

GATE 2022 General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark each.

Q.1	Inhaling the smoke from a burning _____ could _____ you quickly.
(A)	tire / tier
(B)	tire / tyre
(C)	tyre / tire
(D)	tyre / tier

Q.2	A sphere of radius r cm is packed in a box of cubical shape. What should be the minimum volume (in cm^3) of the box that can enclose the sphere?
(A)	$\frac{r^3}{8}$
(B)	r^3
(C)	$2r^3$
(D)	$8r^3$



Q.3	<p>Pipes P and Q can fill a storage tank in full with water in 10 and 6 minutes, respectively. Pipe R draws the water out from the storage tank at a rate of 34 litres per minute. P, Q and R operate at a constant rate.</p> <p>If it takes one hour to completely empty a full storage tank with all the pipes operating simultaneously, what is the capacity of the storage tank (in litres)?</p>
(A)	26.8
(B)	60.0
(C)	120.0
(D)	127.5

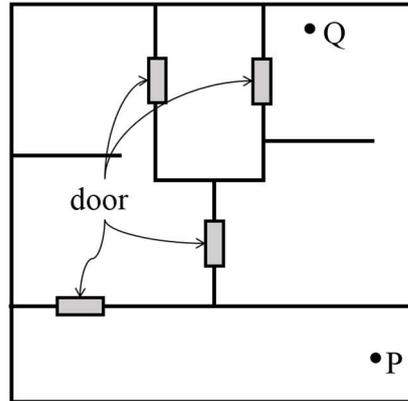


Q.4	<p>Six persons P, Q, R, S, T and U are sitting around a circular table facing the center not necessarily in the same order. Consider the following statements:</p> <ul style="list-style-type: none">• P sits next to S and T.• Q sits diametrically opposite to P.• The shortest distance between S and R is equal to the shortest distance between T and U. <p>Based on the above statements, Q is a neighbor of</p>
(A)	U and S
(B)	R and T
(C)	R and U
(D)	P and S

Q.5

A building has several rooms and doors as shown in the top view of the building given below. The doors are closed initially.

What is the minimum number of doors that need to be opened in order to go from the point P to the point Q?

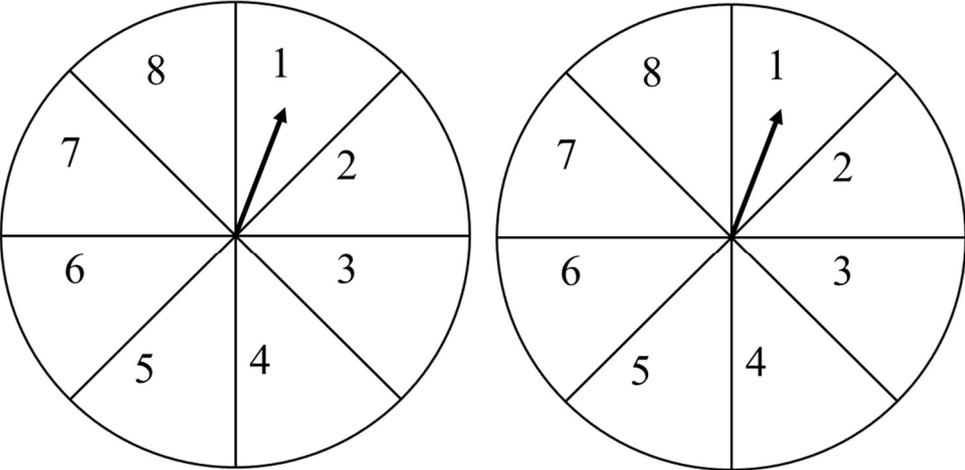


(A) 4

(B) 3

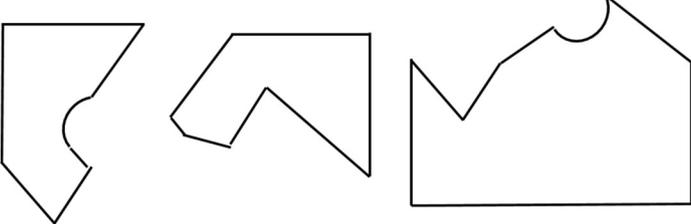
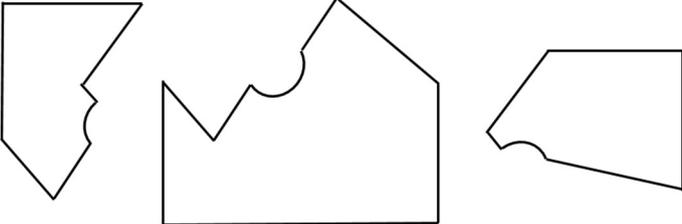
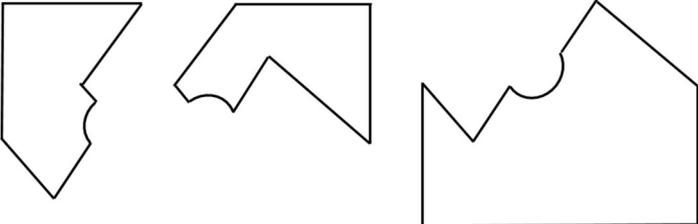
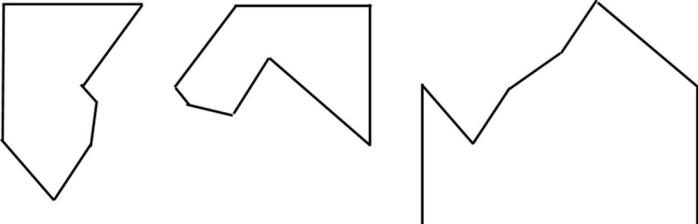
(C) 2

