of migration is incidentally far too limited in its concerns to be very useful here. 4. Further, I am concerned with the flows of people within, but especially beyond, the territory of each society, and how these flows may relate to many different desires, for work, housing, leisure, religion, family relationships, criminal gain, asylum seeking and so on. 5. Moreover, not only people are mobile but so too are many ‘objects’. 6. I show that sociology’s recent development of a ‘sociology of objects’ needs to be taken further and that the diverse flows of objects across societal borders and their intersections with the multiple flows of people are hugely significant.
(A)	3, 2, 5, 4
(B)	2, 3, 4, 5
(C)	5, 4, 3, 2
(D)	4, 2, 5, 3

Q.15	The population of a country increased by 5% from 2020 to 2021. Then, the population decreased by 5% from 2021 to 2022. By what percentage did the population change from 2020 to 2022?
(A)	-0.25%
(B)	0%
(C)	2.5%
(D)	10.25%
Q.16	The words Thin: Slim: Slender are related in some way. Identify the correct option(s) that reflect(s) the same relationship:
(A)	Fat: Plump: Voluptuous
(B)	Short: Small: Petite
(C)	Tall: Taller: Tallest
(D)	Fair: Dark: Wheatish

Q.17	A pandemic like situation hit the country last year, resulting in loss of human life and economic depression. To improve the condition of its citizens, the government made a series of emergency medical interventions and increased spending to revive the economy. In both these efforts, district administration authorities were actively involved. Which of the following action(s) are plausible?
(A)	In future, the government can make district administration authorities responsible for protecting health of citizens and reviving the economy.
(B)	The government may set up a task force to review the post pandemic situation and ascertain the effectiveness of the measures taken.
(C)	The government may set up a committee to formulate a pandemic management program to minimize losses to life and economy in future.
(D)	The government may take population control measures to minimize pandemic related losses in future.

XH-B1: Q.18 – Q.26 Carry TWO marks Each

Q.18	Six students, Arif, Balwinder, Chintu, David, Emon and Fulmoni appeared in the GATE-XH exam in 2022. Balwinder scores less than Chintu in XH-B1, but more than Arif in XH-C1. David scores more than Balwinder in XH-C1, and more than Chintu in XH-B1. Emon scores less than David, but more than Fulmoni in XH-B1. Fulmoni scores more than David in XH-C1. Arif scores less than Emon, but more than Fulmoni in XH-B1. Who scores highest in XH-B1?
(A)	Fulmoni
(B)	Emon
(C)	David
(D)	Chintu
Q.19	Select the correct relation between E and F.
	$E = \frac{x}{1+x}$ and $F = \frac{-x}{1-x}$ $x > 1$
(A)	$E > F$
(B)	$E < F$
(C)	$E = F$
(D)	$E < -F$

Q.20	A code language is formulated thus: Vowels in the original word are replaced by the next vowel from the list of vowels, A-E-I-O-U (For example, E is replaced by I and U is replaced by A). Consonants in the original word are replaced by previous consonant (For example, T is replaced by S and V is replaced by T). Then how does the word, GOODMORNING appear in the coded language?
(A)	HUUFNUSPOPH
(B)	FIICLIQMEMF
(C)	FUUCLUQMOMF
(D)	HEEDATTACRH

Q.21	The stranger is by nature no "owner of soil" -- soil not only in the physical, but also in the figurative sense of a life-substance, which is fixed, if not in a point in space, at least in an ideal point of the social environment. Although in more intimate relations, he may develop all kinds of charm and significance, as long as he is considered a stranger in the eyes of the other, he is not an "owner of soil." Restriction to intermediary trade, and often (as though sublimated from it) to pure finance, gives him the specific character of mobility. If mobility takes place within a closed group, it embodies that synthesis of nearness and distance which constitutes the formal position of the stranger. For, the fundamentally mobile person comes in contact, at one time or another, with every individual, but is not organically connected, through established ties of kinship, locality, and occupation, with any single one. What assumptions can be made about the stranger from the passage above?
(A)	The stranger can become an owner of soil through developing all kinds of charm in more intimate relations.
(B)	The stranger cannot become an owner of soil either in the physical or psychological sense.
(C)	The stranger can become an owner of soil through establishing ties of kinship and so on.
(D)	The stranger might become an owner of soil in the physical sense but not in the psychological

Q.22	L is the only son of A and S. S has one sibling, B, who is married to L's aunt, K. B is the only son of D. How are L and D related? Select the possible option(s):
(A)	Grandchild and Paternal Grandfather
(B)	Grandchild and Maternal Grandfather
(C)	Grandchild and Paternal Grandmother
(D)	Grandchild and Maternal Grandmother

Q.23	Five segments of a sentence are given below. The first and fifth segments are at their correct positions, while the middle three segments (represented by 2, 3, and 4) are jumbled up. Choose the correct order of the segments so that they form a coherent sentence: 1. Consumed multitudes are jostling and shoving inside me 2. and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the center, 3. clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, 4. I must commence the business of remaking my life from the point at which it really began, 5. some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth.
(A)	2 – 3 – 4
(B)	3 – 2 – 4
(C)	4 – 2 – 3
(D)	4 – 3 – 2

Q.24	“I told you the truth,” I say yet again, “Memory’s truth, because memory has its own special kind. It selects, eliminates, alters, exaggerates, minimizes, glorifies, and vilifies also; but in the end it creates its own reality, its heterogeneous but usually coherent versions of events; and no sane human being ever trusts someone else’s version more than his own.” What are the different ways in which ‘truth’ can be understood from the passage?
(A)	Truth is what can be verified by hard empirical evidence.
(B)	Truth is based on what can be perceived by the senses.
(C)	Truth is the product of memory that is fallible, selective and slanted.
(D)	Truth is contingent on the observer and can only be partial.
Q.25	A firm needs both skilled labour and unskilled labour for the production of cloth. The wage of skilled labour is Rs. 40,000 per month, and that of unskilled labour is Rs. 15,000 per month. The total wage bill of the firm for the production of cloth is Rs. 23,75,000 in a month for 100 labour. How many skilled labour are employed by the firm (<i>in Integer</i>)?
Q.26	Select the odd word and write the option number as answer: (1) Lek (2) Zloty (3) Diner (4) Drachma (5) Real

Economics – C1

XH-C1: Q.27 – Q.44 Carry ONE mark Each

Q.27	An individual is endowed with income of Rs. 142 and has the utility function $U(x_1, x_2) = x_2(x_1 + 1)$, where $x_1 \geq 0$, $x_2 \geq 0$. The unit price of x_1 is Rs. 2 and the unit price of x_2 is Rs. 3. The utility maximizing bundle is
(A)	$x_1 = 35, x_2 = 20$
(B)	$x_1 = 30, x_2 = 24$
(C)	$x_1 = 35, x_2 = 24$
(D)	$x_1 = 30, x_2 = 20$
Q.28	The International Monetary Fund (IMF) began operations in the year
(A)	1942
(B)	1947
(C)	1945
(D)	1940

Q.29	According to the <i>Working Group on Money Supply: Analytics and Methodology of Compilation</i> (1998) constituted by the Reserve Bank of India (RBI), which of the following is NOT a component of the new monetary aggregate NM ₁ ?
(A)	Currency with the public
(B)	Demand deposits with the banking system
(C)	Short-term time deposits of residents
(D)	‘Other’ deposits with the RBI
Q.30	Stagflation is a situation when
(A)	both unemployment and inflation are low
(B)	both unemployment and inflation are high
(C)	unemployment is high but inflation is low
(D)	unemployment is low but inflation is high

Q.31	Consider the Keynesian consumption function $C = \alpha + \beta Y$, where C is the aggregate consumption, Y is the aggregate income, α is a constant ($\alpha > 0$), and β is the marginal propensity to consume ($0 < \beta < 1$). Then, the average propensity to consume is
(A)	α
(B)	$\frac{\alpha}{Y} + \beta$
(C)	$\alpha Y + \beta Y^2$
(D)	$\alpha + \frac{\beta}{Y}$
Q.32	An analyst regressed Y on X_1 and X_2 . If she later noticed that $X_1 = 5X_2$, then which of the following assumptions of the classical linear regression model was violated?
(A)	Homoscedasticity
(B)	No Perfect Multicollinearity
(C)	No Autocorrelation
(D)	Linearity in parameters

Q.33	Which of the following is NOT an example of non-tariff barriers?
(A)	Voluntary export restraint
(B)	A procurement law directing a government to buy domestically made products unless comparable foreign made products are substantially cheaper.
(C)	Imposition of sanitary and phytosanitary measures on agricultural produce.
(D)	An antidumping law
Q.34	Among the following, who first proposed that internal government debt does not create a burden for the future generation?
(A)	N. Gregory Mankiw
(B)	Martin Feldstein
(C)	Harvey S. Rosen
(D)	A. P. Lerner

Q.35	Which of the following is an example of direct tax?
(A)	Sales tax
(B)	Customs duty
(C)	Individual income tax
(D)	Excise tax
Q.36	In the context of endogenous growth theory, the Nobel laureate Paul Romer emphasized that “ideas” are
(A)	non-rival
(B)	rival with medium degree of excludability
(C)	rival with high degree of excludability
(D)	rival with low degree of excludability

Q.37	In the Human Development Index (HDI), the longevity is measured by
(A)	child survival rate
(B)	healthy life expectancy
(C)	disability-adjusted life years
(D)	life expectancy at birth
Q.38	Which of the following statements is correct about the Fourteenth Finance Commission?
(A)	The Commission was chaired by Dr. C. Rangarajan.
(B)	The Commission recommended achieving 90 percent metering of electricity by the end of the year 2012.
(C)	The Commission recommended an increase in the share of tax devolution to states to 42 percent of the divisible pool.
(D)	The Commission was mandated to make recommendations for the period 2010-2015.

Q.39	Many scholars consider the study conducted by Dandekar and Rath in the 1960s as the first systematic assessment of poverty in independent India. Which option from the following is NOT correct about the study?
(A)	The study used the data on monthly per capita consumption expenditure (MPCE) from the 1960-61 round of the National Sample Surveys.
(B)	The study used the identical calorie norm for rural and urban areas.
(C)	The poverty head count ratio estimated by the study was higher for rural areas than that for urban areas.
(D)	The study used the same poverty line for all states.
Q.40	Which of the following statements is/are correct about the Pradhan Mantri Kaushal Vikas Yojana (PMKVY)?
(A)	It has been a flagship scheme of the Ministry of Education.
(B)	It was launched in the year 2010.
(C)	The National Skill Development Corporation has been responsible for its implementation.
(D)	One of the objectives of PMKVY has been to enable a large number of Indian youth to take up industry-relevant skill training.

Q.41	Which of the following is/are used for testing the assumption of normality?
(A)	Shapiro-Wilk test
(B)	Breusch-Godfrey test
(C)	Jarque-Bera test
(D)	Park test
Q.42	Suppose Amar borrows Rs. 1000 from Ujala. After one year, Ujala wants Rs. 1100 back from Amar. The yield to maturity in percent (%) on this borrowing is _____ (<i>round off to one decimal place</i>).
Q.43	A 250 ml bottle of mango juice costs USD 4 in the United States. If the exchange rate is 0.02 USD per Rupee, then the cost of the same bottle of mango juice in Rupees would be _____ (<i>in integer</i>).

Q.44

The following table provides population information for different age groups in 2010 and 2017.

Age group	Population in 2010	Population in 2017
0 to 14 years	201630	213609
15 to 64 years	899210	847552
65 years and above	232450	254474

The percentage change in old-age dependency ratio from 2010 to 2017 is _____
(round off to two decimal places).

XH-C1: Q.45– Q.65 Carry TWO marks Each

Q.45	A firm in a market with perfect competition has the following total cost (TC) function: $TC(Q) = a + b(Q)$ where Q is the quantity produced by the firm, a is the fixed cost and $b(Q)$ is the variable cost. What will happen if the fixed cost increases?
(A)	In the short-run, the firm's Average Variable Cost (AVC) curve will shift upwards.
(B)	In the short-run, the firm's Average Total Cost (ATC) curve will shift upwards.
(C)	The firm will earn higher profits.
(D)	In the short-run, the firm's Marginal Cost (MC) curve will shift upwards.
Q.46	The emission of greenhouse gases is an example of "bads" that are
(A)	rival and excludable
(B)	non-rival and excludable
(C)	rival and non-excludable
(D)	non-rival and non-excludable

Q.47	Consider a closed-economy IS-LM model. The IS and LM equations are $Y = C(Y) + I(z) + \bar{G}$ $\frac{\bar{M}}{\bar{P}} = kY - li$ where Y is the output, C is the consumption ($C' > 0$), I is the investment ($I' < 0$), $z \equiv i - \pi^e$, i is the nominal interest rate, π^e is the expected inflation, $\bar{G}$ is the government purchases, $\frac{\bar{M}}{\bar{P}}$ is the fixed real money balances, and k and l are positive constants. Suppose everyone in the economy suddenly expects the inflation to rise in the future. Assuming that the LM curve remains unchanged, what will happen in the short-run?
(A)	Equilibrium Y increases.
(B)	Aggregate demand remains unchanged.
(C)	Equilibrium Y remains unchanged.
(D)	Aggregate demand shifts down.

Q.48	Consider the following simultaneous equations model: $Y_t = \beta_1 + \beta_2 X_t + \beta_3 X_{t-1} + \beta_4 Z_t + \mu_{1t} \quad (1)$ $Z_t = \delta_1 + \delta_2 Y_t + \delta_3 W_t + \mu_{2t} \quad (2)$ Before estimating the above model, a researcher performed the test of identification using order and rank conditions, and found that equation (2) is overidentified. Then, which of the following methods is appropriate to estimate equation (2) ?
(A)	Two-Stage Least Squares
(B)	Indirect Least Squares
(C)	Weighted Least Squares
(D)	Ordinary Least Squares

Q.49	An income tax system is considered as progressive if the average tax rate rises with income. Consider an income tax schedule: $T = p + tY$, where T denotes the tax liability, p is a constant, t is the constant marginal tax rate, and Y is the income. For this tax schedule to be progressive, the value of p
(A)	must be positive
(B)	must be negative
(C)	must be zero
(D)	can be any value except zero

Q.50	Match the following: <table border="1" data-bbox="408 293 1291 842"> <thead> <tr> <th data-bbox="408 293 679 432">Demographic Transition Stage</th><th data-bbox="679 293 1291 432">Feature</th></tr> </thead> <tbody> <tr> <td data-bbox="408 432 679 535">I</td><td data-bbox="679 432 1291 535">P. High fertility and high mortality</td></tr> <tr> <td data-bbox="408 535 679 638">II</td><td data-bbox="679 535 1291 638">Q. Declining fertility</td></tr> <tr> <td data-bbox="408 638 679 741">III</td><td data-bbox="679 638 1291 741">R. Stationary population</td></tr> <tr> <td data-bbox="408 741 679 842">IV</td><td data-bbox="679 741 1291 842">S. Declining mortality</td></tr> </tbody> </table>	Demographic Transition Stage	Feature	I	P. High fertility and high mortality	II	Q. Declining fertility	III	R. Stationary population	IV	S. Declining mortality
Demographic Transition Stage	Feature										
I	P. High fertility and high mortality										
II	Q. Declining fertility										
III	R. Stationary population										
IV	S. Declining mortality										
(A)	I → P ; II → Q ; III → R ; IV → S										
(B)	I → P ; II → S ; III → Q ; IV → R										
(C)	I → R ; II → S ; III → Q ; IV → P										
(D)	I → S ; II → P ; III → R ; IV → Q										

Q.51

Consider two countries, India and Bangladesh, and two goods, Glass Bottle and Ceramic Plate, with labour requirements of production for a unit of each good given below:

Labour hours required per unit of production		
	Glass Bottle	Ceramic Plate
India	2 hours	3 hours
Bangladesh	3 hours	9 hours

Which of the following options is/are correct?

(A)

India has an absolute advantage in Glass Bottle production and a comparative disadvantage in Glass Bottle production.

(B)

India has an absolute advantage in Ceramic Plate production and a comparative disadvantage in Ceramic Plate production.

(C)

India has an absolute advantage in Ceramic Plate production and a comparative disadvantage in Glass Bottle production.

(D)

India has an absolute advantage in Glass Bottle production and a comparative disadvantage in Ceramic Plate production.

Q.52	Suppose the own price elasticity of demand and income elasticity of demand are given by e_p and e_I , respectively. The subscript p represents own price of a good and the subscript I represents the income of the consumer. Identify the correct statement(s) from the following.
(A)	If $1 < e_p < \infty$, the demand is price inelastic.
(B)	Luxury goods are more price inelastic and the necessities are price elastic.
(C)	Luxury goods have $e_I > 1$.
(D)	If $0 < e_p < 1$, the demand is price elastic.
Q.53	Let π^e be the expected inflation rate, i be the nominal interest rate and r be the real interest rate. Which of the following statements is/are correct?
(A)	For small values of r and π^e , $r \approx i - \pi^e$.
(B)	When real interest rate is low, there are greater incentives to borrow and fewer incentives to lend.
(C)	Real interest rate reflects the real cost of borrowing.
(D)	If $i = 8\%$ and $\pi^e = 10\%$, then r is approximately (+) 2%.

Q.54	Which of the following models explain(s) the upward-sloping aggregate supply curve in the short-run?
(A)	Sticky-wage model
(B)	Worker-misperception model
(C)	Imperfect-information model
(D)	Solow model

Q.55	Consider a Mundell-Fleming model for a small open economy with perfect capital mobility. The goods market equation is $Y = C(Y) + I(r^*) + G + NX(e)$ where Y is the output, C is the consumption ($C' > 0$), I is the investment ($I' < 0$), G is the government purchases, and NX is the net exports ($NX' < 0$), r^* is the fixed world interest rate, and e is the exchange rate. The money market equation is $\frac{M}{\bar{P}} = kY - lr^*$ where M is the money supply, $\bar{P}$ is the fixed price level, and k and l are positive constants. Which of the following policies is/are ineffective (i.e., have no impact on income) in the short-run?
(A)	Expansionary fiscal policy under floating exchange rate
(B)	Expansionary monetary policy under floating exchange rate
(C)	Expansionary fiscal policy under fixed exchange rate
(D)	Expansionary monetary policy under fixed exchange rate

Q.56	In the context of Balance of Payments accounting, which of the following transactions is/are NOT recorded under the Current Account?
(A)	Merchandise trade
(B)	Unilateral transfer payments
(C)	Purchase of international financial assets
(D)	Purchase of foreign currency by the central bank
Q.57	The demand and supply functions for a commodity are given by: $D(p) = 10 - 2p \text{ and } S(p) = -2 + p$ where $D(p)$ and $S(p)$ are the quantity demanded and supplied, respectively, and p (in USD) is the unit price of the good. If the government sets a price ceiling of USD 3 per unit, then the increase in consumer surplus (in USD) is _____ (round off to two decimal places).
Q.58	A duopoly faces the inverse market demand function $p = 120 - Q$, where p is the unit price (in Rs.) of the good being sold by firms A and B, and Q is the total output. Firm A has a constant marginal cost of Rs. 20, which is exactly half of firm B's constant marginal cost. There is no fixed cost for both the firms. If there exists a Cournot-Nash equilibrium, Q is _____ (in integer).

Q.59	Consider the following short-run cost function: $C(q) = 10q^3 - 80q^2 + 300q + 50$ At the minimum average variable cost (AVC), the value of marginal cost (MC) is _____ (in integer).
Q.60	Consider the Keynesian Cross Model with a linear consumption function and a zero tax, where the government purchase is Rs. 100 and the equilibrium income is Rs. 1300. If the government purchase is increased to Rs. 125, the equilibrium income increases to Rs. 1400. Using the given information, the marginal propensity to consume is _____ (round off to two decimal places).
Q.61	Using the Ordinary Least Squares (OLS) method, a researcher estimated the relationship between initial salary (S) of MBA graduates and their cumulative grade point average ($CGPA$) as $\hat{S}_i = \hat{\beta}_0 + \hat{\beta}_1 CGPA_i \quad ; \quad i = 1, 2, \dots, 100$ where $\hat{\beta}_0 = 4543$ and $\hat{\beta}_1 = 645.08$. The standard errors of $\hat{\beta}_0$ and $\hat{\beta}_1$ are 921.79 and 70.01, respectively. The t-statistic for testing the null hypothesis $\beta_1 = 0$ is _____ (round off to two decimal places).

Q.62	Let X be a random variable with the probability density function $f(x)$ such that $f(x) = \begin{cases} \frac{1}{2\sqrt{3}} & \text{if } -\sqrt{3} < x < \sqrt{3} \\ 0 & , \quad \text{otherwise.} \end{cases}$ Then, the variance of X is _____ (in integer).
Q.63	Suppose from the estimation of a linear regression model $Y_i = \beta_0 + \beta_1 X_i + e_i$ the residual sum of squares and the total sum of squares are obtained as 44 and 80, respectively. The value of coefficient of determination is _____ (round off to two decimal places).
Q.64	A labour-augmenting production function is $Y = K^{0.33} (A L)^{0.67}$ where Y = output, K = capital, L = labour, and A = technology. Assume that the growth rate of L is 1.2 percent per annum, the growth rate of K is 3 percent per annum, and the growth rate of A is 1.5 percent per annum. Using the growth-accounting approach, the growth rate of Y in percent per annum is _____ (round off to two decimal places).

Q.65	A monopolist is facing the demand function $Q = \frac{100}{(P-1)}$, where Q is the quantity demanded and P is the price per unit of the good ($P > 1$). The average variable cost for the monopolist is $\frac{4}{\sqrt{Q}}$ and the fixed cost is 10. The profit maximizing price is _____ (in integer).