(D) 1

<p>Q.7</p>	<p>A game consists of spinning an arrow around a stationary disk as shown below. When the arrow comes to rest, there are eight equally likely outcomes. It could come to rest in any one of the sectors numbered 1, 2, 3, 4, 5, 6, 7 or 8 as shown.</p> <p>Two such disks are used in a game where their arrows are independently spun.</p> <p>What is the probability that the sum of the numbers on the resulting sectors upon spinning the two disks is equal to 8 after the arrows come to rest?</p> <div style="text-align: center;">  </div>
<p>(A)</p>	<p>$\frac{1}{16}$</p>
<p>(B)</p>	<p>$\frac{5}{64}$</p>
<p>(C)</p>	<p>$\frac{3}{32}$</p>
<p>(D)</p>	<p>$\frac{7}{64}$</p>



Q.8	<p>Consider the following inequalities.</p> <p>(i) $3p - q < 4$</p> <p>(ii) $3q - p < 12$</p> <p>Which one of the following expressions below satisfies the above two inequalities?</p>
(A)	$p + q < 8$
(B)	$p + q = 8$
(C)	$8 \leq p + q < 16$
(D)	$p + q \geq 16$

<p>Q.10</p>	<p>Which one of the following sets of pieces can be assembled to form a square with a single round hole near the center? Pieces cannot overlap.</p>
<p>(A)</p>	
<p>(B)</p>	
<p>(C)</p>	
<p>(D)</p>	



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

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

Q.11	A relationship is expressed as Iodine : Goitre . The pair(s) of words showing SIMILAR relationship is/are
	Space for Figure/Equation, if any:
(A)	Mango : Anaemia
(B)	Insulin : Diabetes
(C)	Fat : Obesity
(D)	Hormones : Heredity
Q.12	Three individuals are named P, Q, and R. Together they have a total of fifteen children of which nine are boys. P has three girls and Q has same number of boys. Q has one more child than P, who has four children. R has four more boys than the number of girls. The number of girls of R is equal to the number of boys of P. How many boys do R and P have?
	Space for Figure/Equation, if any:
(A)	$R = 3, P = 3$
(B)	$R = 4, P = 2$
(C)	$R = 5, P = 1$
(D)	$R = 2, P = 4$



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.13	<p>A sentence has been given below.</p> <p><i>The train will leave at 8:30 PM, we have been ready by 7:30 PM, so that we can reach the station on time.</i></p> <p>To make the above sentence grammatically correct, the phrase marked in bold is to be replaced by</p>
	Space for Figure/Equation, if any:
(A)	were
(B)	are
(C)	must be
(D)	should have
Q.14	<p>Complete the sentence correctly using the options given below.</p> <p>Hastings ____ (p) ____ developed as a holiday resort after ____ (q) ____ .</p>
	Space for Figure/Equation, if any:
(A)	(p) = a seaside town, (q) = the first world war
(B)	(p) = , a seaside town, (q) = the First World War
(C)	(p) = , a Seaside Town, (q) = World War I
(D)	(p) = A seaside town (q) = World War I



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.15	<p>The Arecibo telescope does not resemble what most of us think of when we hear the word telescope. Its reflective surface covers an area of 20 acres, which is quite remarkable. Dangling above it are towers and cables, sub-reflectors and antennas, all of which can be positioned using 26 motors to transmit radio waves and receive echoes with astonishing precision.</p> <p>From the passage, it can be inferred that most telescopes</p>
	Space for Figure/Equation, if any:
(A)	are not as large as Arecibo
(B)	do not have reflective surface
(C)	cannot be re-positioned
(D)	strictly have 26 motors