END OF QUESTION PAPER

Q. No.	Session	Question Type (QT) MCQ/MSQ/NAT	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	3	MCQ	GA	D	1
2	3	MCQ	GA	B	1
3	3	MCQ	GA	A	1
4	3	MCQ	GA	B	1
5	3	MCQ	GA	C	1
6	3	MCQ	GA	D	2
7	3	MCQ	GA	B	2
8	3	MCQ	GA	D	2
9	3	MCQ	GA	A	2
10	3	MCQ	GA	B	2
11	3	MCQ	XH-B1	A	1
12	3	MCQ	XH-B1	B	1
13	3	MCQ	XH-B1	B	1
14	3	MCQ	XH-B1	B	1
15	3	MCQ	XH-B1	A	1
16	3	MSQ	XH-B1	A, B	1
17	3	MSQ	XH-B1	B, C	1
18	3	MCQ	XH-B1	C	2
19	3	MCQ	XH-B1	B	2
20	3	MCQ	XH-B1	C	2
21	3	MCQ	XH-B1	B	2
22	3	MSQ	XH-B1	B, D	2
23	3	MSQ	XH-B1	A	2
24	3	MSQ	XH-B1	C, D	2
25	3	NAT	XH-B1	35 to 35	2
26	3	NAT	XH-B1	3 to 3	2
27	3	MCQ	XH-C1	C	1
28	3	MCQ	XH-C1	MTA	1
29	3	MCQ	XH-C1	C	1
30	3	MCQ	XH-C1	B	1
31	3	MCQ	XH-C1	B	1
32	3	MCQ	XH-C1	B	1
33	3	MCQ	XH-C1	D	1
34	3	MCQ	XH-C1	D	1
35	3	MCQ	XH-C1	C	1
36	3	MCQ	XH-C1	A	1
37	3	MCQ	XH-C1	D	1
38	3	MCQ	XH-C1	C	1
39	3	MCQ	XH-C1	C	1
40	3	MSQ	XH-C1	C,D	1
41	3	MSQ	XH-C1	A,C	1
42	3	NAT	XH-C1	10.0 to 10.0	1
43	3	NAT	XH-C1	200 to 200	1
44	3	NAT	XH-C1	15.00 to 17.00	1
45	3	MCQ	XH-C1	B	2

46	3	MCQ	XH-C1	D	2
47	3	MCQ	XH-C1	A	2
48	3	MCQ	XH-C1	A	2
49	3	MCQ	XH-C1	B	2
50	3	MCQ	XH-C1	B	2
51	3	MSQ	XH-C1	A,C	2
52	3	MSQ	XH-C1	C	2
53	3	MSQ	XH-C1	A,B,C	2
54	3	MSQ	XH-C1	A,B,C	2
55	3	MSQ	XH-C1	A,D	2
56	3	MSQ	XH-C1	C,D	2
57	3	NAT	XH-C1	0.71 to 0.79	2
58	3	NAT	XH-C1	60 to 60	2
59	3	NAT	XH-C1	140 to 140	2
60	3	NAT	XH-C1	0.71 to 0.79	2
61	3	NAT	XH-C1	9.20 to 9.24	2
62	3	NAT	XH-C1	1 to 1	2
63	3	NAT	XH-C1	0.43 to 0.47	2
64	3	NAT	XH-C1	2.70 to 2.90	2
65	3	NAT	XH-C1	26 to 26	2

MTA = Marks to ALL

General Aptitude (GA)**Q.1 – Q.5 Carry ONE mark Each**

Q.1	Rafi told Mary, “I am thinking of watching a film this weekend.” The following reports the above statement in indirect speech: Rafi told Mary that he _____ of watching a film that weekend.
(A)	thought
(B)	is thinking
(C)	am thinking
(D)	was thinking

Q.2	Permit : _____ : : Enforce : Relax (By word meaning)
(A)	Allow
(B)	Forbid
(C)	License
(D)	Reinforce

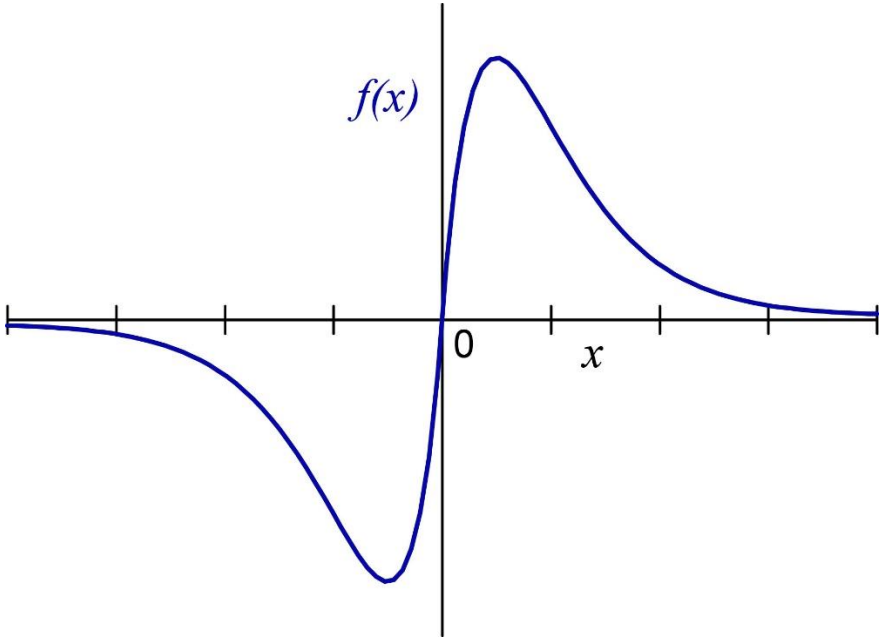
Q.3	Given a fair six-faced dice where the faces are labelled '1', '2', '3', '4', '5', and '6', what is the probability of getting a '1' on the first roll of the dice and a '4' on the second roll?
(A)	$\frac{1}{36}$
(B)	$\frac{1}{6}$
(C)	$\frac{5}{6}$
(D)	$\frac{1}{3}$

Q.4	A recent survey shows that 65% of tobacco users were advised to stop consuming tobacco. The survey also shows that 3 out of 10 tobacco users attempted to stop using tobacco. Based only on the information in the above passage, which one of the following options can be logically inferred with <i>certainty</i>?
(A)	A majority of tobacco users who were advised to stop consuming tobacco made an attempt to do so.
(B)	A majority of tobacco users who were advised to stop consuming tobacco did not attempt to do so.
(C)	Approximately 30% of tobacco users successfully stopped consuming tobacco.
(D)	Approximately 65% of tobacco users successfully stopped consuming tobacco.

Q.5	How many triangles are present in the given figure?
(A)	12
(B)	16
(C)	20
(D)	24

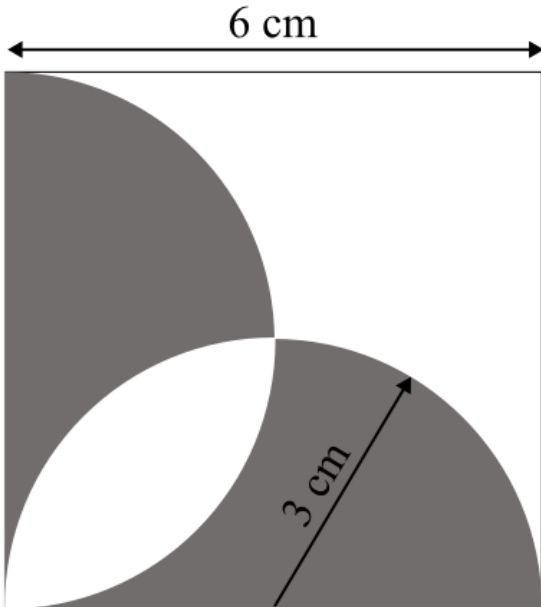
Q.6 – Q.10 Carry TWO marks Each

Q.6	Students of all the departments of a college who have successfully completed the registration process are eligible to vote in the upcoming college elections. However, by the time the due date for registration was over, it was found that suprisingly none of the students from the Department of Human Sciences had completed the registration process. Based only on the information provided above, which one of the following sets of statement(s) can be logically inferred with <i>certainty</i>? (i) All those students who would not be eligible to vote in the college elections would certainly belong to the Department of Human Sciences. (ii) None of the students from departments other than Human Sciences failed to complete the registration process within the due time. (iii) All the eligible voters would certainly be students who are not from the Department of Human Sciences.
(A)	(i) and (ii)
(B)	(i) and (iii)
(C)	only (i)
(D)	only (iii)

Q.7	Which one of the following options represents the given graph?
	
(A)	$f(x) = x^2 2^{- x }$
(B)	$f(x) = x 2^{- x }$
(C)	$f(x) = x 2^{-x}$
(D)	$f(x) = x 2^{-x}$

Q.8	Which one of the options does NOT describe the passage below or follow from it? We tend to think of cancer as a ‘modern’ illness because its metaphors are so modern. It is a disease of overproduction, of sudden growth, a growth that is unstoppable, tipped into the abyss of no control. Modern cell biology encourages us to imagine the cell as a molecular machine. Cancer is that machine unable to quench its initial command (to grow) and thus transform into an indestructible, self-propelled automaton. [Adapted from <i>The Emperor of All Maladies</i> by Siddhartha Mukherjee]
(A)	It is a reflection of why cancer seems so modern to most of us.
(B)	It tells us that modern cell biology uses and promotes metaphors of machinery.
(C)	Modern cell biology encourages metaphors of machinery, and cancer is often imagined as a machine.
(D)	Modern cell biology never uses figurative language, such as metaphors, to describe or explain anything.

Q.9	The digit in the unit's place of the product $3^{999} \times 7^{1000}$ is _____.
(A)	7
(B)	1
(C)	3
(D)	9

Q.10	A square with sides of length 6 cm is given. The boundary of the shaded region is defined by two semi-circles whose diameters are the sides of the square, as shown. The area of the shaded region is _____ cm^2.
	
(A)	6π
(B)	18
(C)	20
(D)	9π

Reasoning and Comprehension – B1

XH-B1: Q.11 – Q.17 Carry ONE mark Each

Q.11	Which word below best describes the idea of being both <i>Spineless</i> and <i>Cowardly</i> ?
(A)	Pusillanimous
(B)	Unctuous
(C)	Obsequious
(D)	Reticent
Q.12	Choose the right preposition to fill up the blank: The whole family got together ____ Diwali
(A)	of
(B)	at
(C)	in
(D)	till

Q.13	Select the correct option to fill in all the blanks to complete the passage: The (i)_____ factor amid this turbulence has been the (ii)_____ of high-octane, action-oriented films such as RRR, K.G.F: Chapter 2 and Pushpa from film industries in the south of the country. Traditionally, films made in the south have done well in their own (iii) _____. But increasingly, their dubbed versions have performed well in the Hindi heartland, with collections (iv)_____ those of their Bollywood counterparts.
(A)	(i) disheartening (ii) failure (iii) channels (iv) matching
(B)	(i) redeeming (ii) outperformance (iii) geographies (iv) eclipsing
(C)	(i) shocking (ii) underperformance (iii) cinemas (iv) below
(D)	(i) humbling (ii) bombing (iii) theatres (iv) falling behind

Q.14	The following passage consists of 6 sentences. The first and sixth sentences of the passage are at their correct positions, while the middle four sentences (represented by 2, 3, 4, and 5) are jumbled up. Choose the correct sequence of the sentences so that they form a coherent paragraph: 1. Most obviously, mobility is taken to be a geographical as well as a social phenomenon. 2. Much of the social mobility literature regarded society as a uniform surface and failed to register the geographical intersections of region, city and place, with the social categories of class, gender and ethnicity. 3. The existing sociology of migration is incidentally far too limited in its concerns to be very useful here. 4. Further, I am concerned with the flows of people within, but especially beyond, the territory of each society, and how these flows may relate to many different desires, for work, housing, leisure, religion, family relationships, criminal gain, asylum seeking and so on. 5. Moreover, not only people are mobile but so too are many ‘objects’. 6. I show that sociology’s recent development of a ‘sociology of objects’ needs to be taken further and that the diverse flows of objects across societal borders and their intersections with the multiple flows of people are hugely significant.
(A)	3, 2, 5, 4
(B)	2, 3, 4, 5
(C)	5, 4, 3, 2
(D)	4, 2, 5, 3

Q.15	The population of a country increased by 5% from 2020 to 2021. Then, the population decreased by 5% from 2021 to 2022. By what percentage did the population change from 2020 to 2022?
(A)	-0.25%
(B)	0%
(C)	2.5%
(D)	10.25%
Q.16	The words Thin: Slim: Slender are related in some way. Identify the correct option(s) that reflect(s) the same relationship:
(A)	Fat: Plump: Voluptuous
(B)	Short: Small: Petite
(C)	Tall: Taller: Tallest
(D)	Fair: Dark: Wheatish

Q.17	A pandemic like situation hit the country last year, resulting in loss of human life and economic depression. To improve the condition of its citizens, the government made a series of emergency medical interventions and increased spending to revive the economy. In both these efforts, district administration authorities were actively involved. Which of the following action(s) are plausible?
(A)	In future, the government can make district administration authorities responsible for protecting health of citizens and reviving the economy.
(B)	The government may set up a task force to review the post pandemic situation and ascertain the effectiveness of the measures taken.
(C)	The government may set up a committee to formulate a pandemic management program to minimize losses to life and economy in future.
(D)	The government may take population control measures to minimize pandemic related losses in future.

XH-B1: Q.18 – Q.26 Carry TWO marks Each

Q.18	Six students, Arif, Balwinder, Chintu, David, Emon and Fulmoni appeared in the GATE-XH exam in 2022. Balwinder scores less than Chintu in XH-B1, but more than Arif in XH-C1. David scores more than Balwinder in XH-C1, and more than Chintu in XH-B1. Emon scores less than David, but more than Fulmoni in XH-B1. Fulmoni scores more than David in XH-C1. Arif scores less than Emon, but more than Fulmoni in XH-B1. Who scores highest in XH-B1?
(A)	Fulmoni
(B)	Emon
(C)	David
(D)	Chintu
Q.19	Select the correct relation between E and F.
	$E = \frac{x}{1+x}$ and $F = \frac{-x}{1-x}$ $x > 1$
(A)	$E > F$
(B)	$E < F$
(C)	$E = F$
(D)	$E < -F$

Q.20	A code language is formulated thus: Vowels in the original word are replaced by the next vowel from the list of vowels, A-E-I-O-U (For example, E is replaced by I and U is replaced by A). Consonants in the original word are replaced by previous consonant (For example, T is replaced by S and V is replaced by T). Then how does the word, GOODMORNING appear in the coded language?
(A)	HUUFNUSPOPH
(B)	FIICLIQMEMF
(C)	FUUCLUQMOMF
(D)	HEEDATTACRH

Q.21	The stranger is by nature no "owner of soil" -- soil not only in the physical, but also in the figurative sense of a life-substance, which is fixed, if not in a point in space, at least in an ideal point of the social environment. Although in more intimate relations, he may develop all kinds of charm and significance, as long as he is considered a stranger in the eyes of the other, he is not an "owner of soil." Restriction to intermediary trade, and often (as though sublimated from it) to pure finance, gives him the specific character of mobility. If mobility takes place within a closed group, it embodies that synthesis of nearness and distance which constitutes the formal position of the stranger. For, the fundamentally mobile person comes in contact, at one time or another, with every individual, but is not organically connected, through established ties of kinship, locality, and occupation, with any single one. What assumptions can be made about the stranger from the passage above?
(A)	The stranger can become an owner of soil through developing all kinds of charm in more intimate relations.
(B)	The stranger cannot become an owner of soil either in the physical or psychological sense.
(C)	The stranger can become an owner of soil through establishing ties of kinship and so on.
(D)	The stranger might become an owner of soil in the physical sense but not in the psychological

Q.22	L is the only son of A and S. S has one sibling, B, who is married to L's aunt, K. B is the only son of D. How are L and D related? Select the possible option(s):
(A)	Grandchild and Paternal Grandfather
(B)	Grandchild and Maternal Grandfather
(C)	Grandchild and Paternal Grandmother
(D)	Grandchild and Maternal Grandmother

Q.23	Five segments of a sentence are given below. The first and fifth segments are at their correct positions, while the middle three segments (represented by 2, 3, and 4) are jumbled up. Choose the correct order of the segments so that they form a coherent sentence: 1. Consumed multitudes are jostling and shoving inside me 2. and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the center, 3. clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, 4. I must commence the business of remaking my life from the point at which it really began, 5. some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth.
(A)	2 – 3 – 4
(B)	3 – 2 – 4
(C)	4 – 2 – 3
(D)	4 – 3 – 2

Q.24	“I told you the truth,” I say yet again, “Memory’s truth, because memory has its own special kind. It selects, eliminates, alters, exaggerates, minimizes, glorifies, and vilifies also; but in the end it creates its own reality, its heterogeneous but usually coherent versions of events; and no sane human being ever trusts someone else’s version more than his own.” What are the different ways in which ‘truth’ can be understood from the passage?
(A)	Truth is what can be verified by hard empirical evidence.
(B)	Truth is based on what can be perceived by the senses.
(C)	Truth is the product of memory that is fallible, selective and slanted.
(D)	Truth is contingent on the observer and can only be partial.
Q.25	A firm needs both skilled labour and unskilled labour for the production of cloth. The wage of skilled labour is Rs. 40,000 per month, and that of unskilled labour is Rs. 15,000 per month. The total wage bill of the firm for the production of cloth is Rs. 23,75,000 in a month for 100 labour. How many skilled labour are employed by the firm (<i>in Integer</i>)?
Q.26	Select the odd word and write the option number as answer: (1) Lek (2) Zloty (3) Diner (4) Drachma (5) Real

English – C2**XH-C2: Q.27 – Q.44 Carry ONE mark Each**

Q.27	Who published the novel <i>The Bell Jar</i> under the pseudonym Victoria Lucas?
(A)	Dorothy Richardson
(B)	Virginia Woolf
(C)	Sylvia Plath
(D)	Alice Walker

Q.28	In which collection did Walt Whitman’s poem “Song of Myself” first appear?
(A)	<i>Two Rivulets</i>
(B)	<i>November Boughs</i>
(C)	<i>The Golden Bough</i>
(D)	<i>Leaves of Grass</i>

Q.29	Who wrote the introduction to Rabindranath Tagore's <i>Gitanjali</i> ?
(A)	T. S. Eliot
(B)	Ezra Pound
(C)	W. H. Auden
(D)	W. B. Yeats

Q.30	Identify the title of the poem in which the following lines appear: "He was found by the Bureau of Statistics to be One against whom there was no official complaint, And all the reports on his conduct agree That, in the modern sense of an old-fashioned word, he was a saint For in everything he did he served the greater community."
(A)	"In Memory of W. B. Yeats"
(B)	"The Unknown Citizen"
(C)	"In Praise of Limestone"
(D)	"On this Island"

Q.31	Identify the point of view used in the following passage: “You are not the kind of guy who would be at a place like this at this time of the morning. But here you are, and you cannot say that the terrain is entirely unfamiliar, though the details are fuzzy.”
(A)	Third-person point of view
(B)	The limited point of view
(C)	Second-person point of view
(D)	First-person point of view

Q.32	Which of the following is a novel by Charles Dickens?
(A)	<i>The Old Curiosity Shop</i>
(B)	<i>The Old Wives’ Tale</i>
(C)	<i>The Old Bachelor</i>
(D)	<i>One Hundred Years of Solitude</i>

Q.33	Which linguistic process can be seen in the formation of the following words? i. smog, ii. brunch, iii. motel iv. telecast
(A)	Borrowing
(B)	Compounding
(C)	Blending
(D)	Backformation

Q.34	Which writer is credited with the ‘chutneyfication’ of Indian English?
(A)	Raja Rao
(B)	Salman Rushdie
(C)	Amitav Ghosh
(D)	Arundhati Roy

Q.35	Whom would you associate the term ‘simulacra’ with?
(A)	Noam Chomsky
(B)	Jean Baudrillard
(C)	Félix Guattari
(D)	Michel Foucault

Q.36	In Plato’s idea of the Republic there is no place for the _____.
(A)	Lawyer
(B)	Magistrate
(C)	Politician
(D)	Poet

Q.37	What was Aristotle's definition of <i>hubris</i> ?
(A)	Tragic flaw in a character
(B)	A false sense of pride which eventually causes the character's downfall
(C)	An ability to imagine the future
(D)	A humble, ascetic quality

Q.38	Stephen Dedalus is a recurring character in the works of _____.
(A)	James Joyce
(B)	H. G. Wells
(C)	P. G. Wodehouse
(D)	D. H. Lawrence

Q.39	Which of the following novels opens with the sentence, “It is a truth universally acknowledged that a single man in possession of a good fortune must be in want of a wife.”?
(A)	<i>Sense and Sensibility</i>
(B)	<i>Pride and Prejudice</i>
(C)	<i>Mansfield Park</i>
(D)	<i>Emma</i>

Q.40	Which of the following novels by Chinua Achebe derives its title from W. B. Yeats’s poem “The Second Coming”?
(A)	<i>Arrow of God</i>
(B)	<i>No Longer at Ease</i>
(C)	<i>A Man of the People</i>
(D)	<i>Things Fall Apart</i>

Q.41	Identify the novels that deal with the trauma of Partition:
(A)	Shauna Singh Baldwin's <i>What the Body Remembers</i>
(B)	Amitav Ghosh's <i>The Shadow Lines</i>
(C)	Anita Desai's <i>Cry, the Peacock</i>
(D)	Kamala Markandaya's <i>Nectar in a Sieve</i>

Q.42	Which of the following writers are associated with the Theatre of the Absurd?
(A)	Harold Pinter
(B)	Edward Albee
(C)	John Osborne
(D)	Eugene O'Neill

Q.43	Identify the writers who are referred to as ‘metaphysical poets’:
(A)	John Donne
(B)	Andrew Marvell
(C)	Philip Larkin
(D)	T. S. Eliot

Q.44	What are the sources of Girish Karnad’s <i>Hayavadana</i> ?
(A)	Thomas Mann’s <i>The Transported Heads</i>
(B)	Valmiki’s <i>Ramayana</i>
(C)	Somadeva’s <i>Kathasaritsagara</i>
(D)	Franz Kafka’s <i>The Metamorphosis</i>

XH-C2: Q.45– Q.65 Carry TWO marks Each

Q.45	Which of the following terms are used by Samuel Taylor Coleridge in his theory of imagination?
(A)	Primary imagination, secondary imagination, and fancy
(B)	Negative capability, Hellenism, and impersonality
(C)	Egotistical sublime, oversoul, and pantheism
(D)	Unacknowledged legislation, atheism, and anarchy

Q.46	Which of the following is the forerunner of the autobiography?
(A)	St. Augustine's <i>Confessions</i>
(B)	James Joyce's <i>Portrait of the Artist as a Young Man</i>
(C)	William Wordsworth's <i>The Prelude</i>
(D)	Izaak Walton's <i>Lives</i>

Q.47	Which of the following poems did Robert Browning intend to write as a play?
(A)	“Men and Women”
(B)	“Dramatis Personae”
(C)	“The Inn Album”
(D)	“The Ring and the Book”

Q.48	The ‘Age of Reason’ in English literary history is popularly known as:
(A)	The Medieval Period
(B)	The Neo-classical Age
(C)	The Romantic Age
(D)	The Victorian Age

Q.49	Who first translated Jacques Derrida's work into English?
(A)	Gayatri C. Spivak
(B)	Edward Said
(C)	Harold Bloom
(D)	Paul de Man

Q.50	Identify the 'Lake Poets':
(A)	Byron, Shelley, Keats
(B)	Wordsworth, Coleridge, Byron
(C)	Byron, Southey, Wordsworth
(D)	Wordsworth, Coleridge, Southey

Q.51	Choose from the following options the type of drama that is intended by the author to be read rather than to be performed:
(A)	Kitchen Sink Drama
(B)	Closet Drama
(C)	Poetic Drama
(D)	Folk Drama

Q.52	Identify the commonality shared by the authors of <i>Mansfield Park</i> and <i>Middlemarch</i> :
(A)	Both the novels were authored by men who were sent on exile.
(B)	Both the novels were authored by political prisoners.
(C)	Both the novels were written by children who were not allowed to publish their works.
(D)	Both the novels were written by women who wrote under pseudonyms.

Q.53	Who said, “Poetry makes nothing happen”?
(A)	Marianne Moore
(B)	Ezra Pound
(C)	Wallace Stevens
(D)	W. H. Auden

Q.54	Which literary device does the following line employ? “A timorous foe, and a suspicious friend.”
(A)	Antithesis
(B)	Antistrophe
(C)	Oxymoron
(D)	Apostrophe

Q.55	Match the following excerpts with their authors: <table border="1" data-bbox="304 275 1385 940"> <tr> <td data-bbox="304 275 836 521">(P) “He rose from the table; and advancing to the master, basin and spoon in hand, said: somewhat alarmed at his own temerity: ‘Please, Sir, I want some more’.”</td><td data-bbox="836 275 1385 521">(i) Ralph Waldo Emerson</td></tr> <tr> <td data-bbox="304 521 836 663">(Q) “Studies serve for delight, for ornament, and for ability.”</td><td data-bbox="836 521 1385 663">(ii) George Orwell</td></tr> <tr> <td data-bbox="304 663 836 804">(R) “Trust thyself: every heart vibrates to that iron string.”</td><td data-bbox="836 663 1385 804">(iii) Charles Dickens</td></tr> <tr> <td data-bbox="304 804 836 940">(S) “It was a bright cold day in April, and the clocks were striking thirteen.”</td><td data-bbox="836 804 1385 940">(iv) Francis Bacon</td></tr> </table>	(P) “He rose from the table; and advancing to the master, basin and spoon in hand, said: somewhat alarmed at his own temerity: ‘Please, Sir, I want some more’.”	(i) Ralph Waldo Emerson	(Q) “Studies serve for delight, for ornament, and for ability.”	(ii) George Orwell	(R) “Trust thyself: every heart vibrates to that iron string.”	(iii) Charles Dickens	(S) “It was a bright cold day in April, and the clocks were striking thirteen.”	(iv) Francis Bacon
(P) “He rose from the table; and advancing to the master, basin and spoon in hand, said: somewhat alarmed at his own temerity: ‘Please, Sir, I want some more’.”	(i) Ralph Waldo Emerson								
(Q) “Studies serve for delight, for ornament, and for ability.”	(ii) George Orwell								
(R) “Trust thyself: every heart vibrates to that iron string.”	(iii) Charles Dickens								
(S) “It was a bright cold day in April, and the clocks were striking thirteen.”	(iv) Francis Bacon								
(A)	(P)-(iii), (Q)-(iv), (R)-(i), (S)-(ii)								
(B)	(P)-(iv), (Q)-(iii), (R)-(ii), (S)-(i)								
(C)	(P)-(iii), (Q)-(ii), (R)-(i), (S)-(iv)								
(D)	(P)-(i), (Q)-(iv), (R)-(ii), (S)-(iii)								

Q.56	The 1667 edition of <i>Paradise Lost</i> had 10 books. How many more were added to the 1674 edition?
(A)	2
(B)	4
(C)	6
(D)	12

Q.57	Read the following poem and identify the appropriate options: And search for certain thin – stemmed, bubble-eyed water bugs. See them perch on dry capillary legs weightless on the ripple skin of a stream. No, not only prophets walk on water. This bug sits on a landslide of lights and drowns eye – deep into its tiny strip of sky.
(A)	It uses free verse form.
(B)	It employs imagery.
(C)	It uses the iambic pentameter.
(D)	It juxtaposes the non-human with the human.

Q.58	Which of the following employ ‘Interior Monologue’?
(A)	Alfred Lord Tennyson’s “In Memoriam”
(B)	The final chapter of James Joyce’s <i>Ulysses</i>
(C)	T. S. Eliot’s “The Love Song of J. Alfred Prufrock”
(D)	Robert Browning’s “My Last Duchess”

Q.59	Which of the following works may be described as novels in verse?
(A)	<i>Aurora Leigh</i> by Elizabeth Barrett Browning
(B)	<i>The Golden Gate</i> by Vikram Seth
(C)	<i>Pamela</i> by Samuel Richardson
(D)	<i>Old Possum’s Book of Practical Cats</i> by T. S. Eliot

Q.60	Which of the following critics belong to the deconstructionist school?
(A)	Jacques Derrida
(B)	Paul de Man
(C)	J. Hillis Miller
(D)	Kate Soper

Q.61	Cleanth Brooks's definition of 'paradox' in poetry foregrounds the following qualities:
(A)	Wonder and irony
(B)	Contradiction and qualification
(C)	Piety and plurality
(D)	Omniscience and death of the author

Q.62	Two examples of magic realist fiction include:
(A)	<i>Midnight's Children</i>
(B)	<i>The Tin Drum</i>
(C)	<i>The English Teacher</i>
(D)	<i>Tom Jones</i>

Q.63	Ferdinand de Saussure differentiates language in terms of:
(A)	langue
(B)	metaphor
(C)	metonymy
(D)	parole

Q.64	Which of the following are considered to be typical postmodern narratives?
(A)	Italo Calvino's <i>If on a Winter's Night a Traveller</i>
(B)	John Barth's <i>Lost in the Funhouse</i>
(C)	Thomas Pynchon's <i>V.</i>
(D)	Iris Murdoch's <i>The Bell</i>

Q.65	What does a green reading of a text aim at?
(A)	Analyzing the implications of a text for environmental concerns
(B)	Deconstructing human exceptionalism
(C)	Studying connections between humans, society and the non-human world
(D)	Marginalizing differently abled people

END OF QUESTION PAPER

Q. No.	Session	Question Type (QT) MCQ/MSQ/NAT	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	3	MCQ	GA	D	1
2	3	MCQ	GA	B	1
3	3	MCQ	GA	A	1
4	3	MCQ	GA	B	1
5	3	MCQ	GA	C	1
6	3	MCQ	GA	D	2
7	3	MCQ	GA	B	2
8	3	MCQ	GA	D	2
9	3	MCQ	GA	A	2
10	3	MCQ	GA	B	2
11	3	MCQ	XH-B1	A	1
12	3	MCQ	XH-B1	B	1
13	3	MCQ	XH-B1	B	1
14	3	MCQ	XH-B1	B	1
15	3	MCQ	XH-B1	A	1
16	3	MSQ	XH-B1	A, B	1
17	3	MSQ	XH-B1	B, C	1
18	3	MCQ	XH-B1	C	2
19	3	MCQ	XH-B1	B	2
20	3	MCQ	XH-B1	C	2
21	3	MCQ	XH-B1	B	2
22	3	MSQ	XH-B1	B, D	2
23	3	MSQ	XH-B1	A	2
24	3	MSQ	XH-B1	C, D	2
25	3	NAT	XH-B1	35 to 35	2
26	3	NAT	XH-B1	3 to 3	2
27	3	MCQ	XH-C2	C	1
28	3	MCQ	XH-C2	D	1
29	3	MCQ	XH-C2	D	1
30	3	MCQ	XH-C2	B	1
31	3	MCQ	XH-C2	C	1
32	3	MCQ	XH-C2	A	1
33	3	MCQ	XH-C2	C	1
34	3	MCQ	XH-C2	B	1
35	3	MCQ	XH-C2	B	1
36	3	MCQ	XH-C2	D	1
37	3	MCQ	XH-C2	B	1
38	3	MCQ	XH-C2	A	1
39	3	MCQ	XH-C2	B	1
40	3	MCQ	XH-C2	D	1
41	3	MSQ	XH-C2	A, B	1
42	3	MSQ	XH-C2	A, B	1

43	3	MSQ	XH-C2	A, B	1
44	3	MSQ	XH-C2	A, C	1
45	3	MCQ	XH-C2	A	2
46	3	MCQ	XH-C2	A	2
47	3	MCQ	XH-C2	C	2
48	3	MCQ	XH-C2	B	2
49	3	MCQ	XH-C2	A	2
50	3	MCQ	XH-C2	D	2
51	3	MCQ	XH-C2	B	2
52	3	MCQ	XH-C2	D	2
53	3	MCQ	XH-C2	D	2
54	3	MCQ	XH-C2	A	2
55	3	MCQ	XH-C2	A	2
56	3	MSQ	XH-C2	A	2
57	3	MSQ	XH-C2	A, B, D	2
58	3	MSQ	XH-C2	B, C	2
59	3	MSQ	XH-C2	A, B	2
60	3	MSQ	XH-C2	A, B, C	2
61	3	MSQ	XH-C2	A, B	2
62	3	MSQ	XH-C2	A, B	2
63	3	MSQ	XH-C2	A, D	2
64	3	MSQ	XH-C2	A, B, C	2
65	3	MSQ	XH-C2	A, B, C	2

General Aptitude (GA)**Q.1 – Q.5 Carry ONE mark Each**

Q.1	Rafi told Mary, “I am thinking of watching a film this weekend.” The following reports the above statement in indirect speech: Rafi told Mary that he _____ of watching a film that weekend.
(A)	thought
(B)	is thinking
(C)	am thinking
(D)	was thinking

Q.2	Permit : _____ : : Enforce : Relax (By word meaning)
(A)	Allow
(B)	Forbid
(C)	License
(D)	Reinforce

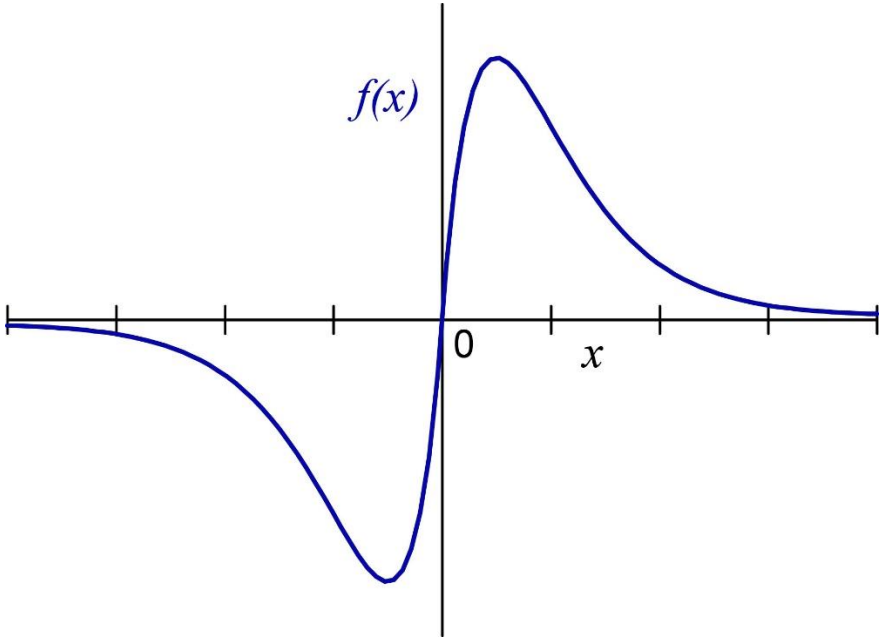
Q.3	Given a fair six-faced dice where the faces are labelled '1', '2', '3', '4', '5', and '6', what is the probability of getting a '1' on the first roll of the dice and a '4' on the second roll?
(A)	$\frac{1}{36}$
(B)	$\frac{1}{6}$
(C)	$\frac{5}{6}$
(D)	$\frac{1}{3}$

Q.4	A recent survey shows that 65% of tobacco users were advised to stop consuming tobacco. The survey also shows that 3 out of 10 tobacco users attempted to stop using tobacco. Based only on the information in the above passage, which one of the following options can be logically inferred with <i>certainty</i>?
(A)	A majority of tobacco users who were advised to stop consuming tobacco made an attempt to do so.
(B)	A majority of tobacco users who were advised to stop consuming tobacco did not attempt to do so.
(C)	Approximately 30% of tobacco users successfully stopped consuming tobacco.
(D)	Approximately 65% of tobacco users successfully stopped consuming tobacco.

Q.5	How many triangles are present in the given figure?
(A)	12
(B)	16
(C)	20
(D)	24

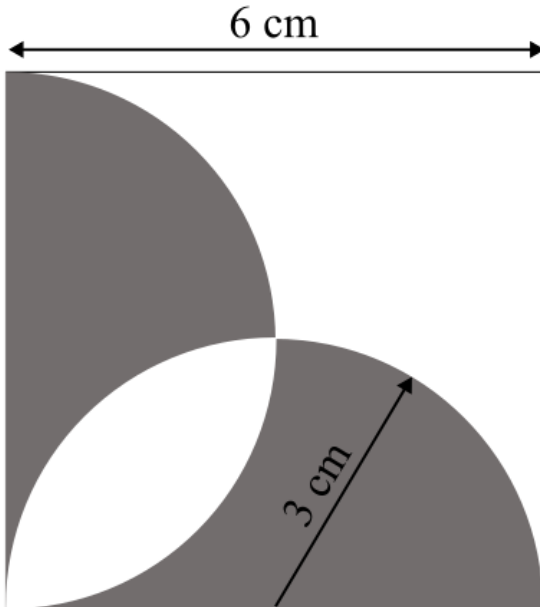
Q.6 – Q.10 Carry TWO marks Each

Q.6	Students of all the departments of a college who have successfully completed the registration process are eligible to vote in the upcoming college elections. However, by the time the due date for registration was over, it was found that suprisingly none of the students from the Department of Human Sciences had completed the registration process. Based only on the information provided above, which one of the following sets of statement(s) can be logically inferred with <i>certainty</i>? (i) All those students who would not be eligible to vote in the college elections would certainly belong to the Department of Human Sciences. (ii) None of the students from departments other than Human Sciences failed to complete the registration process within the due time. (iii) All the eligible voters would certainly be students who are not from the Department of Human Sciences.
(A)	(i) and (ii)
(B)	(i) and (iii)
(C)	only (i)
(D)	only (iii)

Q.7	Which one of the following options represents the given graph?
	
(A)	$f(x) = x^2 2^{- x }$
(B)	$f(x) = x 2^{- x }$
(C)	$f(x) = x 2^{-x}$
(D)	$f(x) = x 2^{-x}$

Q.8	Which one of the options does NOT describe the passage below or follow from it? We tend to think of cancer as a ‘modern’ illness because its metaphors are so modern. It is a disease of overproduction, of sudden growth, a growth that is unstoppable, tipped into the abyss of no control. Modern cell biology encourages us to imagine the cell as a molecular machine. Cancer is that machine unable to quench its initial command (to grow) and thus transform into an indestructible, self-propelled automaton. [Adapted from <i>The Emperor of All Maladies</i> by Siddhartha Mukherjee]
(A)	It is a reflection of why cancer seems so modern to most of us.
(B)	It tells us that modern cell biology uses and promotes metaphors of machinery.
(C)	Modern cell biology encourages metaphors of machinery, and cancer is often imagined as a machine.
(D)	Modern cell biology never uses figurative language, such as metaphors, to describe or explain anything.

Q.9	The digit in the unit's place of the product $3^{999} \times 7^{1000}$ is _____.
(A)	7
(B)	1
(C)	3
(D)	9

Q.10	A square with sides of length 6 cm is given. The boundary of the shaded region is defined by two semi-circles whose diameters are the sides of the square, as shown. The area of the shaded region is _____ cm^2.
	 The diagram shows a square with a side length of 6 cm. Two semi-circles are drawn inside the square. One semi-circle is centered on the left side of the square, and the other is centered on the bottom side. The two semi-circles overlap in the bottom-left corner. The region where the two semi-circles overlap is shaded grey. The region of the square that is not covered by either semi-circle is also shaded grey. The unshaded region is the intersection of the two semi-circles.
(A)	6π
(B)	18
(C)	20
(D)	9π

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11 – Q.17 Carry ONE mark Each

Q.11	Which word below best describes the idea of being both <i>Spineless</i> and <i>Cowardly</i> ?
(A)	Pusillanimous
(B)	Unctuous
(C)	Obsequious
(D)	Reticent
Q.12	Choose the right preposition to fill up the blank: The whole family got together ____ Diwali
(A)	of
(B)	at
(C)	in
(D)	till

Q.13	Select the correct option to fill in all the blanks to complete the passage: The (i)_____ factor amid this turbulence has been the (ii)_____ of high-octane, action-oriented films such as RRR, K.G.F: Chapter 2 and Pushpa from film industries in the south of the country. Traditionally, films made in the south have done well in their own (iii) _____. But increasingly, their dubbed versions have performed well in the Hindi heartland, with collections (iv)_____ those of their Bollywood counterparts.
(A)	(i) disheartening (ii) failure (iii) channels (iv) matching
(B)	(i) redeeming (ii) outperformance (iii) geographies (iv) eclipsing
(C)	(i) shocking (ii) underperformance (iii) cinemas (iv) below
(D)	(i) humbling (ii) bombing (iii) theatres (iv) falling behind

Q.14	The following passage consists of 6 sentences. The first and sixth sentences of the passage are at their correct positions, while the middle four sentences (represented by 2, 3, 4, and 5) are jumbled up. Choose the correct sequence of the sentences so that they form a coherent paragraph: 1. Most obviously, mobility is taken to be a geographical as well as a social phenomenon. 2. Much of the social mobility literature regarded society as a uniform surface and failed to register the geographical intersections of region, city and place, with the social categories of class, gender and ethnicity. 3. The existing sociology of migration is incidentally far too limited in its concerns to be very useful here. 4. Further, I am concerned with the flows of people within, but especially beyond, the territory of each society, and how these flows may relate to many different desires, for work, housing, leisure, religion, family relationships, criminal gain, asylum seeking and so on. 5. Moreover, not only people are mobile but so too are many ‘objects’. 6. I show that sociology’s recent development of a ‘sociology of objects’ needs to be taken further and that the diverse flows of objects across societal borders and their intersections with the multiple flows of people are hugely significant.
(A)	3, 2, 5, 4
(B)	2, 3, 4, 5
(C)	5, 4, 3, 2
(D)	4, 2, 5, 3

Q.15	The population of a country increased by 5% from 2020 to 2021. Then, the population decreased by 5% from 2021 to 2022. By what percentage did the population change from 2020 to 2022?
(A)	-0.25%
(B)	0%
(C)	2.5%
(D)	10.25%
Q.16	The words Thin: Slim: Slender are related in some way. Identify the correct option(s) that reflect(s) the same relationship:
(A)	Fat: Plump: Voluptuous
(B)	Short: Small: Petite
(C)	Tall: Taller: Tallest
(D)	Fair: Dark: Wheatish

Q.17	A pandemic like situation hit the country last year, resulting in loss of human life and economic depression. To improve the condition of its citizens, the government made a series of emergency medical interventions and increased spending to revive the economy. In both these efforts, district administration authorities were actively involved. Which of the following action(s) are plausible?
(A)	In future, the government can make district administration authorities responsible for protecting health of citizens and reviving the economy.
(B)	The government may set up a task force to review the post pandemic situation and ascertain the effectiveness of the measures taken.
(C)	The government may set up a committee to formulate a pandemic management program to minimize losses to life and economy in future.
(D)	The government may take population control measures to minimize pandemic related losses in future.