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.16	<p>Tailgating another vehicle is unsafe and illegal. Many rear-end collisions are caused by drivers following too close to the vehicle in front of them. The rules state that a driver must keep significant distance from the vehicle in front in order to stop safely and avoid a collision. Drivers should allow a minimum two seconds gap between their vehicle and the one ahead. At 60 km per hour, this equates to a gap of 33 meters; at 100 km per hour, it equates to a gap of 55 meters. More distance is needed to safely stop in rain or poor visibility, as during rain slippery roads reduce the effectiveness of braking.</p> <p>Which of the following statement(s) can be inferred from the above passage?</p>
	Space for Figure/Equation, if any:
(A)	People drive faster in rain and under poor visibility.
(B)	Braking may not be as effective during rain as in the dry conditions.
(C)	Tailgating is against the road rules.
(D)	Collision has no relationship with tailgating.
Q.17	<p>There are three separate, but equal-sized boxes. Inside each box, there are two separate small boxes. Inside each of the small boxes, there are four even smaller boxes. The total number of boxes will be _____ .</p>
	Space for Figure/Equation, if any:



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.18 – Q.26 Carry TWO marks Each

Q.18	<p>In a specific language, <i>xer dan</i> means “big horse”, <i>liro cas</i> means “red tomato” and <i>dum cas dan</i> means “big red barn”.</p> <p>The equivalent word for barn in this language is</p>
	Space for Figure/Equation, if any:
(A)	<i>dum</i>
(B)	<i>liro</i>
(C)	<i>dan</i>
(D)	<i>cas</i>
Q.19	<p>Park street is parallel to Rock street. Garden street is perpendicular (90°) to Lake street. Lake street is parallel to Rock street.</p> <p>For the situation described above, the TRUE statement is</p>
	Space for Figure/Equation, if any:
(A)	Park street is perpendicular to Lake street
(B)	Rock street is parallel to Garden street
(C)	Park street is parallel to Garden street
(D)	Garden street is perpendicular to Park street

GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.20	Six examinations are required to be conducted in a week starting from Sunday to Saturday. Hindi is not scheduled on the first day and English is not scheduled before Hindi. Mathematics is scheduled one day after Physics. Biology is scheduled two days after Hindi. One day prior to Chemistry, there is no examination. Only one examination can be scheduled on a single day and Sunday is not an off day. What are the subjects scheduled on first and the last days?
	Space for Figure/Equation, if any:
(A)	First day Physics, Last day Biology
(B)	First day Physics, Last day Chemistry
(C)	First day Physics, Last day English
(D)	First day English, Last day Biology



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q.21</p>	<p>A 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 P, Q, R, and S) are jumbled up.</p> <p><i>First sentence:</i> Smoke oozed up between the planks.</p> <p>P: Passengers were told to be ready to quit the ship.</p> <p>Q: The rising gale fanned the smouldering fire.</p> <p>R: Everyone now knew there was fire onboard.</p> <p>S: Flames broke out here and there.</p> <p><i>Sixth sentence:</i> Most people bore the shock bravely.</p> <p>The most logically CORRECT order for the given jumbled up sentences is</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>QSRP</p>
<p>(B)</p>	<p>QPSR</p>
<p>(C)</p>	<p>RSPQ</p>
<p>(D)</p>	<p>PQRS</p>



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q.22</p>	<p>For a painting to succeed, it is essential that the painter and his public agree about what is significant. The subject of the painting may have a personal meaning for the painter or a common person; but there can also be the possibility of their agreement on its general meaning. It is at this point that the culture of the society and the period in question precedes the artists and her/his art. Renaissance art would have meant nothing to the Aztecs, and vice versa. If, to some extent, a few intellectuals can appreciate them both today, it is because their culture is a historical one. Its inspiration is history and all known developments to date.</p> <p>According to the passage, which of the following is/are NOT necessarily among the attributes needed for a painter to succeed?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>The subject must have a personal meaning for the painter.</p>
(B)	<p>The painter is able to communicate and justify the significance of its subject selection.</p>
(C)	<p>The painter and the public agree on what is significant.</p>
(D)	<p>The painting of the subjects is driven by public demand.</p>



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.23	<p>Vinod has a pre-determined route. Each morning he delivers 37 newspapers to customers in his neighborhood. It takes Vinod 50 minutes to deliver all the papers. When Vinod was sick or had other engagements, his friend Tarun, who lives on the same street delivered the papers on his behalf.</p> <p>Find the statement(s) that must be TRUE according to the given information.</p>
	Space for Figure/Equation, if any:
(A)	Vinod and Tarun lived in the same locality.
(B)	It was dark outside when Vinod began his delivery.
(C)	It took Tarun more than 50 minutes to deliver the papers.
(D)	Tarun delivered 37 newspapers to customers.