XH-B1: Q.18 – Q.26 Carry TWO marks Each

Q.18	Six students, Arif, Balwinder, Chintu, David, Emon and Fulmoni appeared in the GATE-XH exam in 2022. Balwinder scores less than Chintu in XH-B1, but more than Arif in XH-C1. David scores more than Balwinder in XH-C1, and more than Chintu in XH-B1. Emon scores less than David, but more than Fulmoni in XH-B1. Fulmoni scores more than David in XH-C1. Arif scores less than Emon, but more than Fulmoni in XH-B1. Who scores highest in XH-B1?
(A)	Fulmoni
(B)	Emon
(C)	David
(D)	Chintu
Q.19	Select the correct relation between E and F.
	$E = \frac{x}{1+x}$ and $F = \frac{-x}{1-x}$ $x > 1$
(A)	$E > F$
(B)	$E < F$
(C)	$E = F$
(D)	$E < -F$

Q.20	A code language is formulated thus: Vowels in the original word are replaced by the next vowel from the list of vowels, A-E-I-O-U (For example, E is replaced by I and U is replaced by A). Consonants in the original word are replaced by previous consonant (For example, T is replaced by S and V is replaced by T). Then how does the word, GOODMORNING appear in the coded language?
(A)	HUUFNUSPOPH
(B)	FIICLIQMEMF
(C)	FUUCLUQMOMF
(D)	HEEDATTACRH

Q.21	The stranger is by nature no "owner of soil" -- soil not only in the physical, but also in the figurative sense of a life-substance, which is fixed, if not in a point in space, at least in an ideal point of the social environment. Although in more intimate relations, he may develop all kinds of charm and significance, as long as he is considered a stranger in the eyes of the other, he is not an "owner of soil." Restriction to intermediary trade, and often (as though sublimated from it) to pure finance, gives him the specific character of mobility. If mobility takes place within a closed group, it embodies that synthesis of nearness and distance which constitutes the formal position of the stranger. For, the fundamentally mobile person comes in contact, at one time or another, with every individual, but is not organically connected, through established ties of kinship, locality, and occupation, with any single one. What assumptions can be made about the stranger from the passage above?
(A)	The stranger can become an owner of soil through developing all kinds of charm in more intimate relations.
(B)	The stranger cannot become an owner of soil either in the physical or psychological sense.
(C)	The stranger can become an owner of soil through establishing ties of kinship and so on.
(D)	The stranger might become an owner of soil in the physical sense but not in the psychological

Q.22	L is the only son of A and S. S has one sibling, B, who is married to L's aunt, K. B is the only son of D. How are L and D related? Select the possible option(s):
(A)	Grandchild and Paternal Grandfather
(B)	Grandchild and Maternal Grandfather
(C)	Grandchild and Paternal Grandmother
(D)	Grandchild and Maternal Grandmother

Q.23	Five segments of a sentence are given below. The first and fifth segments are at their correct positions, while the middle three segments (represented by 2, 3, and 4) are jumbled up. Choose the correct order of the segments so that they form a coherent sentence: 1. Consumed multitudes are jostling and shoving inside me 2. and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the center, 3. clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, 4. I must commence the business of remaking my life from the point at which it really began, 5. some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth.
(A)	2 – 3 – 4
(B)	3 – 2 – 4
(C)	4 – 2 – 3
(D)	4 – 3 – 2

Q.24	“I told you the truth,” I say yet again, “Memory’s truth, because memory has its own special kind. It selects, eliminates, alters, exaggerates, minimizes, glorifies, and vilifies also; but in the end it creates its own reality, its heterogeneous but usually coherent versions of events; and no sane human being ever trusts someone else’s version more than his own.” What are the different ways in which ‘truth’ can be understood from the passage?
(A)	Truth is what can be verified by hard empirical evidence.
(B)	Truth is based on what can be perceived by the senses.
(C)	Truth is the product of memory that is fallible, selective and slanted.
(D)	Truth is contingent on the observer and can only be partial.
Q.25	A firm needs both skilled labour and unskilled labour for the production of cloth. The wage of skilled labour is Rs. 40,000 per month, and that of unskilled labour is Rs. 15,000 per month. The total wage bill of the firm for the production of cloth is Rs. 23,75,000 in a month for 100 labour. How many skilled labour are employed by the firm (<i>in Integer</i>)?
Q.26	Select the odd word and write the option number as answer: (1) Lek (2) Zloty (3) Diner (4) Drachma (5) Real

Linguistics – C3

XH-C3: Q.27 – Q.44 Carry ONE mark Each

Q.27	In a writing system, if each unique grapheme represents a unique morpheme/word, the writing system is known as _____.
(A)	Logographic
(B)	Syllabic
(C)	Abugida
(D)	Moraic
Q.28	If an SOV language allows movement to OSV and VSO word orders, the resulting word order will be known as:
(A)	Unmarked
(B)	Marked
(C)	Ungrammatical
(D)	Default

Q.29	The phenomenon where ‘missed hotel’ is pronounced as ‘hissed motel’ is known as _____.
(A)	Agrammatism
(B)	Wernicke’s aphasia
(C)	Spoonerism
(D)	Malapropism
Q.30	When new information is introduced in a communication, such information is classified as _____.
(A)	Focus
(B)	Topic
(C)	Presupposition
(D)	Theme

Q.31	What type of morphological process is involved in the expression ‘English-vinglish’
(A)	Complete reduplication
(B)	Partial reduplication
(C)	Prefixation
(D)	Suffixation
Q.32	Which one of the following is a language isolate?
(A)	Burushashki
(B)	Mundari
(C)	Angami
(D)	Kalasha

Q.33	Which of the following Dravidian language is spoken in Pakistan?
(A)	Konda
(B)	Kuvi
(C)	Toda
(D)	Brahui
Q.34	Which word-order pair is the most common in world's languages?
(A)	SVO-SOV
(B)	SOV-VSO
(C)	VSO-VOS
(D)	SOV-VOS

Q.35	Which type of morphological process is involved in creating <u>catty</u> from <u>cat</u> ?
(A)	Inflection
(B)	Derivation
(C)	Suppletion
(D)	Reduplication
Q.36	Devanagari organizes the consonant graphemes as shown in the image. What is the parameter by which the following two rows differ?
	क ख ग घ ङ /k/ /k^h/ /g/ /g^h/ /ŋ/ प फ ब भ म /p/ /p^h/ /b/ /b^h/ /m/
(A)	Voicing
(B)	Manner of articulation
(C)	Place of articulation
(D)	Aspiration

Q.37	Which option is related to Neo-Whorfism?
(A)	Language, thought, worldview
(B)	Innateness, deep-structure, surface-structure
(C)	Language, methods, analysis
(D)	Signifier, signified, sign
Q.38	Which of the following is/are involved in the comparative method for establishing language families and genetic relationship among languages?
(A)	Reconstruction of the proto language
(B)	Assembling a list of cognates
(C)	Strictly using basic vocabulary lists
(D)	Setting up sound correspondences

Q.39	Aphasia can be caused by
(A)	Open or closed head trauma
(B)	Attention deficit
(C)	Neurodegeneration in advanced age
(D)	Lack of motivation
Q.40	In sociolinguistics, the term ‘anti-language’ refers to the language used for
(A)	Academic purposes by professional criminologists
(B)	Legal proceedings in the court of law
(C)	Communication by small non-mainstream groups
(D)	Communication between caregivers and infants

Q.41	In language policy making, which of the following steps is/are necessary for an erstwhile minority language, spoken by a sizeable population, to be introduced as a medium of instruction in schools?
(A)	Language revival
(B)	Corpus planning
(C)	Status planning
(D)	Language preservation
Q.42	Which of the following research methods involve Reaction Time?
(A)	Behavioral methods
(B)	Experimental methods
(C)	Non-behavioral methods
(D)	Qualitative methods

Q.43	If [p] and [p ^h] are allophones of the same phoneme /p/, which of the following statements is/are true?
(A)	[p] and [p ^h] are in contrastive distribution
(B)	[p] and [p ^h] are in complementary distribution
(C)	[p ^h] has more restrictive occurrence than [p]
(D)	[p] and [p ^h] can be used interchangeably
Q.44	Which of the following show(s) dissociation between cognitive disorder and language abilities?
(A)	Autism spectrum disorder
(B)	Williams syndrome
(C)	Dyslexia
(D)	Specific Language Impairment (SLI)

XH-C3: Q.45 – Q.65 Carry TWO mark Each

Q.45	Which of the following sound pairs differ from each other in exactly two articulatory parameters?
(A)	[p] vs. [b]
(B)	[t] vs. [s]
(C)	[v] vs. [θ]
(D)	[n] vs. [d]
Q.46	The cover term <u>determiner</u> refers to:
(A)	Articles, demonstratives, and possessors
(B)	Possessors, prepositions, and demonstratives
(C)	Postpositions, articles, and prepositions
(D)	Articles, prepositions, and possessors

Q.47	In ‘John seems to have left’, the subject <u>John</u> has undergone:
(A)	Subject-to-Subject lowering
(B)	Object-to-Subject raising
(C)	Subject-to-Subject raising
(D)	Object-to-Object lowering
Q.48	The comparative and superlative forms of the adjective ‘good’ are examples of:
(A)	Alternation
(B)	Syncope
(C)	Ablaut
(D)	Suppletion

[illegible]

Q.50	Match the following historical sound changes in Column X with the processes in Column Y										
	<table> <tr> <th>Column X</th><th>Column Y</th></tr> <tr> <td>P. rupa → rup</td><td>1. Grassman's law</td></tr> <tr> <td>Q. sapta → sa:ta</td><td>2. Apocope</td></tr> <tr> <td>R. b^hod^ha → bod^ha</td><td>3. Assimilation</td></tr> <tr> <td>S. sǣmkǣlǣn → sǣŋkǣlǣn</td><td>4. Compensatory lengthening</td></tr> </table>	Column X	Column Y	P. rupa → rup	1. Grassman's law	Q. sapta → sa:ta	2. Apocope	R. b ^h od ^h a → bod ^h a	3. Assimilation	S. sǣmkǣlǣn → sǣŋkǣlǣn	4. Compensatory lengthening
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P. rupa → rup	1. Grassman's law										
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S. sǣmkǣlǣn → sǣŋkǣlǣn	4. Compensatory lengthening										
(A)	P-2, Q-4, R-1, S-3										
(B)	P-4, Q-2, R-1, S-3										
(C)	P-2, Q-1, R-4, S-3										
(D)	P-2, Q-4, R-3, S-1										

Q.51	Consider the following morphological break-up of <i>pfeifing</i> produced by a simultaneous bilingual child. What phenomenon does this example indicate?
	pfeife + ing → pfeifing whistle (German) + <i>progressive</i> (English) → 'whistling'
(A)	Code-mixing arising out of social bilingualism
(B)	Code-switching based on context of the conversation
(C)	Understanding both languages as part of a single 'system'
(D)	Mixed language arising out of pedagogical preferences
Q.52	Which one of the following is compounding of compounded words?
(A)	Lighthouse tower
(B)	Skating board
(C)	Boyfriend
(D)	Walkman

Q.53	What sociolinguistic phenomenon does the following sentence exemplify?
	la the(fem.) French fam woman French micimine:w she-is-holding-it Cree li the (masc.) French pci little-one French

Q.54	Identify the labels for X and Y in the following tree.
	<pre> graph TD Y --> X Y --> able X --> re X --> use </pre>
(A)	X: Verb, Y: Adjective
(B)	X: Adjective, Y: Adjective
(C)	X: Adjective, Y: Verb
(D)	X: Verb, Y: Verb

[illegible]

Q.56	Look at the adjectives in Column X and match with the types of adjectives in Column Y. Choose the correct option.								
	<table border="1"> <thead> <tr> <th>Column X</th><th>Column Y</th></tr> </thead> <tbody> <tr> <td>P. Blue shirt</td><td>1. Subsective</td></tr> <tr> <td>Q. Fake Picasso</td><td>2. Intersective</td></tr> <tr> <td>R. Big elephant</td><td>3. Anti-intersective</td></tr> </tbody> </table>	Column X	Column Y	P. Blue shirt	1. Subsective	Q. Fake Picasso	2. Intersective	R. Big elephant	3. Anti-intersective
Column X	Column Y								
P. Blue shirt	1. Subsective								
Q. Fake Picasso	2. Intersective								
R. Big elephant	3. Anti-intersective								
(A)	P-2, Q-3, R-1								
(B)	P-2, Q-1, R-3								
(C)	P-1, Q-2, R-3								
(D)	P-1, Q-3, R-2								

Q.57	In a given constraint ranking of *COMPLEX, DEP-IO >> MAX-IO for the input /spun/, which of the following candidates is/are optimal?
(A)	[su.pun]
(B)	[pun]
(C)	[sun]
(D)	[is.pun]
Q.58	Consider the pattern of stress assignment shown below. Which of the given statements is/are true?
	* * * * * (ma . pi) (le . se) <gu>
(A)	Stress assignment is from left to right
(B)	There are/is extrametrical syllable(s)
(C)	Feet are binary
(D)	Stress system is iambic

Q.59	In word processing studies, visual word recognition is affected by:
(A)	Proficiency, word length, neighborhood effect
(B)	Frequency, age of acquisition (AoA), familiarity
(C)	McGurk effect, place and manner of articulation (PoA and MoA)
(D)	Language family, areal features, phoneme inventory size
Q.60	Identify the language(s) that belong(s) to the Balkan Sprachbund.
(A)	Romanian
(B)	Bulgarian
(C)	Norwegian
(D)	Swedish

Q.61	Consider the following tree structure, where A and C are co-referential. Similarly, E and H are co-referential. Identify the <u>incorrect</u> statement(s).
	<pre> graph TD Root["..."] --> Ai["A_i"] Root --> B["B"] B --> Ci["C_i"] B --> D["D"] D --> Ej["E_j"] D --> F["F"] F --> G["G"] F --> Hj["H_j"] </pre>
(A)	A binds C
(B)	C binds E
(C)	E binds D
(D)	A binds H

Q.62	Which of the following statements is/are true for the pair - bird : cuckoo
(A)	Cuckoo is the hyponym of bird
(B)	Bird is the hypernym of cuckoo
(C)	Cuckoo is the hypernym of bird
(D)	Bird is the hyponym of cuckoo
Q.63	In the sentences 1 through 4, in which one(s) a) entails b)?
	1. a) Rama plays a string instrument. b) Rama is a violinist. 3. a) Fido is a Dalmatian. b) Fido is a dog. 2. a) Hutolu sings. b) Hutolu is melodious. 4. a) Students don't study. b) Linguistics students do not study.
(A)	1 a) entails 1 b)
(B)	2 a) entails 2 b)
(C)	3 a) entails 3 b)
(D)	4 a) entails 4 b)

Q.64	The following figure depicts a spectrum of a vowel (dashed line), where $F_0 = 150$ Hz and $F_0 = H_1$. The harmonics are indicated from H1 to H11. From the figure, the frequency (in Hz) of the second formant (F2) of this vowel is_____.
Q.65	The number of core arguments associated with the ditransitive verb 'give' is _____.

END OF QUESTION PAPER

Q. No.	Session	Question Type (QT) MCQ/MSQ/NAT	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	3	MCQ	GA	D	1
2	3	MCQ	GA	B	1
3	3	MCQ	GA	A	1
4	3	MCQ	GA	B	1
5	3	MCQ	GA	C	1
6	3	MCQ	GA	D	2
7	3	MCQ	GA	B	2
8	3	MCQ	GA	D	2
9	3	MCQ	GA	A	2
10	3	MCQ	GA	B	2
11	3	MCQ	XH-B1	A	1
12	3	MCQ	XH-B1	B	1
13	3	MCQ	XH-B1	B	1
14	3	MCQ	XH-B1	B	1
15	3	MCQ	XH-B1	A	1
16	3	MSQ	XH-B1	A, B	1
17	3	MSQ	XH-B1	B, C	1
18	3	MCQ	XH-B1	C	2
19	3	MCQ	XH-B1	B	2
20	3	MCQ	XH-B1	C	2
21	3	MCQ	XH-B1	B	2
22	3	MSQ	XH-B1	B, D	2
23	3	MSQ	XH-B1	A	2
24	3	MSQ	XH-B1	C, D	2
25	3	NAT	XH-B1	35 to 35	2
26	3	NAT	XH-B1	3 to 3	2
27	3	MCQ	XH-C3	A	1
28	3	MCQ	XH-C3	B	1
29	3	MCQ	XH-C3	C	1
30	3	MCQ	XH-C3	A	1
31	3	MCQ	XH-C3	B	1
32	3	MCQ	XH-C3	A	1
33	3	MCQ	XH-C3	D	1
34	3	MCQ	XH-C3	A	1
35	3	MCQ	XH-C3	B	1
36	3	MCQ	XH-C3	C	1
37	3	MCQ	XH-C3	A	1
38	3	MSQ	XH-C3	A, B, D	1
39	3	MSQ	XH-C3	A, C	1
40	3	MSQ	XH-C3	C	1
41	3	MSQ	XH-C3	B, C	1
42	3	MSQ	XH-C3	A, B	1
43	3	MSQ	XH-C3	B, C	1
44	3	MSQ	XH-C3	B, C, D	1
45	3	MCQ	XH-C3	C	2

46	3	MCQ	XH-C3	A	2
47	3	MCQ	XH-C3	C	2
48	3	MCQ	XH-C3	D	2
49	3	MCQ	XH-C3	A	2
50	3	MCQ	XH-C3	A	2
51	3	MCQ	XH-C3	C	2
52	3	MCQ	XH-C3	A	2
53	3	MCQ	XH-C3	D	2
54	3	MCQ	XH-C3	A	2
55	3	MCQ	XH-C3	A	2
56	3	MCQ	XH-C3	A	2
57	3	MSQ	XH-C3	B, C	2
58	3	MSQ	XH-C3	A, B, C	2
59	3	MSQ	XH-C3	A, B	2
60	3	MSQ	XH-C3	A, B	2
61	3	MSQ	XH-C3	B, C, D	2
62	3	MSQ	XH-C3	A, B	2
63	3	MSQ	XH-C3	C, D	2
64	3	NAT	XH-C3	1350 to 1350	2
65	3	NAT	XH-C3	3 to 3	2

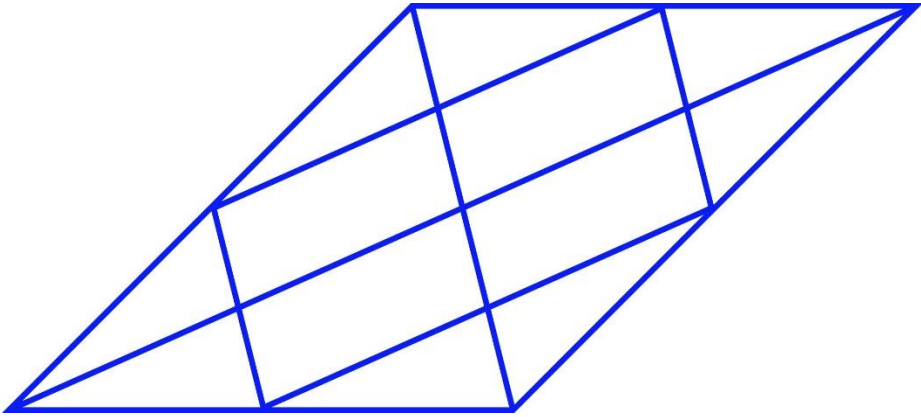
General Aptitude (GA)**Q.1 – Q.5 Carry ONE mark Each**

Q.1	Rafi told Mary, “I am thinking of watching a film this weekend.” The following reports the above statement in indirect speech: Rafi told Mary that he _____ of watching a film that weekend.
(A)	thought
(B)	is thinking
(C)	am thinking
(D)	was thinking

Q.2	Permit : _____ : : Enforce : Relax (By word meaning)
(A)	Allow
(B)	Forbid
(C)	License
(D)	Reinforce

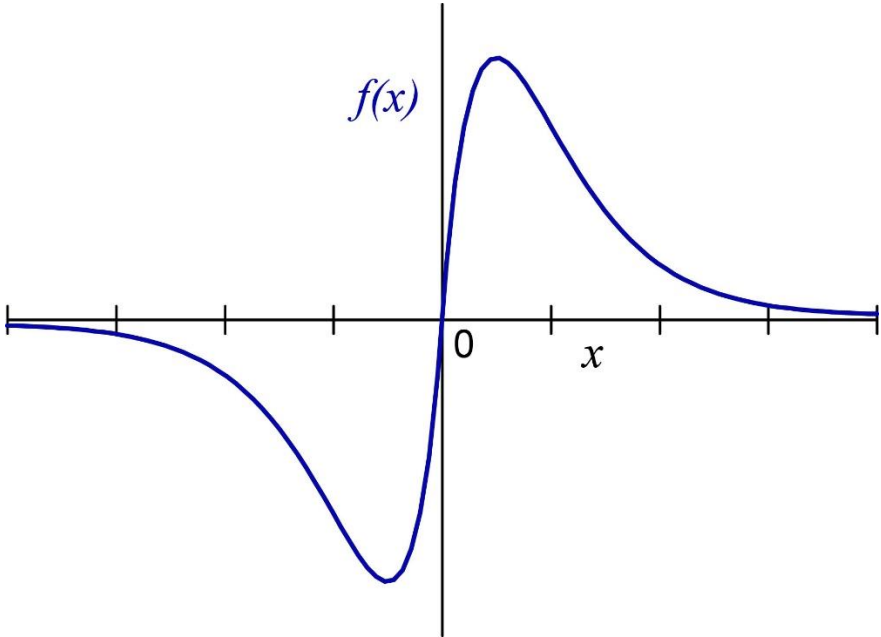
Q.3	Given a fair six-faced dice where the faces are labelled '1', '2', '3', '4', '5', and '6', what is the probability of getting a '1' on the first roll of the dice and a '4' on the second roll?
(A)	$\frac{1}{36}$
(B)	$\frac{1}{6}$
(C)	$\frac{5}{6}$
(D)	$\frac{1}{3}$

Q.4	A recent survey shows that 65% of tobacco users were advised to stop consuming tobacco. The survey also shows that 3 out of 10 tobacco users attempted to stop using tobacco. Based only on the information in the above passage, which one of the following options can be logically inferred with <i>certainty</i>?
(A)	A majority of tobacco users who were advised to stop consuming tobacco made an attempt to do so.
(B)	A majority of tobacco users who were advised to stop consuming tobacco did not attempt to do so.
(C)	Approximately 30% of tobacco users successfully stopped consuming tobacco.
(D)	Approximately 65% of tobacco users successfully stopped consuming tobacco.

Q.5	How many triangles are present in the given figure?
	
(A)	12
(B)	16
(C)	20
(D)	24

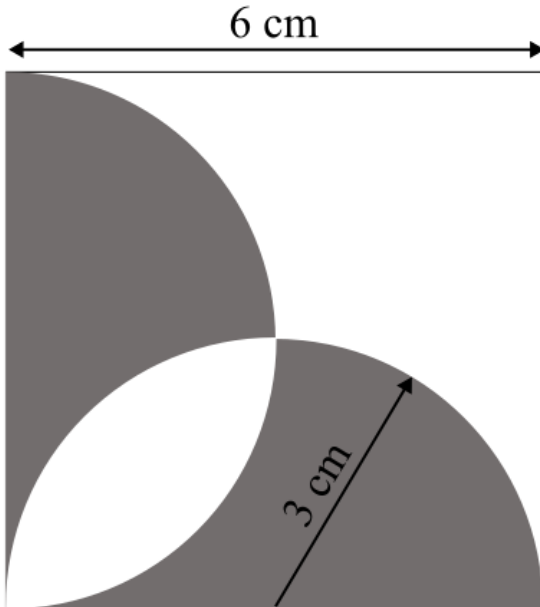
Q.6 – Q.10 Carry TWO marks Each

Q.6	Students of all the departments of a college who have successfully completed the registration process are eligible to vote in the upcoming college elections. However, by the time the due date for registration was over, it was found that suprisingly none of the students from the Department of Human Sciences had completed the registration process. Based only on the information provided above, which one of the following sets of statement(s) can be logically inferred with <i>certainty</i>? (i) All those students who would not be eligible to vote in the college elections would certainly belong to the Department of Human Sciences. (ii) None of the students from departments other than Human Sciences failed to complete the registration process within the due time. (iii) All the eligible voters would certainly be students who are not from the Department of Human Sciences.
(A)	(i) and (ii)
(B)	(i) and (iii)
(C)	only (i)
(D)	only (iii)

Q.7	Which one of the following options represents the given graph?
	
(A)	$f(x) = x^2 2^{- x }$
(B)	$f(x) = x 2^{- x }$
(C)	$f(x) = x 2^{-x}$
(D)	$f(x) = x 2^{-x}$

Q.8	Which one of the options does NOT describe the passage below or follow from it? We tend to think of cancer as a ‘modern’ illness because its metaphors are so modern. It is a disease of overproduction, of sudden growth, a growth that is unstoppable, tipped into the abyss of no control. Modern cell biology encourages us to imagine the cell as a molecular machine. Cancer is that machine unable to quench its initial command (to grow) and thus transform into an indestructible, self-propelled automaton. [Adapted from <i>The Emperor of All Maladies</i> by Siddhartha Mukherjee]
(A)	It is a reflection of why cancer seems so modern to most of us.
(B)	It tells us that modern cell biology uses and promotes metaphors of machinery.
(C)	Modern cell biology encourages metaphors of machinery, and cancer is often imagined as a machine.
(D)	Modern cell biology never uses figurative language, such as metaphors, to describe or explain anything.

Q.9	The digit in the unit's place of the product $3^{999} \times 7^{1000}$ is _____.
(A)	7
(B)	1
(C)	3
(D)	9

Q.10	A square with sides of length 6 cm is given. The boundary of the shaded region is defined by two semi-circles whose diameters are the sides of the square, as shown. The area of the shaded region is _____ cm^2.
	
(A)	6π
(B)	18
(C)	20
(D)	9π

Reasoning and Comprehension – B1**XH-B1: Q.11 – Q.17 Carry ONE mark Each**

Q.11	Which word below best describes the idea of being both <i>Spineless</i> and <i>Cowardly</i> ?
(A)	Pusillanimous
(B)	Unctuous
(C)	Obsequious
(D)	Reticent
Q.12	Choose the right preposition to fill up the blank: The whole family got together ____ Diwali
(A)	of
(B)	at
(C)	in
(D)	till

Q.13	Select the correct option to fill in all the blanks to complete the passage: The (i)_____ factor amid this turbulence has been the (ii)_____ of high-octane, action-oriented films such as RRR, K.G.F: Chapter 2 and Pushpa from film industries in the south of the country. Traditionally, films made in the south have done well in their own (iii) _____. But increasingly, their dubbed versions have performed well in the Hindi heartland, with collections (iv)_____ those of their Bollywood counterparts.
(A)	(i) disheartening (ii) failure (iii) channels (iv) matching
(B)	(i) redeeming (ii) outperformance (iii) geographies (iv) eclipsing
(C)	(i) shocking (ii) underperformance (iii) cinemas (iv) below
(D)	(i) humbling (ii) bombing (iii) theatres (iv) falling behind

Q.14	The following passage consists of 6 sentences. The first and sixth sentences of the passage are at their correct positions, while the middle four sentences (represented by 2, 3, 4, and 5) are jumbled up. Choose the correct sequence of the sentences so that they form a coherent paragraph: 1. Most obviously, mobility is taken to be a geographical as well as a social phenomenon. 2. Much of the social mobility literature regarded society as a uniform surface and failed to register the geographical intersections of region, city and place, with the social categories of class, gender and ethnicity. 3. The existing sociology of migration is incidentally far too limited in its concerns to be very useful here. 4. Further, I am concerned with the flows of people within, but especially beyond, the territory of each society, and how these flows may relate to many different desires, for work, housing, leisure, religion, family relationships, criminal gain, asylum seeking and so on. 5. Moreover, not only people are mobile but so too are many ‘objects’. 6. I show that sociology’s recent development of a ‘sociology of objects’ needs to be taken further and that the diverse flows of objects across societal borders and their intersections with the multiple flows of people are hugely significant.
(A)	3, 2, 5, 4
(B)	2, 3, 4, 5
(C)	5, 4, 3, 2
(D)	4, 2, 5, 3

Q.15	The population of a country increased by 5% from 2020 to 2021. Then, the population decreased by 5% from 2021 to 2022. By what percentage did the population change from 2020 to 2022?
(A)	-0.25%
(B)	0%
(C)	2.5%
(D)	10.25%
Q.16	The words Thin: Slim: Slender are related in some way. Identify the correct option(s) that reflect(s) the same relationship:
(A)	Fat: Plump: Voluptuous
(B)	Short: Small: Petite
(C)	Tall: Taller: Tallest
(D)	Fair: Dark: Wheatish

Q.17	A pandemic like situation hit the country last year, resulting in loss of human life and economic depression. To improve the condition of its citizens, the government made a series of emergency medical interventions and increased spending to revive the economy. In both these efforts, district administration authorities were actively involved. Which of the following action(s) are plausible?
(A)	In future, the government can make district administration authorities responsible for protecting health of citizens and reviving the economy.
(B)	The government may set up a task force to review the post pandemic situation and ascertain the effectiveness of the measures taken.
(C)	The government may set up a committee to formulate a pandemic management program to minimize losses to life and economy in future.
(D)	The government may take population control measures to minimize pandemic related losses in future.

XH-B1: Q.18 – Q.26 Carry TWO marks Each

Q.18	Six students, Arif, Balwinder, Chintu, David, Emon and Fulmoni appeared in the GATE-XH exam in 2022. Balwinder scores less than Chintu in XH-B1, but more than Arif in XH-C1. David scores more than Balwinder in XH-C1, and more than Chintu in XH-B1. Emon scores less than David, but more than Fulmoni in XH-B1. Fulmoni scores more than David in XH-C1. Arif scores less than Emon, but more than Fulmoni in XH-B1. Who scores highest in XH-B1?
(A)	Fulmoni
(B)	Emon
(C)	David
(D)	Chintu
Q.19	Select the correct relation between E and F.
	$E = \frac{x}{1+x}$ and $F = \frac{-x}{1-x}$ $x > 1$
(A)	$E > F$
(B)	$E < F$
(C)	$E = F$
(D)	$E < -F$

Q.20	A code language is formulated thus: Vowels in the original word are replaced by the next vowel from the list of vowels, A-E-I-O-U (For example, E is replaced by I and U is replaced by A). Consonants in the original word are replaced by previous consonant (For example, T is replaced by S and V is replaced by T). Then how does the word, GOODMORNING appear in the coded language?
(A)	HUUFNUSPOPH
(B)	FIICLIQMEMF
(C)	FUUCLUQMOMF
(D)	HEEDATTACRH

Q.21	The stranger is by nature no "owner of soil" -- soil not only in the physical, but also in the figurative sense of a life-substance, which is fixed, if not in a point in space, at least in an ideal point of the social environment. Although in more intimate relations, he may develop all kinds of charm and significance, as long as he is considered a stranger in the eyes of the other, he is not an "owner of soil." Restriction to intermediary trade, and often (as though sublimated from it) to pure finance, gives him the specific character of mobility. If mobility takes place within a closed group, it embodies that synthesis of nearness and distance which constitutes the formal position of the stranger. For, the fundamentally mobile person comes in contact, at one time or another, with every individual, but is not organically connected, through established ties of kinship, locality, and occupation, with any single one. What assumptions can be made about the stranger from the passage above?
(A)	The stranger can become an owner of soil through developing all kinds of charm in more intimate relations.
(B)	The stranger cannot become an owner of soil either in the physical or psychological sense.
(C)	The stranger can become an owner of soil through establishing ties of kinship and so on.
(D)	The stranger might become an owner of soil in the physical sense but not in the psychological

Q.22	L is the only son of A and S. S has one sibling, B, who is married to L's aunt, K. B is the only son of D. How are L and D related? Select the possible option(s):
(A)	Grandchild and Paternal Grandfather
(B)	Grandchild and Maternal Grandfather
(C)	Grandchild and Paternal Grandmother
(D)	Grandchild and Maternal Grandmother

Q.23	Five segments of a sentence are given below. The first and fifth segments are at their correct positions, while the middle three segments (represented by 2, 3, and 4) are jumbled up. Choose the correct order of the segments so that they form a coherent sentence: 1. Consumed multitudes are jostling and shoving inside me 2. and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the center, 3. clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, 4. I must commence the business of remaking my life from the point at which it really began, 5. some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth.
(A)	2 – 3 – 4
(B)	3 – 2 – 4
(C)	4 – 2 – 3
(D)	4 – 3 – 2

Q.24	“I told you the truth,” I say yet again, “Memory’s truth, because memory has its own special kind. It selects, eliminates, alters, exaggerates, minimizes, glorifies, and vilifies also; but in the end it creates its own reality, its heterogeneous but usually coherent versions of events; and no sane human being ever trusts someone else’s version more than his own.” What are the different ways in which ‘truth’ can be understood from the passage?
(A)	Truth is what can be verified by hard empirical evidence.
(B)	Truth is based on what can be perceived by the senses.
(C)	Truth is the product of memory that is fallible, selective and slanted.
(D)	Truth is contingent on the observer and can only be partial.
Q.25	A firm needs both skilled labour and unskilled labour for the production of cloth. The wage of skilled labour is Rs. 40,000 per month, and that of unskilled labour is Rs. 15,000 per month. The total wage bill of the firm for the production of cloth is Rs. 23,75,000 in a month for 100 labour. How many skilled labour are employed by the firm (<i>in Integer</i>)?
Q.26	Select the odd word and write the option number as answer: (1) Lek (2) Zloty (3) Diner (4) Drachma (5) Real

Philosophy – C4

XH-C4: Q.27 – Q.44 Carry ONE mark Each

Q.27	In Sāṅkhya philosophy ‘mind’ (<i>manas</i>) is an evolute of _____.
(A)	<i>Prakṛti</i>
(B)	<i>Puruṣa</i>
(C)	Three <i>guṇas</i>
(D)	<i>Puruṣa</i> and <i>Prakṛti</i>
Q. 28	Which one of the following is the manifestation of the Absolute Spirit in Hegel’s <i>Phenomenology of Spirit</i> ?
(A)	The devotion of a church congregation
(B)	The knowledge of a natural scientist
(C)	The self-transparency of a society of free individuals
(D)	The mystical insight of an enlightened sage

Q.29	The Cārvāka system accepts the following <i>puruṣārthas</i> :
(A)	<i>Artha and Kāma</i>
(B)	<i>Dharma, Kāma and Mokṣa</i>
(C)	<i>Mokṣa and Dharma</i>
(D)	<i>Artha, Kāma and Mokṣa</i>
Q.30	In <i>Taittirīya Upaniṣad</i> there is a discussion of five sheaths (<i>pañca-koṣa</i>) in which the individual self is encased. Which one of the following is the sheath (<i>koṣa</i>) of knowledge and intelligence?
(A)	<i>Vijñānamaya-koṣa</i>
(B)	<i>Prāṇamaya-koṣa</i>
(C)	<i>Manomaya-koṣa</i>
(D)	<i>Ānandamaya-koṣa</i>

Q.31	According to Swami Vivekananda, ‘Universal Religion’ would consist in recognising that there are different ways of approaching the religious object. The <i>watch-word</i> for universal religion is _____.
(A)	Tolerance
(B)	Acceptance
(C)	Submission
(D)	Adoration
Q.32	In his ‘The Concept of the Absolute and Its Alternative Forms’, K. C. Bhattacharyya says, “... consciousness is of three kinds – knowing, feeling and willing...” Which one of the following is the ‘absolute’ of ‘knowing’?
(A)	Truth
(B)	Beauty
(C)	Goodness
(D)	Bliss

Q.33	Which one of the following is NOT considered a <i>pramāṇa</i> by the Prābhākara Mīmāṃsaka?
(A)	<i>Anupalabdhi</i> (Non-apprehension)
(B)	<i>Anumāna</i> (Inference)
(C)	<i>Arthāpatti</i> (Postulation/ Presumption)
(D)	<i>Upamāna</i> (Comparison/ Analogy)
Q.34	Marx introduces the concept of ‘commodity fetishism’ in <i>Capital</i> . Which one of the following is a correct description of the concept?
(A)	The reflection of human spiritual capacities in the material product
(B)	The reflection of human needs in the material product
(C)	The reflection of the social character of human labour in the material product
(D)	The reflection of the dignity of human labour in the material product

Q.35	W. V. O. Quine famously writes in ‘Two Dogmas of Empiricism’:
(A)	No statement is immune to revision
(B)	Only analytic statements are immune to revision
(C)	Only synthetic statements are immune to revision
(D)	Only the statements of empirical sciences are immune to revision
Q.36	Comparing the thoughts of Heraclitus and Parmenides, we can say that:
(A)	Both assert that only the soul (<i>psuche</i>) truly exists
(B)	Heraclitus asserts the unity underlying the plurality of things, whereas Parmenides denies the plurality of things altogether
(C)	Heraclitus asserts the infinity of the cosmos, whereas Parmenides asserts its finitude
(D)	Heraclitus asserts the incomprehensibility of the plurality of nature, while Parmenides asserts the fundamental comprehensibility of the plurality of nature

Q.37	According to Heidegger's <i>Being and Time</i> , the ontological difference is:
(A)	The distinction between Being (<i>Sein</i>) and beings (<i>Seiende</i>)
(B)	The distinction between Being (<i>Sein</i>) and Being-there (<i>Dasein</i>)
(C)	The distinction between beings (<i>Seiende</i>) and Being-there (<i>Dasein</i>)
(D)	The difference between Being (<i>Sein</i>) and Non-Being (<i>Nichtsein</i>)
Q.38	In Plato's <i>Republic</i> , the virtue of moderation is present:
(A)	Only in the guardians
(B)	In the auxiliaries and guardians
(C)	Only in the money makers
(D)	Throughout the republic

Q.39	In Kāśmīra Śaivism, Śiva is the only reality, the one without a second. Which among the following is/are the other name[s] for Kāśmīra Śaivism?
(A)	Pratyabhijñā
(B)	Trika
(C)	Spanda
(D)	Vīra-śaivism
Q.40	In ‘Democracy’, B. R. Ambedkar lays out certain fundamental assumptions about his conception of democracy. They include:
(A)	Adult suffrage and frequent elections are no bar against the governing class reaching places of power and authority
(B)	Servile classes volunteering to elect members of the governing class as their rulers is a sign of a thriving democracy
(C)	Servile classes in some countries may need other safeguards beside adult suffrage to oust the governing class from the seat of authority
(D)	Existence of the governing class is consistent with democracy and self-government

Q.41	Read the following passage carefully and answer the question: My uniform experience has convinced me that there is no other God than Truth...That is why my devotion to Truth has drawn me into the field of politics; and I can say without the slightest hesitation, yet in all humility, that those who say that religion has nothing to do with politics do not know what religion means. Identification with everything that lives is impossible without self-purification; without self-purification the observance of the law of <i>Ahimsa</i> must remain an empty dream; God can never be realized by one who is not pure of heart. - M. K. Gandhi, <i>An Autobiography or the Story of my Experiments with Truth</i>, p. 615 Which among the following are NOT in conformity with the above passage?
(A)	God is Truth
(B)	Devotion to God, which is Truth, prompted Gandhi to enter politics
(C)	Religion and politics should be separated
(D)	Ahimsa and politics do not go hand in hand
Q.42	Soli likes either logic or biology. If Soli likes logic, then he is not a happy person. Neither Soli nor Rupinder likes biology. Which among the following can be concluded from the premises given here?
(A)	Soli is not a happy person.
(B)	Rupinder is not a happy person.
(C)	Rupinder is a happy person.
(D)	Soli likes logic.

Q.43	On the basis of Aristotle's <i>Nicomachean Ethics</i> , we can say the following about virtue:
(A)	We can know the virtue of something only if we understand the function (<i>ergon</i>) of that thing
(B)	Virtue entails deliberation
(C)	We become virtuous by simply knowing what virtue is
(D)	Virtue has the nature of a mean between two extremes in most cases
Q.44	According to Hume's <i>An Inquiry Concerning Human Understanding</i> , the following is/are the principle[s] governing the connection of ideas:
(A)	Resemblance
(B)	Contiguity in space and time
(C)	Juxtaposition
(D)	Cause and Effect

XH-C4: Q.45– Q.65 Carry TWO marks Each

Q.45	In his <i>Yogasūtra</i> , Patañjali mentions five kinds of afflictions (<i>kleśas</i>). Which one of the following is NOT among the five afflictions?
(A)	<i>Mātsarya</i> (competition/ rivalry)
(B)	<i>Avidyā</i> (false knowledge)
(C)	<i>Rāga</i> (attachment)
(D)	<i>Asmitā</i> (egoism)
Q.46	According to Jaina philosophy, all substances (<i>dravya</i>) but one have extension in space (<i>astikāya</i>). That one substance which has no extension in space (<i>anastikāya</i>) is ____.
(A)	Time (<i>kāla</i>)
(B)	Space (<i>ākāśa</i>)
(C)	Rest (<i>adharma</i>)
(D)	Motion (<i>dharma</i>)

Q.47	Husserl's fifth Cartesian Meditation is founded upon the realization that the reduction to my transcendental sphere of ownness:
(A)	Does not fundamentally cut me off from the other
(B)	Fatefully cuts me off from the other
(C)	Can never be completely achieved
(D)	Is not necessary to understand the constitution of the objective world
Q.48	According to the Nyāya system, the argument "A sparrow is a bird, since it has wings" would have an inferential defect (<i>hetvābhāsa</i>) called _____.
(A)	<i>Svarūpāsiddhi</i> (unestablished in respect of itself)
(B)	<i>Āśrayāsiddhi</i> (unestablished in respect of abode)
(C)	<i>Sādhāraṇa-anaikāntika</i> (common strayer)
(D)	<i>Asādhāraṇa-anaikāntika</i> (uncommon strayer)

Q.49	Consider the following sentence: ‘Dhavalā is a white cow.’ For the Vaiśeṣika, the meaning (<i>artha</i>) of the sentence consists of the following <i>padārthas</i> :
(A)	Action (<i>karma</i>), Substance (<i>dravya</i>) and Unique particular (<i>viśeṣa</i>) only
(B)	Substance (<i>dravya</i>), Universal (<i>sāmānya</i>) and Quality (<i>guṇa</i>) only
(C)	Substance (<i>dravya</i>), Universal (<i>sāmānya</i>), Inherence (<i>samavāya</i>) and Quality (<i>guṇa</i>) only
(D)	Action (<i>karma</i>), Substance (<i>dravya</i>), Unique particular (<i>viśeṣa</i>) and Absence (<i>abhāva</i>) only
Q.50	According to the theory advocated by G. Frege in his ‘On Sense and Reference’, the expression ‘the largest prime number’ would have _____.
(A)	Both a sense and a reference
(B)	Only sense, and no reference
(C)	Only reference, and no sense
(D)	Neither sense, nor reference

Q.51	In the <i>Phaedo</i> , Plato's Socrates develops a novel way of understanding the beauty of things. He tells us:
(A)	The beauty of things is caused by nothing other than a combination of the colour, the shape and the size of a thing
(B)	The beauty of things is simply the effect of that thing on the eyes of the observer
(C)	If things are beautiful then it is due to the presence (<i>parousia</i>) of the beautiful in itself
(D)	The beauty of things is simply an illusion; only the beautiful exists in itself by itself (<i>auto kath' auto</i>)
Q.52	Descartes postulates the evil genius in his <i>Meditations</i> to deny the certainty of which statements? I. There is a table lamp to the left of the desk at which I am sitting. II. The sum of the angles of a triangle is 180 degrees. III. Sodium has only one electron in its outermost shell. IV. Plants absorb nourishment from the soil by means of their roots. V. I wish you were here. VI. I can see my friend in the 10th floor window of that building from where I stand on the road here below. VII. I am thinking of my dear mother. VIII. $2+2=4$.
(A)	IV, III and V
(B)	I, II and III
(C)	V and VI
(D)	II and VIII

Q.53	Which of the following statement[s] is/are NOT true in relation to Kant's concept of the will?
(A)	Every will, even the divine will is subject to imperatives
(B)	Only the human will is subject to imperatives
(C)	The human will is subject to the hypothetical imperative, whereas the divine will is subject to the categorical imperative
(D)	The human will is subject to the categorical imperative which comes from God
Q.54	We see a bronze statue of Poseidon in the National Archaeological Museum of Athens. Which of the following would be [a] cause[s] of the statue for Aristotle if we read his <i>Physics</i> ?
(A)	Bronze
(B)	The sculptor who produced it
(C)	The plan to have a bronze statue of Poseidon installed in a temple
(D)	The space in the temple in which the statue is installed

Q.55	In the Buddhist theory of elements (<i>dharmas</i>), <i>dharmas</i> are the ultimate momentary elements of existence. The number of elements varies in different schools of Buddhism. Of the following alternatives, which pair[s] does/do NOT give us the respective number of <i>dharmas</i> accepted in Sautrāntika and Sarvāstivāda (Vaibhāṣika) schools?
(A)	75 and 43
(B)	43 and 75
(C)	43 and 0
(D)	0 and 43
Q.56	According to the Advaita of Śaṅkara, the individual self (<i>jīva</i>) is:
(A)	Not ontologically different from Brahman
(B)	Empirically different from Brahman due to the limiting adjuncts of body, mind, senses etc.
(C)	Ontologically real and one with Brahman
(D)	A part of Brahman

Q.57	Mohammad Iqbal's views on the nature of 'intuition' would state:
(A)	Intuition is immediate knowledge of the Reality (God)
(B)	Intuitive experience is not only subjective but also objective
(C)	Intuition is a property of the heart
(D)	Intuition is the property of the mind and the intellect
Q.58	Sandra Harding's Standpoint Epistemology involves:
(A)	Adopting a feminist empiricist point of view that critiques the masculine underpinnings of western sciences
(B)	Recognizing that science is value free
(C)	Negating the value of objectivity in scientific research
(D)	Grounding distinctive feminist science in strongly objective accounts of the world

Q.59	In J. S. Mill's articulation of utilitarianism which of the following statements about justice are valid?
(A)	Standards of justice stand higher in the scale of social utility
(B)	The just and the expedient are divided by an imaginary distinction
(C)	Social duty can become so important as to overrule any one of general maxims of justice
(D)	Utilitarianism prioritises expediency over justice
Q.60	According to Russell's 'On Denoting', the proposition, 'The prime number between 7 and 11 is NOT larger than 12' would be true, if _____.
(A)	The proposition, 'The prime number between 7 and 11 is larger than 12' is false
(B)	The expression 'the prime number between 7 and 11' has a <i>primary</i> occurrence in the proposition
(C)	The expression 'the prime number between 7 and 11' has a <i>secondary</i> occurrence in the proposition
(D)	There were only one prime number between 7 and 11

Q.61	(i) $p \supset (q \cdot r)$ (ii) $\sim(p \supset s)$ Taking (i) and (ii) as premises, which of the following can be deduced?
(A)	q
(B)	r
(C)	s
(D)	$\sim p$
Q.62	$\sim q$ can be deduced from $\sim(p \supset (q \vee r))$ by using rules of propositional logic in the following sequence[s]:
(A)	Material Implication> De Morgan's Theorem> Commutation> Simplification> De Morgan's Theorem> Simplification
(B)	Conjunction> Addition> Modus Ponens> De Morgan's Theorem
(C)	Transposition> Material Implication> Double Negation> De Morgan's Theorem> Simplification> De Morgan's Theorem> Simplification
(D)	Modus Tollens> Conjunction> Hypothetical Syllogism> Simplification

Q.63	Read the passage below from Wittgenstein’s <i>Philosophical Investigations</i> carefully and answer the question. I can think of no better expression to characterize these similarities than “family resemblances”; for the various resemblances between members of a family – build, features, colour of eyes, gait, temperament, and so on and so forth – overlap and crisscross in the same way. – And I shall say: ‘games’ form a family. And likewise the kinds of number, for example, form a family. Why do we call something a “number”? Well, perhaps because it has a – direct – affinity with several things that have hitherto been called “number”; and this can be said to give it an indirect affinity with other things that we also call “numbers.” And we extend our concept of number, as in spinning a thread we twist fibre on fibre. And the strength of the thread resides not in the fact that some one fibre runs through its whole length but in the overlapping of many fibres. But if someone wanted to say, “So there is something common to all these constructions – namely, the disjunction of all their common properties” – I’d reply: Now you are only playing with a word. One might as well say, “There is a Something that runs through the whole thread – namely, the continuous overlapping of these “fibres.” - Ludwig Wittgenstein, <i>Philosophical Investigations</i>, Investigation No. 67 Which of the following statement[s] does Wittgenstein imply in the above passage?
(A)	The one fibre supposed to run through the length of the thread corresponds to what is supposed to be common to all numbers
(B)	The overlapping of the fibres corresponds to the family resemblance Wittgenstein is trying to explicate
(C)	It is absurd to insist that there is one thing common to all the members of the family
(D)	To describe a family resemblance is another way to describe the common property shared by all the family members

Q.64	In Kant's <i>Critique of Pure Reason</i> , the equation $7 + 5 = 12$ is synthetic <i>a priori</i> and not simply analytic for the following reason[s].
(A)	A simple analysis of the concept of 5, the concept of 7 and the concept of addition does not give us the sum 12
(B)	With 7 as the starting point, we require an intuition such as 5 fingers or 5 marks on a page to reach upto 12
(C)	If $7 + 5 = 12$ were an analytic proposition it would not need any intuition to know it
(D)	We arrive at the knowledge of $7 + 5 = 12$ by imitating others adding 7 and 5
Q.65	According to Sartre's <i>Being and Nothingness</i> , which of following statement[s] is/are true?
(A)	Bad faith is human beings' denial of their own freedom
(B)	To assert the existence of nothingness is to deny the existence of human freedom
(C)	To assert the existence of nothingness is to assert the existence of human freedom
(D)	Being and nothingness self-evidently exclude each other

END OF QUESTION PAPER

Q. No.	Session	Question Type (QT) MCQ/MSQ/NAT	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	3	MCQ	GA	D	1
2	3	MCQ	GA	B	1
3	3	MCQ	GA	A	1
4	3	MCQ	GA	B	1
5	3	MCQ	GA	C	1
6	3	MCQ	GA	D	2
7	3	MCQ	GA	B	2
8	3	MCQ	GA	D	2
9	3	MCQ	GA	A	2
10	3	MCQ	GA	B	2
11	3	MCQ	XH-B1	A	1
12	3	MCQ	XH-B1	B	1
13	3	MCQ	XH-B1	B	1
14	3	MCQ	XH-B1	B	1
15	3	MCQ	XH-B1	A	1
16	3	MSQ	XH-B1	A, B	1
17	3	MSQ	XH-B1	B, C	1
18	3	MCQ	XH-B1	C	2
19	3	MCQ	XH-B1	B	2
20	3	MCQ	XH-B1	C	2
21	3	MCQ	XH-B1	B	2
22	3	MSQ	XH-B1	B, D	2
23	3	MSQ	XH-B1	A	2
24	3	MSQ	XH-B1	C, D	2
25	3	NAT	XH-B1	35 to 35	2
26	3	NAT	XH-B1	3 to 3	2
27	3	MCQ	XH-C4	A	1
28	3	MCQ	XH-C4	C	1
29	3	MCQ	XH-C4	A	1
30	3	MCQ	XH-C4	A	1
31	3	MCQ	XH-C4	B	1
32	3	MCQ	XH-C4	A	1
33	3	MCQ	XH-C4	A	1
34	3	MCQ	XH-C4	C	1
35	3	MCQ	XH-C4	A	1
36	3	MCQ	XH-C4	B	1
37	3	MCQ	XH-C4	A	1
38	3	MCQ	XH-C4	D	1
39	3	MSQ	XH-C4	A, B, C	1
40	3	MSQ	XH-C4	A, C	1
41	3	MSQ	XH-C4	C, D	1
42	3	MSQ	XH-C4	A, D	1
43	3	MSQ	XH-C4	A, B, D	1
44	3	MSQ	XH-C4	A, B, D	1
45	3	MCQ	XH-C4	A	2

46	3	MCQ	XH-C4	A	2
47	3	MCQ	XH-C4	A	2
48	3	MCQ	XH-C4	C	2
49	3	MCQ	XH-C4	C	2
50	3	MCQ	XH-C4	B	2
51	3	MCQ	XH-C4	C	2
52	3	MSQ	XH-C4	D	2
53	3	MSQ	XH-C4	A, C, D	2
54	3	MSQ	XH-C4	A, B, C	2
55	3	MSQ	XH-C4	A, C, D	2
56	3	MSQ	XH-C4	A, B, C	2
57	3	MSQ	XH-C4	A, B, C	2
58	3	MSQ	XH-C4	D	2
59	3	MSQ	XH-C4	A, C	2
60	3	MSQ	XH-C4	C, D	2
61	3	MSQ	XH-C4	A, B	2
62	3	MSQ	XH-C4	A, C	2
63	3	MSQ	XH-C4	A, B, C	2
64	3	MSQ	XH-C4	A, B, C	2
65	3	MSQ	XH-C4	A, C	2

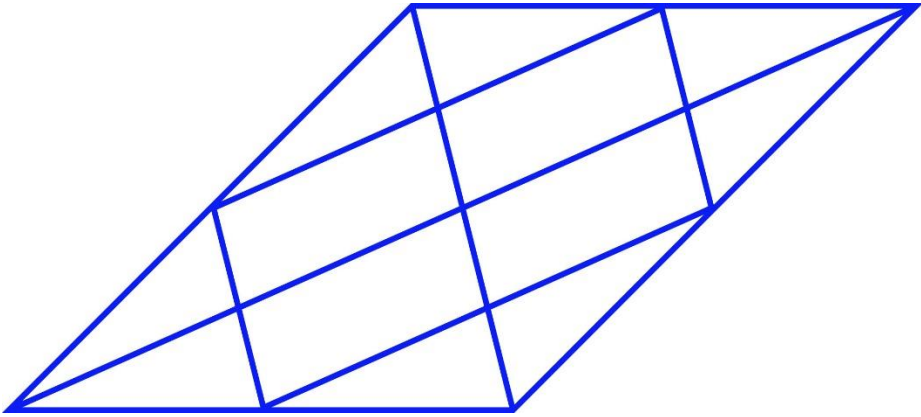
General Aptitude (GA)**Q.1 – Q.5 Carry ONE mark Each**

Q.1	Rafi told Mary, “I am thinking of watching a film this weekend.” The following reports the above statement in indirect speech: Rafi told Mary that he _____ of watching a film that weekend.
(A)	thought
(B)	is thinking
(C)	am thinking
(D)	was thinking

Q.2	Permit : _____ : : Enforce : Relax (By word meaning)
(A)	Allow
(B)	Forbid
(C)	License
(D)	Reinforce

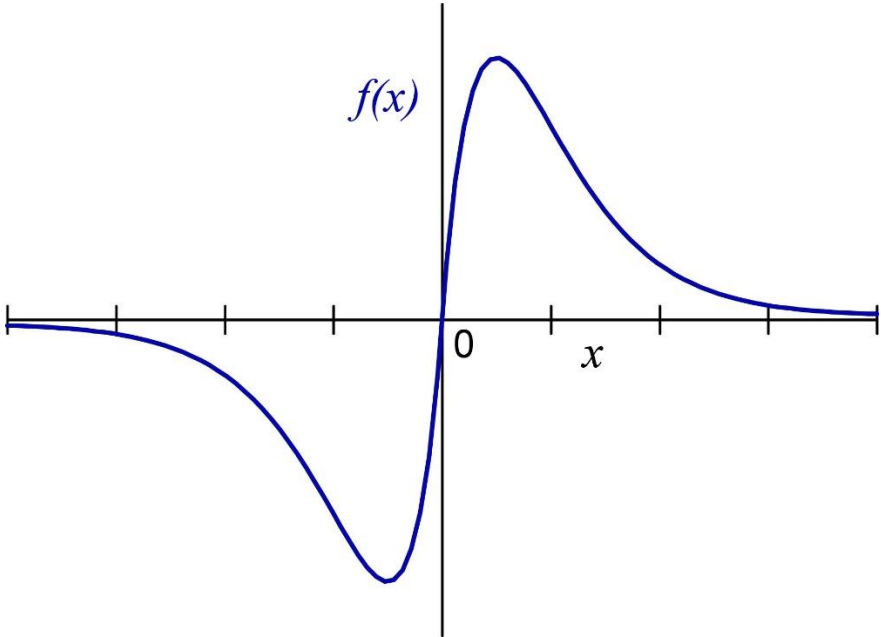
Q.3	Given a fair six-faced dice where the faces are labelled '1', '2', '3', '4', '5', and '6', what is the probability of getting a '1' on the first roll of the dice and a '4' on the second roll?
(A)	$\frac{1}{36}$
(B)	$\frac{1}{6}$
(C)	$\frac{5}{6}$
(D)	$\frac{1}{3}$

Q.4	A recent survey shows that 65% of tobacco users were advised to stop consuming tobacco. The survey also shows that 3 out of 10 tobacco users attempted to stop using tobacco. Based only on the information in the above passage, which one of the following options can be logically inferred with <i>certainty</i>?
(A)	A majority of tobacco users who were advised to stop consuming tobacco made an attempt to do so.
(B)	A majority of tobacco users who were advised to stop consuming tobacco did not attempt to do so.
(C)	Approximately 30% of tobacco users successfully stopped consuming tobacco.
(D)	Approximately 65% of tobacco users successfully stopped consuming tobacco.

Q.5	How many triangles are present in the given figure?
	
(A)	12
(B)	16
(C)	20
(D)	24

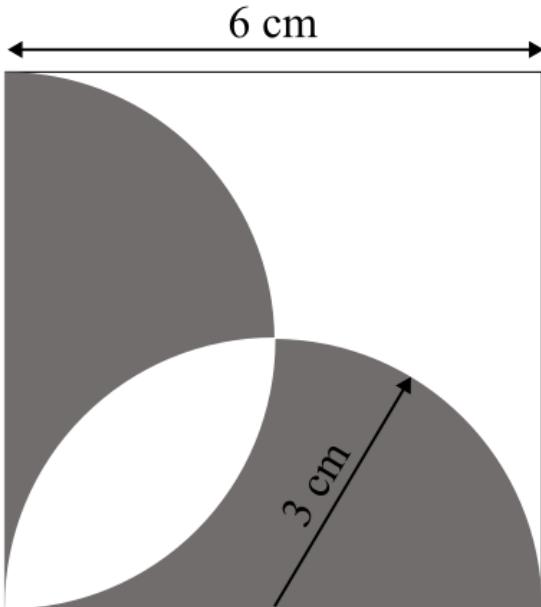
Q.6 – Q.10 Carry TWO marks Each

Q.6	Students of all the departments of a college who have successfully completed the registration process are eligible to vote in the upcoming college elections. However, by the time the due date for registration was over, it was found that suprisingly none of the students from the Department of Human Sciences had completed the registration process. Based only on the information provided above, which one of the following sets of statement(s) can be logically inferred with <i>certainty</i>? (i) All those students who would not be eligible to vote in the college elections would certainly belong to the Department of Human Sciences. (ii) None of the students from departments other than Human Sciences failed to complete the registration process within the due time. (iii) All the eligible voters would certainly be students who are not from the Department of Human Sciences.
(A)	(i) and (ii)
(B)	(i) and (iii)
(C)	only (i)
(D)	only (iii)

Q.7	Which one of the following options represents the given graph?
	
(A)	$f(x) = x^2 2^{- x }$
(B)	$f(x) = x 2^{- x }$
(C)	$f(x) = x 2^{-x}$
(D)	$f(x) = x 2^{-x}$

Q.8	Which one of the options does NOT describe the passage below or follow from it? We tend to think of cancer as a ‘modern’ illness because its metaphors are so modern. It is a disease of overproduction, of sudden growth, a growth that is unstoppable, tipped into the abyss of no control. Modern cell biology encourages us to imagine the cell as a molecular machine. Cancer is that machine unable to quench its initial command (to grow) and thus transform into an indestructible, self-propelled automaton. [Adapted from <i>The Emperor of All Maladies</i> by Siddhartha Mukherjee]
(A)	It is a reflection of why cancer seems so modern to most of us.
(B)	It tells us that modern cell biology uses and promotes metaphors of machinery.
(C)	Modern cell biology encourages metaphors of machinery, and cancer is often imagined as a machine.
(D)	Modern cell biology never uses figurative language, such as metaphors, to describe or explain anything.

Q.9	The digit in the unit's place of the product $3^{999} \times 7^{1000}$ is _____.
(A)	7
(B)	1
(C)	3
(D)	9

Q.10	A square with sides of length 6 cm is given. The boundary of the shaded region is defined by two semi-circles whose diameters are the sides of the square, as shown. The area of the shaded region is _____ cm^2.
	
(A)	6π
(B)	18
(C)	20
(D)	9π

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11 – Q.17 Carry ONE mark Each

Q.11	Which word below best describes the idea of being both <i>Spineless</i> and <i>Cowardly</i> ?
(A)	Pusillanimous
(B)	Unctuous
(C)	Obsequious
(D)	Reticent
Q.12	Choose the right preposition to fill up the blank: The whole family got together ____ Diwali
(A)	of
(B)	at
(C)	in
(D)	till

Q.13	Select the correct option to fill in all the blanks to complete the passage: The (i)_____ factor amid this turbulence has been the (ii)_____ of high-octane, action-oriented films such as RRR, K.G.F: Chapter 2 and Pushpa from film industries in the south of the country. Traditionally, films made in the south have done well in their own (iii) _____. But increasingly, their dubbed versions have performed well in the Hindi heartland, with collections (iv)_____ those of their Bollywood counterparts.
(A)	(i) disheartening (ii) failure (iii) channels (iv) matching
(B)	(i) redeeming (ii) outperformance (iii) geographies (iv) eclipsing
(C)	(i) shocking (ii) underperformance (iii) cinemas (iv) below
(D)	(i) humbling (ii) bombing (iii) theatres (iv) falling behind

Q.14	The following passage consists of 6 sentences. The first and sixth sentences of the passage are at their correct positions, while the middle four sentences (represented by 2, 3, 4, and 5) are jumbled up. Choose the correct sequence of the sentences so that they form a coherent paragraph: 1. Most obviously, mobility is taken to be a geographical as well as a social phenomenon. 2. Much of the social mobility literature regarded society as a uniform surface and failed to register the geographical intersections of region, city and place, with the social categories of class, gender and ethnicity. 3. The existing sociology of migration is incidentally far too limited in its concerns to be very useful here. 4. Further, I am concerned with the flows of people within, but especially beyond, the territory of each society, and how these flows may relate to many different desires, for work, housing, leisure, religion, family relationships, criminal gain, asylum seeking and so on. 5. Moreover, not only people are mobile but so too are many ‘objects’. 6. I show that sociology’s recent development of a ‘sociology of objects’ needs to be taken further and that the diverse flows of objects across societal borders and their intersections with the multiple flows of people are hugely significant.
(A)	3, 2, 5, 4
(B)	2, 3, 4, 5
(C)	5, 4, 3, 2
(D)	4, 2, 5, 3

Q.15	The population of a country increased by 5% from 2020 to 2021. Then, the population decreased by 5% from 2021 to 2022. By what percentage did the population change from 2020 to 2022?
(A)	-0.25%
(B)	0%
(C)	2.5%
(D)	10.25%
Q.16	The words Thin: Slim: Slender are related in some way. Identify the correct option(s) that reflect(s) the same relationship:
(A)	Fat: Plump: Voluptuous
(B)	Short: Small: Petite
(C)	Tall: Taller: Tallest
(D)	Fair: Dark: Wheatish

Q.17	A pandemic like situation hit the country last year, resulting in loss of human life and economic depression. To improve the condition of its citizens, the government made a series of emergency medical interventions and increased spending to revive the economy. In both these efforts, district administration authorities were actively involved. Which of the following action(s) are plausible?
(A)	In future, the government can make district administration authorities responsible for protecting health of citizens and reviving the economy.
(B)	The government may set up a task force to review the post pandemic situation and ascertain the effectiveness of the measures taken.
(C)	The government may set up a committee to formulate a pandemic management program to minimize losses to life and economy in future.
(D)	The government may take population control measures to minimize pandemic related losses in future.

XH-B1: Q.18 – Q.26 Carry TWO marks Each

Q.18	Six students, Arif, Balwinder, Chintu, David, Emon and Fulmoni appeared in the GATE-XH exam in 2022. Balwinder scores less than Chintu in XH-B1, but more than Arif in XH-C1. David scores more than Balwinder in XH-C1, and more than Chintu in XH-B1. Emon scores less than David, but more than Fulmoni in XH-B1. Fulmoni scores more than David in XH-C1. Arif scores less than Emon, but more than Fulmoni in XH-B1. Who scores highest in XH-B1?
(A)	Fulmoni
(B)	Emon
(C)	David
(D)	Chintu
Q.19	Select the correct relation between E and F.
	$E = \frac{x}{1+x}$ and $F = \frac{-x}{1-x}$ $x > 1$
(A)	$E > F$
(B)	$E < F$
(C)	$E = F$
(D)	$E < -F$

Q.20	A code language is formulated thus: Vowels in the original word are replaced by the next vowel from the list of vowels, A-E-I-O-U (For example, E is replaced by I and U is replaced by A). Consonants in the original word are replaced by previous consonant (For example, T is replaced by S and V is replaced by T). Then how does the word, GOODMORNING appear in the coded language?
(A)	HUUFNUSPOPH
(B)	FIICLIQMEMF
(C)	FUUCLUQMOMF
(D)	HEEDATTACRH

Q.21	The stranger is by nature no "owner of soil" -- soil not only in the physical, but also in the figurative sense of a life-substance, which is fixed, if not in a point in space, at least in an ideal point of the social environment. Although in more intimate relations, he may develop all kinds of charm and significance, as long as he is considered a stranger in the eyes of the other, he is not an "owner of soil." Restriction to intermediary trade, and often (as though sublimated from it) to pure finance, gives him the specific character of mobility. If mobility takes place within a closed group, it embodies that synthesis of nearness and distance which constitutes the formal position of the stranger. For, the fundamentally mobile person comes in contact, at one time or another, with every individual, but is not organically connected, through established ties of kinship, locality, and occupation, with any single one. What assumptions can be made about the stranger from the passage above?
(A)	The stranger can become an owner of soil through developing all kinds of charm in more intimate relations.
(B)	The stranger cannot become an owner of soil either in the physical or psychological sense.
(C)	The stranger can become an owner of soil through establishing ties of kinship and so on.
(D)	The stranger might become an owner of soil in the physical sense but not in the psychological

Q.22	L is the only son of A and S. S has one sibling, B, who is married to L's aunt, K. B is the only son of D. How are L and D related? Select the possible option(s):
(A)	Grandchild and Paternal Grandfather
(B)	Grandchild and Maternal Grandfather
(C)	Grandchild and Paternal Grandmother
(D)	Grandchild and Maternal Grandmother

Q.23	Five segments of a sentence are given below. The first and fifth segments are at their correct positions, while the middle three segments (represented by 2, 3, and 4) are jumbled up. Choose the correct order of the segments so that they form a coherent sentence: 1. Consumed multitudes are jostling and shoving inside me 2. and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the center, 3. clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, 4. I must commence the business of remaking my life from the point at which it really began, 5. some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth.
(A)	2 – 3 – 4
(B)	3 – 2 – 4
(C)	4 – 2 – 3
(D)	4 – 3 – 2

Q.24	“I told you the truth,” I say yet again, “Memory’s truth, because memory has its own special kind. It selects, eliminates, alters, exaggerates, minimizes, glorifies, and vilifies also; but in the end it creates its own reality, its heterogeneous but usually coherent versions of events; and no sane human being ever trusts someone else’s version more than his own.” What are the different ways in which ‘truth’ can be understood from the passage?
(A)	Truth is what can be verified by hard empirical evidence.
(B)	Truth is based on what can be perceived by the senses.
(C)	Truth is the product of memory that is fallible, selective and slanted.
(D)	Truth is contingent on the observer and can only be partial.
Q.25	A firm needs both skilled labour and unskilled labour for the production of cloth. The wage of skilled labour is Rs. 40,000 per month, and that of unskilled labour is Rs. 15,000 per month. The total wage bill of the firm for the production of cloth is Rs. 23,75,000 in a month for 100 labour. How many skilled labour are employed by the firm (<i>in Integer</i>)?
Q.26	Select the odd word and write the option number as answer: (1) Lek (2) Zloty (3) Diner (4) Drachma (5) Real

Psychology – C5

XH-C5: Q.27 – Q.44 Carry ONE mark Each

Q.27	Blind spot in the retina contains_____.
(A)	only rod cells
(B)	only cone cells
(C)	both rod and cone cells
(D)	neither rod nor cone cells
Q.28	Taking painkillers eliminates pain, increasing the likelihood that the person will take painkillers again. This is an example of_____.
(A)	negative punishment
(B)	positive reinforcement
(C)	negative reinforcement
(D)	positive punishment

Q.29	When learning something new impairs the ability to retrieve information learnt earlier, it is known as _____.
(A)	retroactive interference
(B)	proactive interference
(C)	tip-of-the-tongue phenomenon
(D)	recency effect
Q.30	Iconic memory is a type of _____.
(A)	short term memory
(B)	sensory memory
(C)	semantic memory
(D)	working memory

Q.31	Which one of the following components of language has to do with the practical or social aspects of communication with others?
(A)	Phonemes
(B)	Morphemes
(C)	Pragmatics
(D)	Syntax
Q.32	The Yerkes-Dodson law states that_____.
(A)	performance is affected by the level of arousal
(B)	frustration leads to aggression
(C)	self-concept helps us organize and remember information
(D)	changes in behaviour are a result of experiences that have happened frequently or recently

Q.33	Transduction of mechanical energy into nerve impulses in the auditory system takes place in response to bending of the_____.
(A)	pinna
(B)	hair cells
(C)	incus
(D)	malleus
Q.34	Which one of the following theories states that emotion occurs as a result of physical arousal and labeling of the arousal based on cues from the surrounding environment?
(A)	Ekman-Friesen theory
(B)	Schachter-Singer theory
(C)	James-Lange theory
(D)	Cannon-Bard theory

Q.35	Which one of the following is TRUE for the Pain-Gate control theory?
(A)	Gate is a physical structure
(B)	Activity of gate cannot be closed by non-pain signals
(C)	Substance P released into spinal cord does not activate other neurons that send messages through spinal gates
(D)	Pain signals must pass through a gate located in the spinal cord
Q.36	Being treated with warmth and consideration by others only when one behaves as expected, is called as_____.
(A)	openness to experience
(B)	conditional positive regard
(C)	unconditional positive regard
(D)	zone of proximal development

Q.37	Which of the following is/are NOT the factor(s) of the Big Five Personality model?
(A)	Conscientiousness
(B)	Optimism
(C)	Humility
(D)	Extraversion
Q.38	Which of the following is/are TRUE for creative individuals?
(A)	They are not very good at mental imagery
(B)	They are not afraid to be different
(C)	They do not value their independence
(D)	They are unconventional in their work

Q.39	Which of the following is/are included under behavioural genetics studies in humans?
(A)	Selective breeding studies
(B)	Family studies
(C)	Twin studies
(D)	Adoption studies
Q.40	Which of the following statements regarding locus of control is/are CORRECT?
(A)	It can be internal and/or external
(B)	It is associated with self-esteem
(C)	Internal locus of control is positively correlated with success
(D)	Regret has no association with locus of control

Q.41	Which of the following is/are TRUE for nonparametric statistics?
(A)	It is often called distribution free statistics
(B)	It is used to analyze interval data
(C)	It is used to analyze ordinal data
(D)	It compares groups in terms of means
Q.42	According to the review of research on stress and immune system, which of the following statement(s) has/have substantial evidence?
(A)	There is a negative relationship between stress and functional immune measures
(B)	There is no measurable impact of stress on functional immune measures
(C)	Loneliness impacts the relationship between stress and functional immune measures
(D)	There is a positive relationship between long term stressors and functional immune measures

Q.43	Which of the following influence(s) gender dysphoria?
(A)	Prenatal factors
(B)	Early childhood experiences
(C)	Socialization
(D)	Attention Deficit Hyperactivity Disorder
Q.44	If the variance of a set of scores is 100, the standard deviation is_____ (in integer).

XH-C5: Q.45– Q.65 Carry TWO marks Each

Q.45	Match the structures of the brain in the first column with their respective functions in the second column of the table given below.	
	Brain Structures	Functions
	P) Cerebellum	i) Orients a person in the environment
	Q) Thalamus	ii) Coordinates heart rate, circulation, and respiration
	R) Tectum	iii) Controls fine motor skills
	S) Medulla	iv) Relays and filters information from the senses and transmits the information to the cerebral cortex
(A)	P-(iii), Q-(i), R-(iv), S-(ii)	
(B)	P-(i), Q-(iv), R-(ii), S-(iii)	
(C)	P-(iv), Q-(iii), R-(ii), S-(i)	
(D)	P-(iii), Q-(iv), R-(i), S-(ii)	

[illegible]

Q.47	Match the theory/law in the first column with the corresponding explanation in the second column of the table given below.										
	<table> <tr> <th>Theory/law</th><th>Explanation</th></tr> <tr> <td>P) Weber's law</td><td>i) The detection of change in a stimulus is relative to the magnitude of the stimulus</td></tr> <tr> <td>Q) Steven's Power law</td><td>ii) Sensory magnitude grows in proportion to the physical intensity of the stimulus raised to a power</td></tr> <tr> <td>R) Signal detection theory</td><td>iii) The magnitude of a sensation is a logarithmic function of the stimulus</td></tr> <tr> <td>S) Fechner's law</td><td>iv) The ability to detect a weak stimulus varies from moment to moment as per response bias</td></tr> </table>	Theory/law	Explanation	P) Weber's law	i) The detection of change in a stimulus is relative to the magnitude of the stimulus	Q) Steven's Power law	ii) Sensory magnitude grows in proportion to the physical intensity of the stimulus raised to a power	R) Signal detection theory	iii) The magnitude of a sensation is a logarithmic function of the stimulus	S) Fechner's law	iv) The ability to detect a weak stimulus varies from moment to moment as per response bias
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Q.48	Match the sleep disorders in the first column with the symptoms in the second column of the table given below.										
	<table> <tr> <th>Sleep disorders</th><th>Symptoms</th></tr> <tr> <td>P) Enuresis</td><td>i) Excessive daytime sleepiness</td></tr> <tr> <td>Q) Hypersomnia</td><td>ii) Urinating while asleep in bed</td></tr> <tr> <td>R) Circadian rhythm disorder</td><td>iii) A disorder in which the person stops breathing for brief periods while asleep</td></tr> <tr> <td>S) Sleep apnea</td><td>iv) Disturbances of the sleep-wake cycle</td></tr> </table>	Sleep disorders	Symptoms	P) Enuresis	i) Excessive daytime sleepiness	Q) Hypersomnia	ii) Urinating while asleep in bed	R) Circadian rhythm disorder	iii) A disorder in which the person stops breathing for brief periods while asleep	S) Sleep apnea	iv) Disturbances of the sleep-wake cycle
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(D)	P-(iii), Q-(iv), R-(i), S-(ii)										

[illegible]

Q.50	Match the biases/effects in the first column with the descriptions in the second column of the table given below.										
	<table> <tr> <th>Biases/effects</th><th>Descriptions</th></tr> <tr> <td>P) Barnum Effect</td><td>i) Tendency to take credit for one's success but downplaying responsibility for one's failure</td></tr> <tr> <td>Q) Reference Group Effect</td><td>ii) Tendency to take blame for failure but downplay one's role in the success</td></tr> <tr> <td>R) Self-Serving Bias</td><td>iii) Tendency to rate oneself with respect to one's social and cultural group</td></tr> <tr> <td>S) Self-Effacing Bias</td><td>iv) Tendency to believe in description of personality that is supposedly descriptive of oneself, but could in fact describe almost anyone</td></tr> </table>	Biases/effects	Descriptions	P) Barnum Effect	i) Tendency to take credit for one's success but downplaying responsibility for one's failure	Q) Reference Group Effect	ii) Tendency to take blame for failure but downplay one's role in the success	R) Self-Serving Bias	iii) Tendency to rate oneself with respect to one's social and cultural group	S) Self-Effacing Bias	iv) Tendency to believe in description of personality that is supposedly descriptive of oneself, but could in fact describe almost anyone
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Q.51	Match the theories in the first column with the central themes in the second column of the table given below.										
	<table> <tr> <th>Theories</th><th>Central themes</th></tr> <tr> <td>P) Drive theory</td><td>i) Our general level of activation leads to optimization</td></tr> <tr> <td>Q) Arousal theory</td><td>ii) Behaviour is determined by desirable outcomes</td></tr> <tr> <td>R) Expectancy theory</td><td>iii) Setting specific and challenging goals boosts motivation</td></tr> <tr> <td>S) Goal setting theory</td><td>iv) Biological needs push us to action</td></tr> </table>	Theories	Central themes	P) Drive theory	i) Our general level of activation leads to optimization	Q) Arousal theory	ii) Behaviour is determined by desirable outcomes	R) Expectancy theory	iii) Setting specific and challenging goals boosts motivation	S) Goal setting theory	iv) Biological needs push us to action
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[illegible]

Q.53	Match the research methods in the first column with their purposes in the second column of the table given below.										
	<table> <tr> <th>Research Methods</th><th>Purposes</th></tr> <tr> <td>P) Narrative method</td><td>i) Describing a person, event, and experience in detail</td></tr> <tr> <td>Q) Ethnography</td><td>ii) Collecting data in the form of cohesive stories</td></tr> <tr> <td>R) Case Study</td><td>iii) Extracting themes from data</td></tr> <tr> <td>S) Content analysis</td><td>iv) Describing cultural characteristics in detail</td></tr> </table>	Research Methods	Purposes	P) Narrative method	i) Describing a person, event, and experience in detail	Q) Ethnography	ii) Collecting data in the form of cohesive stories	R) Case Study	iii) Extracting themes from data	S) Content analysis	iv) Describing cultural characteristics in detail
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Q.54	Which one of the following statements is TRUE according to Brehm's reactance theory?
(A)	A mild sign prohibiting spitting would be more effective in preventing spitting than a strong sign
(B)	A strong sign would be more effective in preventing spitting than a mild one
(C)	Absence of any sign would be most effective in preventing spitting
(D)	Signs are irrelevant to spitting behaviour
Q.55	According to the overjustification effect, which one of the following consequences would be TRUE for students who freely choose to study psychology, if marks are given for attendance?
(A)	Increased interest of students in the subject
(B)	Decreased interest of students in the subject
(C)	No effect on the interest of students in the subject
(D)	Increased interest in other social science subjects

Q.56	Large rewards and severe punishments are examples of _____ justification for behaviour and result in _____ changes in attitude.
(A)	internal; big
(B)	external; big
(C)	internal; small
(D)	external; small
Q.57	Which of the following therapies is/are based on classical conditioning?
(A)	Systematic desensitization
(B)	Aversion therapy
(C)	Cognitive behaviour therapy
(D)	Rational emotive behaviour therapy

Q.58	Which of the following characterize(s) Wernicke's aphasia?
(A)	Inability to comprehend spoken words
(B)	Inability to understand the meaning of words
(C)	Inability to speak grammatically correct language
(D)	Inability to write and understand the symbols that represent speech sounds
Q.59	Which of the following is/are the component(s) of Theory of Mind?
(A)	Understanding that people can have false beliefs
(B)	Distinguishing faces and smells
(C)	Recognizing that others have mental states
(D)	Having a vast vocabulary to express one's thoughts

Q.60	Which of the following would NOT be effective in minimizing groupthink?
(A)	The leader being impartial to all ideas no matter what they are
(B)	The leader reminding the team that everyone will be held responsible for the decision of the group
(C)	The leader taking all decisions on behalf of the group
(D)	The leader arriving at a consensus quickly
Q.61	Which of the following describe(s) the standard error of the mean?
(A)	It is the standard deviation of the sampling distribution of the mean
(B)	It reflects the accuracy with which sample means estimate the population mean
(C)	It is the difference between mean and standard deviation of a distribution
(D)	It is the standard deviation of a stratified sample

Q.62	Which of the following describe(s) organizational commitment?
(A)	A strong desire to remain a member of the organization
(B)	Willingness to exert high level of effort on behalf of the organization
(C)	A definite belief in and acceptance of values and goals of the organization
(D)	High turnover intention of the employees of the organization
Q.63	Prejudice is supported by the human tendency to categorize into in-groups and out-groups. Prejudice is supported by which of the following processes?
(A)	The way we think about others
(B)	The way we assign meaning to others behaviour
(C)	By following intellectual pursuits
(D)	By working towards a common goal

Q.64	Which of the following is/are feature(s) of clinical phobia?												
(A)	The fear must be persistent												
(B)	The fear must be a source of significant distress												
(C)	The fear is rational												
(D)	The fear is usually perceived as unwarranted												
Q.65	The value of F calculated from the data given in the table below is _____(rounded off to one decimal place).												
	<table><tr><td></td><td>Sum of Square (SS)</td><td>Degree of freedom (df)</td><td>Mean Square (MS)</td></tr><tr><td>Between</td><td>54</td><td>3</td><td>18</td></tr><tr><td>Within</td><td>100</td><td>20</td><td>5</td></tr></table>		Sum of Square (SS)	Degree of freedom (df)	Mean Square (MS)	Between	54	3	18	Within	100	20	5
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Between	54	3	18										
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END OF QUESTION PAPER

Q. No.	Session	Question Type (QT) MCQ/MSQ/NAT	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	3	MCQ	GA	D	1
2	3	MCQ	GA	B	1
3	3	MCQ	GA	A	1
4	3	MCQ	GA	B	1
5	3	MCQ	GA	C	1
6	3	MCQ	GA	D	2
7	3	MCQ	GA	B	2
8	3	MCQ	GA	D	2
9	3	MCQ	GA	A	2
10	3	MCQ	GA	B	2
11	3	MCQ	XH-B1	A	1
12	3	MCQ	XH-B1	B	1
13	3	MCQ	XH-B1	B	1
14	3	MCQ	XH-B1	B	1
15	3	MCQ	XH-B1	A	1
16	3	MSQ	XH-B1	A, B	1
17	3	MSQ	XH-B1	B, C	1
18	3	MCQ	XH-B1	C	2
19	3	MCQ	XH-B1	B	2
20	3	MCQ	XH-B1	C	2
21	3	MCQ	XH-B1	B	2
22	3	MSQ	XH-B1	B, D	2
23	3	MSQ	XH-B1	A	2
24	3	MSQ	XH-B1	C, D	2
25	3	NAT	XH-B1	35 to 35	2
26	3	NAT	XH-B1	3 to 3	2
27	3	MCQ	XH-C5	D	1
28	3	MCQ	XH-C5	C	1
29	3	MCQ	XH-C5	A	1
30	3	MCQ	XH-C5	B	1
31	3	MCQ	XH-C5	C	1
32	3	MCQ	XH-C5	A	1
33	3	MCQ	XH-C5	B	1
34	3	MCQ	XH-C5	B	1
35	3	MCQ	XH-C5	D	1
36	3	MCQ	XH-C5	B	1
37	3	MSQ	XH-C5	B,C	1
38	3	MSQ	XH-C5	B,D	1
39	3	MSQ	XH-C5	B,C,D	1
40	3	MSQ	XH-C5	A,B,C	1
41	3	MSQ	XH-C5	A,C	1
42	3	MSQ	XH-C5	A,C	1

43	3	MSQ	XH-C5	A,B,C	1
44	3	NAT	XH-C5	10 to 10	1
45	3	MCQ	XH-C5	D	2
46	3	MCQ	XH-C5	B	2
47	3	MCQ	XH-C5	C	2
48	3	MCQ	XH-C5	B	2
49	3	MCQ	XH-C5	C	2
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51	3	MCQ	XH-C5	A	2
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57	3	MSQ	XH-C5	A,B	2
58	3	MSQ	XH-C5	A,B,C,D	2
59	3	MSQ	XH-C5	A,C	2
60	3	MSQ	XH-C5	C,D	2
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63	3	MSQ	XH-C5	A,B	2
64	3	MSQ	XH-C5	A,B,D	2
65	3	NAT	XH-C5	3.6 to 3.6	2

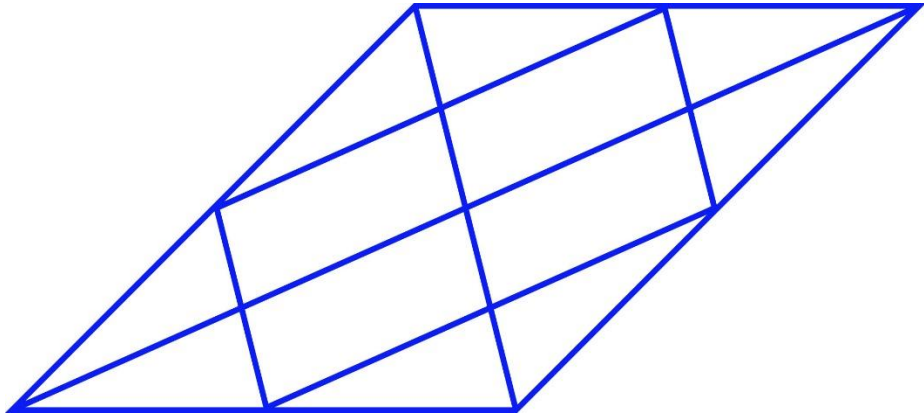
General Aptitude (GA)**Q.1 – Q.5 Carry ONE mark Each**

Q.1	Rafi told Mary, “I am thinking of watching a film this weekend.” The following reports the above statement in indirect speech: Rafi told Mary that he _____ of watching a film that weekend.
(A)	thought
(B)	is thinking
(C)	am thinking
(D)	was thinking

Q.2	Permit : _____ : : Enforce : Relax (By word meaning)
(A)	Allow
(B)	Forbid
(C)	License
(D)	Reinforce

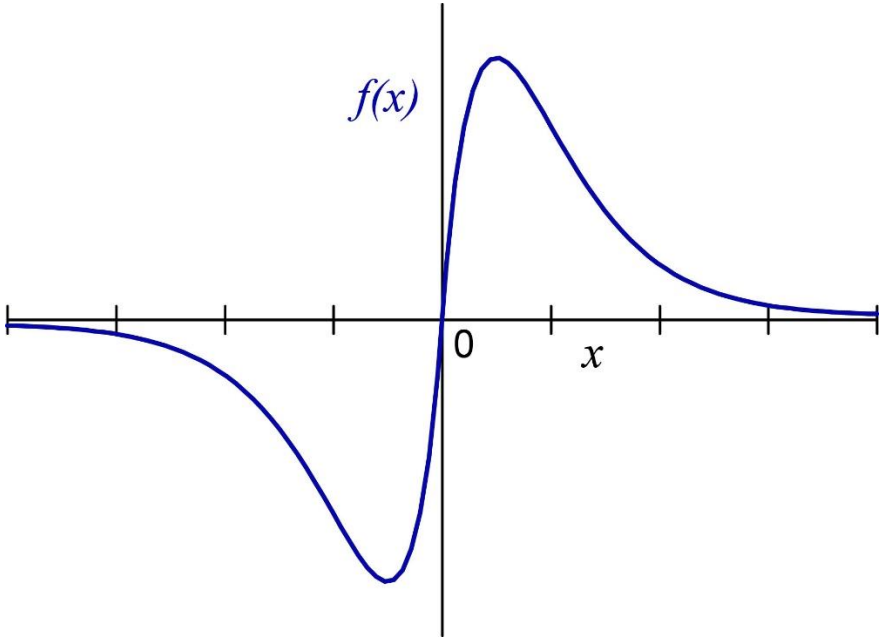
Q.3	Given a fair six-faced dice where the faces are labelled '1', '2', '3', '4', '5', and '6', what is the probability of getting a '1' on the first roll of the dice and a '4' on the second roll?
(A)	$\frac{1}{36}$
(B)	$\frac{1}{6}$
(C)	$\frac{5}{6}$
(D)	$\frac{1}{3}$

Q.4	A recent survey shows that 65% of tobacco users were advised to stop consuming tobacco. The survey also shows that 3 out of 10 tobacco users attempted to stop using tobacco. Based only on the information in the above passage, which one of the following options can be logically inferred with <i>certainty</i>?
(A)	A majority of tobacco users who were advised to stop consuming tobacco made an attempt to do so.
(B)	A majority of tobacco users who were advised to stop consuming tobacco did not attempt to do so.
(C)	Approximately 30% of tobacco users successfully stopped consuming tobacco.
(D)	Approximately 65% of tobacco users successfully stopped consuming tobacco.

Q.5	How many triangles are present in the given figure?
	
(A)	12
(B)	16
(C)	20
(D)	24

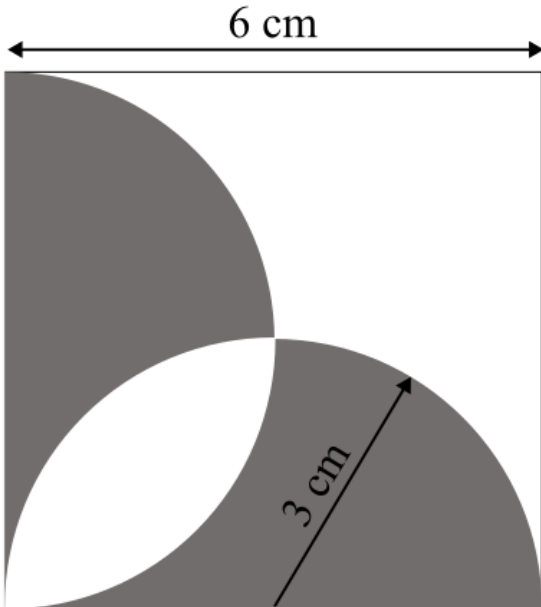
Q.6 – Q.10 Carry TWO marks Each

Q.6	Students of all the departments of a college who have successfully completed the registration process are eligible to vote in the upcoming college elections. However, by the time the due date for registration was over, it was found that suprisingly none of the students from the Department of Human Sciences had completed the registration process. Based only on the information provided above, which one of the following sets of statement(s) can be logically inferred with <i>certainty</i>? (i) All those students who would not be eligible to vote in the college elections would certainly belong to the Department of Human Sciences. (ii) None of the students from departments other than Human Sciences failed to complete the registration process within the due time. (iii) All the eligible voters would certainly be students who are not from the Department of Human Sciences.
(A)	(i) and (ii)
(B)	(i) and (iii)
(C)	only (i)
(D)	only (iii)

Q.7	Which one of the following options represents the given graph?
	
(A)	$f(x) = x^2 2^{- x }$
(B)	$f(x) = x 2^{- x }$
(C)	$f(x) = x 2^{-x}$
(D)	$f(x) = x 2^{-x}$

Q.8	Which one of the options does NOT describe the passage below or follow from it? We tend to think of cancer as a ‘modern’ illness because its metaphors are so modern. It is a disease of overproduction, of sudden growth, a growth that is unstoppable, tipped into the abyss of no control. Modern cell biology encourages us to imagine the cell as a molecular machine. Cancer is that machine unable to quench its initial command (to grow) and thus transform into an indestructible, self-propelled automaton. [Adapted from <i>The Emperor of All Maladies</i> by Siddhartha Mukherjee]
(A)	It is a reflection of why cancer seems so modern to most of us.
(B)	It tells us that modern cell biology uses and promotes metaphors of machinery.
(C)	Modern cell biology encourages metaphors of machinery, and cancer is often imagined as a machine.
(D)	Modern cell biology never uses figurative language, such as metaphors, to describe or explain anything.

Q.9	The digit in the unit's place of the product $3^{999} \times 7^{1000}$ is _____.
(A)	7
(B)	1
(C)	3
(D)	9

Q.10	A square with sides of length 6 cm is given. The boundary of the shaded region is defined by two semi-circles whose diameters are the sides of the square, as shown. The area of the shaded region is _____ cm^2.
	
(A)	6π
(B)	18
(C)	20
(D)	9π

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11 – Q.17 Carry ONE mark Each

Q.11	Which word below best describes the idea of being both <i>Spineless</i> and <i>Cowardly</i> ?
(A)	Pusillanimous
(B)	Unctuous
(C)	Obsequious
(D)	Reticent
Q.12	Choose the right preposition to fill up the blank: The whole family got together ____ Diwali
(A)	of
(B)	at
(C)	in
(D)	till

Q.13	Select the correct option to fill in all the blanks to complete the passage: The (i)_____ factor amid this turbulence has been the (ii)_____ of high-octane, action-oriented films such as RRR, K.G.F: Chapter 2 and Pushpa from film industries in the south of the country. Traditionally, films made in the south have done well in their own (iii) _____. But increasingly, their dubbed versions have performed well in the Hindi heartland, with collections (iv)_____ those of their Bollywood counterparts.
(A)	(i) disheartening (ii) failure (iii) channels (iv) matching
(B)	(i) redeeming (ii) outperformance (iii) geographies (iv) eclipsing
(C)	(i) shocking (ii) underperformance (iii) cinemas (iv) below
(D)	(i) humbling (ii) bombing (iii) theatres (iv) falling behind

Q.14	The following passage consists of 6 sentences. The first and sixth sentences of the passage are at their correct positions, while the middle four sentences (represented by 2, 3, 4, and 5) are jumbled up. Choose the correct sequence of the sentences so that they form a coherent paragraph: 1. Most obviously, mobility is taken to be a geographical as well as a social phenomenon. 2. Much of the social mobility literature regarded society as a uniform surface and failed to register the geographical intersections of region, city and place, with the social categories of class, gender and ethnicity. 3. The existing sociology of migration is incidentally far too limited in its concerns to be very useful here. 4. Further, I am concerned with the flows of people within, but especially beyond, the territory of each society, and how these flows may relate to many different desires, for work, housing, leisure, religion, family relationships, criminal gain, asylum seeking and so on. 5. Moreover, not only people are mobile but so too are many ‘objects’. 6. I show that sociology’s recent development of a ‘sociology of objects’ needs to be taken further and that the diverse flows of objects across societal borders and their intersections with the multiple flows of people are hugely significant.
(A)	3, 2, 5, 4
(B)	2, 3, 4, 5
(C)	5, 4, 3, 2
(D)	4, 2, 5, 3

Q.15	The population of a country increased by 5% from 2020 to 2021. Then, the population decreased by 5% from 2021 to 2022. By what percentage did the population change from 2020 to 2022?
(A)	-0.25%
(B)	0%
(C)	2.5%
(D)	10.25%
Q.16	The words Thin: Slim: Slender are related in some way. Identify the correct option(s) that reflect(s) the same relationship:
(A)	Fat: Plump: Voluptuous
(B)	Short: Small: Petite
(C)	Tall: Taller: Tallest
(D)	Fair: Dark: Wheatish

Q.17	A pandemic like situation hit the country last year, resulting in loss of human life and economic depression. To improve the condition of its citizens, the government made a series of emergency medical interventions and increased spending to revive the economy. In both these efforts, district administration authorities were actively involved. Which of the following action(s) are plausible?
(A)	In future, the government can make district administration authorities responsible for protecting health of citizens and reviving the economy.
(B)	The government may set up a task force to review the post pandemic situation and ascertain the effectiveness of the measures taken.
(C)	The government may set up a committee to formulate a pandemic management program to minimize losses to life and economy in future.
(D)	The government may take population control measures to minimize pandemic related losses in future.

XH-B1: Q.18 – Q.26 Carry TWO marks Each

Q.18	Six students, Arif, Balwinder, Chintu, David, Emon and Fulmoni appeared in the GATE-XH exam in 2022. Balwinder scores less than Chintu in XH-B1, but more than Arif in XH-C1. David scores more than Balwinder in XH-C1, and more than Chintu in XH-B1. Emon scores less than David, but more than Fulmoni in XH-B1. Fulmoni scores more than David in XH-C1. Arif scores less than Emon, but more than Fulmoni in XH-B1. Who scores highest in XH-B1?
(A)	Fulmoni
(B)	Emon
(C)	David
(D)	Chintu
Q.19	Select the correct relation between E and F.
	$E = \frac{x}{1+x}$ and $F = \frac{-x}{1-x}$ $x > 1$
(A)	$E > F$
(B)	$E < F$
(C)	$E = F$
(D)	$E < -F$

Q.20	A code language is formulated thus: Vowels in the original word are replaced by the next vowel from the list of vowels, A-E-I-O-U (For example, E is replaced by I and U is replaced by A). Consonants in the original word are replaced by previous consonant (For example, T is replaced by S and V is replaced by T). Then how does the word, GOODMORNING appear in the coded language?
(A)	HUUFNUSPOPH
(B)	FIICLIQMEMF
(C)	FUUCLUQMOMF
(D)	HEEDATTACRH

Q.21	The stranger is by nature no "owner of soil" -- soil not only in the physical, but also in the figurative sense of a life-substance, which is fixed, if not in a point in space, at least in an ideal point of the social environment. Although in more intimate relations, he may develop all kinds of charm and significance, as long as he is considered a stranger in the eyes of the other, he is not an "owner of soil." Restriction to intermediary trade, and often (as though sublimated from it) to pure finance, gives him the specific character of mobility. If mobility takes place within a closed group, it embodies that synthesis of nearness and distance which constitutes the formal position of the stranger. For, the fundamentally mobile person comes in contact, at one time or another, with every individual, but is not organically connected, through established ties of kinship, locality, and occupation, with any single one. What assumptions can be made about the stranger from the passage above?
(A)	The stranger can become an owner of soil through developing all kinds of charm in more intimate relations.
(B)	The stranger cannot become an owner of soil either in the physical or psychological sense.
(C)	The stranger can become an owner of soil through establishing ties of kinship and so on.
(D)	The stranger might become an owner of soil in the physical sense but not in the psychological

Q.22	L is the only son of A and S. S has one sibling, B, who is married to L's aunt, K. B is the only son of D. How are L and D related? Select the possible option(s):
(A)	Grandchild and Paternal Grandfather
(B)	Grandchild and Maternal Grandfather
(C)	Grandchild and Paternal Grandmother
(D)	Grandchild and Maternal Grandmother

Q.23	Five segments of a sentence are given below. The first and fifth segments are at their correct positions, while the middle three segments (represented by 2, 3, and 4) are jumbled up. Choose the correct order of the segments so that they form a coherent sentence: 1. Consumed multitudes are jostling and shoving inside me 2. and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the center, 3. clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, 4. I must commence the business of remaking my life from the point at which it really began, 5. some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth.
(A)	2 – 3 – 4
(B)	3 – 2 – 4
(C)	4 – 2 – 3
(D)	4 – 3 – 2

Q.24	“I told you the truth,” I say yet again, “Memory’s truth, because memory has its own special kind. It selects, eliminates, alters, exaggerates, minimizes, glorifies, and vilifies also; but in the end it creates its own reality, its heterogeneous but usually coherent versions of events; and no sane human being ever trusts someone else’s version more than his own.” What are the different ways in which ‘truth’ can be understood from the passage?
(A)	Truth is what can be verified by hard empirical evidence.
(B)	Truth is based on what can be perceived by the senses.
(C)	Truth is the product of memory that is fallible, selective and slanted.
(D)	Truth is contingent on the observer and can only be partial.
Q.25	A firm needs both skilled labour and unskilled labour for the production of cloth. The wage of skilled labour is Rs. 40,000 per month, and that of unskilled labour is Rs. 15,000 per month. The total wage bill of the firm for the production of cloth is Rs. 23,75,000 in a month for 100 labour. How many skilled labour are employed by the firm (<i>in Integer</i>)?
Q.26	Select the odd word and write the option number as answer: (1) Lek (2) Zloty (3) Diner (4) Drachma (5) Real

Sociology – C6

XH-C6: Q.27 – Q.44 Carry ONE mark Each

Q.27	_____ has given the concept of ‘thick description’.
(A)	Emile Durkheim
(B)	Clifford Geertz
(C)	Louis Dumont
(D)	Talcott Parsons
Q.28	Objectivity in social science research as a matter of transpersonal replicability entails _____.
(A)	Merciless elimination of personal biases
(B)	Allocation of costs and benefits to parties be made on normative standards
(C)	Basic honesty in application of professional norms of research
(D)	Reproducibility of findings of research under similar conditions and methods

Q.29	Which of the following is NOT a characteristic of hypothesis?
(A)	A shrewd hunch suggestive of a possible solution to a problem
(B)	A causal relationship between two/more variables
(C)	An empirical conclusion foregone
(D)	A theoretically derived statement that denies refutability
Q.30	_____ theory most appropriately describes a hierarchy of wealthy ‘core’ nations, poor ‘periphery’ nations, and a middle group of ‘semi-periphery’ nations.
(A)	Globalization
(B)	Stages of growth
(C)	World systems
(D)	Limits to growth

Q.31	In Hindu society, marriage of a widow to the husband's brother is referred to as _____.
(A)	Polygyny
(B)	Endogamy
(C)	Levirate
(D)	Polyandry
Q.32	Because of Covid-19 lockdown, a large number of working-class people lost their jobs. Rising price of commodities has also worsened their economic conditions. _____ concept of Karl Marx most appropriately describes this 'increasing impoverishment' of the poor in contemporary times.
(A)	Alienation
(B)	Commodity fetishism
(C)	Pauperization
(D)	Embourgeoisement

Q.33	_____ coined the term, ‘ethnocentrism’.
(A)	A.R. Radcliffe-Brown
(B)	Bronislaw Malinowski
(C)	W.G. Sumner
(D)	Harold Garfinkel
Q.34	Supremacy of science over non-sciences is attributed to _____.
(A)	Postcolonialism
(B)	Neo-Kantianism
(C)	Positivism
(D)	Verstehen

Q.35	Communism, universalism, disinterestedness and _____constitute Mertonian ethos of science.
(A)	Organized skepticism
(B)	Organized dogmatism
(C)	Objectivity
(D)	Neutrality
Q.36	_____theory postulates that developing economies would eventually catch up with the developed economies if they follow the social and economic models of Western capitalism.
(A)	Postmodern
(B)	Subaltern
(C)	Marxist
(D)	Modernization

Q.37	_____ approach was NOT propounded by B.S. Cohn as one of the approaches to study Indian civilization.
(A)	Administrative
(B)	Missionary
(C)	Orientalist
(D)	Historiographical
Q.38	If standard deviation is 0.3, then its corresponding variance would be _____.
(A)	0.9
(B)	0.03
(C)	0.09
(D)	0.3

Q.39	Under _____ land tenurial system during the British rule in India, the individual cultivator/peasant had some ownership right over land holding.
(A)	Zamindari
(B)	Ryotwari
(C)	Mahalwari
(D)	Talukdari
Q.40	_____ introduced the concept of ‘reconstructive science’.
(A)	J. Habermas
(B)	A. Giddens
(C)	P. Bourdieu
(D)	M. Foucault

Q.41	_____ theory lies between minor working hypotheses and master conceptual schemes.
(A)	Middle-range
(B)	Social action
(C)	Conflict
(D)	Symbolic interactionist
Q.42	_____ is NOT a characteristic feature of M.N. Srinivas's concept of 'dominant caste'.
(A)	Numerical strength
(B)	Economic power through possession of land
(C)	Political power
(D)	Membership in militant organizations

Q.43	Max Weber's instrumental rationality refers to _____.
(A)	Traditional action
(B)	Emotive action
(C)	Goal-rational action
(D)	Value-rational action
Q.44	The stable pattern of 'modern men' formulated by Alex Inkeles does not include _____.
(A)	Openness to new experiences
(B)	Freedom from traditional authority
(C)	Rejection of activities in civil politics
(D)	Belief in science and technology

XH-C6: Q.45 – Q.65 Carry TWO marks Each

Q.45	_____ refers to the careful consideration of the ways in which researchers' past experiences, points of view, and roles impact these same researchers' interactions with, and interpretations of, the research scene.
(A)	Self-reflexivity
(B)	Social interactionism
(C)	Objectivity
(D)	Participant action research
Q.46	_____ introduced the concept of _____ to refer to situations in which people accept, consent to, internalize, and are complicit in reproducing values and norms that are not in their own best interests.
(A)	K. Marx, alienation
(B)	M. Foucault, governmentality
(C)	A. Gramsci, hegemony
(D)	R. Putnam, social capital

Q.47	_____ is the process by which researchers begin by identifying several participants who fit the study's criteria and then ask these people to suggest a colleague, a friend, or a family member who also fits the study's criteria.
(A)	Random sampling
(B)	Stratified random sampling
(C)	Purposive sampling
(D)	Snowball sampling

Q.48

Match the following sociologists as given in Column P with their views on religion as given in Column Q.

Column P

Column Q

A	Karl Marx	I	Opiate of the people
B	Max Weber	II	Sources of social solidarity
C	Clifford Geertz	III	A source of capitalist outlook
D	Emile Durkheim	IV	A cultural system
		V	A source of modernity

(A)

A-I, B-II, C-V, D-III

(B)

A-I, B-III, C-V, D-II

(C)

A-IV, B-III, C-II, D-V

(D)

A-I, B-III, C-IV, D-II

Q.49	There are four forms of triangulation, namely data triangulation, _____, theory triangulation and _____.
(A)	Field triangulation, methodological triangulation
(B)	Investigator triangulation, methodological triangulation
(C)	Investigator triangulation, interviewee triangulation
(D)	Investigator triangulation, epistemological triangulation
Q.50	_____ is the process by which groups seek to preserve some advantage by monopolizing resources and restricting access to the group.
(A)	Social action
(B)	Social construction
(C)	Social closure
(D)	Social conflict

Q.51	Correlation coefficient lies between _____ and _____, and probability lies between _____ and _____.
(A)	– 1 and 1, 0 and 1
(B)	0 and 1, – 1 and 1
(C)	– 0.5 and 1.5, 0 and 1
(D)	– 1 and 1, – 0.5 and 1.5

Q.52	Match the following concepts as given in Column P with the Sociologists as given in Column Q:				
	Column P			Column Q	
	A	Systematic falsification		I	Thomas Kuhn
	B	Systematic verification		II	Emile Durkheim
	C	Consensus		III	Karl Popper
	D	Social fact		IV	Positivism
(A)	A-III, B-IV, C-I, D-II				
(B)	A-III, B-I, C-IV, D-II				
(C)	A-III, B-II, C-IV, D-I				
(D)	A-IV, B-III, C-II, D-I				

Q.53	Match the following approaches and village study as given in Column P with Sociologists as given in Column Q: <table><thead><tr><th colspan="2">Column P</th><th colspan="2">Column Q</th></tr></thead><tbody><tr><td>A</td><td>Rampura village</td><td>I</td><td>Sharmila Rege</td></tr><tr><td>B</td><td>Indology</td><td>II</td><td>M.N. Srinivas</td></tr><tr><td>C</td><td>Marxist approach</td><td>III</td><td>A.R. Desai</td></tr><tr><td>D</td><td>Feminist perspective</td><td>IV</td><td>Irawati Karve</td></tr></tbody></table>	Column P		Column Q		A	Rampura village	I	Sharmila Rege	B	Indology	II	M.N. Srinivas	C	Marxist approach	III	A.R. Desai	D	Feminist perspective	IV	Irawati Karve
Column P		Column Q																			
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(A)	A-III, B-IV, C-I, D-II																				
(B)	A-II, B-IV, C-III D-I																				
(C)	A-II, B-IV, C-I, D-III																				
(D)	A-IV, B-III, C-II, D-I																				

Q.54	According to the World Commission on Environment and Development, ‘sustainable development’ refers to _____.
(A)	Development that meets the needs of the present
(B)	Development that meets the needs of the future
(C)	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs
(D)	Development that meets the needs of the past

Q.55	According to David Pocock, the Indian Jajmani system reflects _____.
(A)	Hierarchical collectivity
(B)	Regulated individuality
(C)	Egalitarian collectivity
(D)	Anarchic individuality
Q.56	Which of the following is/are NOT characteristic(s) of class system?
(A)	Class systems are fluid and the boundaries between classes are never clear-cut.
(B)	Class is a form of stratification in which one's social position is given for a lifetime.
(C)	Class is economically based.
(D)	Class divisions are organized around the purity and pollution.

Q.57	Which of the following concept(s) is/are NOT propounded by Emile Durkheim?
(A)	Collective bargaining
(B)	Collective effervescence
(C)	Cult of the individual
(D)	Charismatic authority
Q.58	The example(s) of relations of production is/are _____.
(A)	Labour
(B)	Division of labour
(C)	Property relations
(D)	Capitalism

Q.59	While _____ emerges around a charismatic figure, idea or vision, _____ emerges as a breakaway group from a preexisting body of belief, rituals, or believers.
(A)	Cult, Sect
(B)	Sect, Cult
(C)	Totem, Cult
(D)	Religion, Sect
Q.60	Which of the following statement(s) is/are true for the Forest Rights Act (2006) of India?
(A)	Forest dwellers' right of conserving and protecting community forest resources
(B)	Forest dwellers' right to rehabilitation
(C)	Forest dwellers' right to settlement from forest villages into revenue villages
(D)	Forest dwellers' absolute right over all the natural resources within the given forest area

Q.61	The Ethnographic Survey of India as part of the Census 1901 was conducted to _____.
(A)	Mitigate the racial and cultural issues faced by the British
(B)	Make suitable legislations for Indian subjects
(C)	Protect the primitive beliefs and usages of Indians
(D)	Take executive action (welfare and development)
Q.62	_____ and _____ propounded conflict theory.
(A)	Talcott Parsons
(B)	Ralf Dahrendorf
(C)	Lewis A. Coser
(D)	Jeffrey C. Alexander

Q.63	Which of the following is/are NOT aspect(s) of secularization process?
(A)	Privatization of religion
(B)	Rising level of membership of religious organizations
(C)	Loss of social and political influence of religious organizations
(D)	Belief in magic and supernatural forces
Q.64	Which of the following pair(s) is/are correct? M1: Michel Foucault M2: Pierre Bourdieu M3: John Urry X1: Archaeology of Knowledge X2: Sociological Imagination X3: Practice Theory
(A)	M1 – X1
(B)	M2 – X2
(C)	M3 – X2
(D)	M2 – X3

Q.65	Which of the following statement(s) is/are INCORRECT?
(A)	Hypergamy is a form of marriage where bride's family is of superior status to the groom's family
(B)	Hypogamy is a form of marriage where groom's family is of superior status to the bride's family
(C)	Exogamy refers to marriage outside the caste or sub-caste group
(D)	Polygynandry refers to marriage of several men to several women at the same time

END OF QUESTION PAPER

Q. No.	Session	Question Type (QT) MCQ/MSQ/NAT	Subject Name (SN)	Key/Range (KY)	Mark (MK)
1	3	MCQ	GA	D	1
2	3	MCQ	GA	B	1
3	3	MCQ	GA	A	1
4	3	MCQ	GA	B	1
5	3	MCQ	GA	C	1
6	3	MCQ	GA	D	2
7	3	MCQ	GA	B	2
8	3	MCQ	GA	D	2
9	3	MCQ	GA	A	2
10	3	MCQ	GA	B	2
11	3	MCQ	XH-B1	A	1
12	3	MCQ	XH-B1	B	1
13	3	MCQ	XH-B1	B	1
14	3	MCQ	XH-B1	B	1
15	3	MCQ	XH-B1	A	1
16	3	MSQ	XH-B1	A, B	1
17	3	MSQ	XH-B1	B, C	1
18	3	MCQ	XH-B1	C	2
19	3	MCQ	XH-B1	B	2
20	3	MCQ	XH-B1	C	2
21	3	MCQ	XH-B1	B	2
22	3	MSQ	XH-B1	B, D	2
23	3	MSQ	XH-B1	A	2
24	3	MSQ	XH-B1	C, D	2
25	3	NAT	XH-B1	35 to 35	2
26	3	NAT	XH-B1	3 to 3	2
27	3	MCQ	XH-C6	B	1
28	3	MCQ	XH-C6	D	1
29	3	MCQ	XH-C6	D	1
30	3	MCQ	XH-C6	C	1
31	3	MCQ	XH-C6	C	1
32	3	MCQ	XH-C6	C	1
33	3	MCQ	XH-C6	C	1
34	3	MCQ	XH-C6	C	1
35	3	MCQ	XH-C6	A	1
36	3	MCQ	XH-C6	D	1
37	3	MCQ	XH-C6	D	1
38	3	MCQ	XH-C6	C	1
39	3	MCQ	XH-C6	B	1
40	3	MCQ	XH-C6	A	1
41	3	MCQ	XH-C6	A	1
42	3	MCQ	XH-C6	D	1
43	3	MCQ	XH-C6	C	1
44	3	MCQ	XH-C6	C	1
45	3	MCQ	XH-C6	A	2

46	3	MCQ	XH-C6	C	2
47	3	MCQ	XH-C6	D	2
48	3	MCQ	XH-C6	D	2
49	3	MCQ	XH-C6	B	2
50	3	MCQ	XH-C6	C	2
51	3	MCQ	XH-C6	A	2
52	3	MCQ	XH-C6	A	2
53	3	MCQ	XH-C6	B	2
54	3	MCQ	XH-C6	C	2
55	3	MSQ	XH-C6	B, C	2
56	3	MSQ	XH-C6	B, D	2
57	3	MSQ	XH-C6	A, D	2
58	3	MSQ	XH-C6	B, C	2
59	3	MSQ	XH-C6	A	2
60	3	MSQ	XH-C6	A, B, C	2
61	3	MSQ	XH-C6	A	2
62	3	MSQ	XH-C6	B, C	2
63	3	MSQ	XH-C6	B, D	2
64	3	MSQ	XH-C6	A, D	2
65	3	MSQ	XH-C6	A, B	2