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q.24</p>	<p>Cholera, typhoid, diphtheria and tuberculosis cause huge number of deaths. Poor quality drinking water has always been the world’s greatest single carrier of sickness. Disease is transmitted when sewage and drinking water come into contact. Children are particularly vulnerable. In some of the poorest countries the infant mortality rate is high. The separation of sewage and the supply of clean drinking water are the domain of civil engineers, and their work makes a significant contribution to public health. That contribution was recognized when public sanitation was voted the greatest medical breakthrough, beating the discoveries including antibiotics and vaccines in a poll organized by the British Medical Journal.</p> <p>Identify the statement(s), which is/are NOT TRUE according to the passage.</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Children are less prone to water borne diseases.</p>
(B)	<p>The infant mortality rate was high in economically weaker countries.</p>
(C)	<p>The provision of sewage and drinking water should be adequately separated from each other.</p>
(D)	<p>The literature states that the public health and sanitation was never given its due importance.</p>



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q. 25</p>	<p>Shark’s teeth have evolved to correspond to the diet of each particular species of shark. Consequently, the teeth of the great white shark bear little resemblance to those of the bull shark or nurse shark. There were essentially four different shark diets and thus four varieties of shark teeth. Sharks that feed on fish have needle like teeth, perfect for spearing and ripping. Sharks that eat mammals such as seals and sea lions have heavy, serrated teeth, typically triangular on the upper jaw and pointed on the lower jaw. Shark that feed in the benthic zone of the ocean have flattened teeth for crushing the shell of the creatures they find scuttling in the sand or clinging to rocks. Sharks that bask have teeth that are largely non-functional; these sharks filter food from the water by passing it through their gills.</p> <p>Which of the following is/are the CORRECT inference(s) as per the passage?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Shark’s teeth are not specially designed for slaughter.</p>
(B)	<p>The shape of the shark’s teeth relates to its prey.</p>
(C)	<p>Some species of sharks filter food through their gills.</p>
(D)	<p>Shark’s teeth relate to its diet.</p>



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q. 26	<p>A particular school management wants to contact all parents, all businessmen and all engineers. The following statistics are available with the school.</p> <p>Businessmen = 50</p> <p>Engineers = 25</p> <p>Parents = 2500</p> <p>Businessmen who are engineers = 0</p> <p>Businessmen who are parents = 25</p> <p>Engineers who are parents = 15</p> <p>The number of people needs to be contacted are _____ .</p>
	Space for Figure/Equation, if any:

GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

XH-C1 (Q.27 – Q.35 Carry ONE mark Each)

Q.27	<p>Suppose that a firm has a technology represented by the following production function:</p> $Y(K, L) = K^x L^y$ <p>where K denotes capital, L denotes labour, Y denotes the maximum output that is possible to produce using capital K and labour L. x and y are two positive real numbers. It is also known that the production function satisfies constant returns to scale. Then which of the following is true?</p>
(A)	$x + y = 0.5$
(B)	$x + y = 1$
(C)	$x + y = 1.5$
(D)	$x + y = 2$
Q.28	<p>The Human Development Index (HDI), as reported by the United Nations Development Program, is based on three components. Two of these components are per-capita income and a measure of educational attainment of society. The third component is</p>
(A)	Gini coefficient
(B)	percentage of population who have access to safe drinking water
(C)	percentage of population who work in non-agricultural sector
(D)	life expectancy at birth

GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.29	<p>Suppose we estimate the following regression equation:</p> $\ln(x_t) = \alpha_0 + \alpha_1 \ln(y_t) + \varepsilon_t, \quad \alpha_0, \alpha_1 > 0$ <p>where x_t and y_t are some variables. α_0 and α_1 are the intercept and the slope, respectively. ε_t is the residual term. What is the interpretation of the coefficient α_1?</p>
(A)	A 1% increase in y_t causes a $\alpha_1\%$ increase in x_t
(B)	A 1% increase in y_t causes a $\alpha_1 \times 0.01$ unit increase in x_t
(C)	A one unit increase in y_t causes a $100 \times \alpha_1\%$ increase in x_t
(D)	A one unit increase in y_t causes a α_1 unit increase in x_t
Q.30	<p>Consider the following system of equations in three variables x, y, z:</p> $\begin{aligned} -x - y - z &= 3 \\ x + y + z &= 10 \\ 2x - 3y &= 6 \end{aligned}$ <p>This system of equations has</p>
(A)	no combination of values of (x, y, z) that satisfy this system simultaneously
(B)	only one combination of values of (x, y, z) that satisfy this system simultaneously
(C)	only two combinations of values of (x, y, z) that satisfy this system simultaneously
(D)	infinitely many combinations of values of (x, y, z) that satisfy this system simultaneously



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.31	Which of the following models appropriately explains the fluctuations in potential output and long-run aggregate supply by understanding the shocks to productivity or the willingness of the worker?
(A)	Solow growth model
(B)	Real business cycle model
(C)	IS-LM model
(D)	Harrod-Domar Model
Q.32	The change in equilibrium output for an equal amount of change in government expenditure and tax revenue is linked to which one of the following multipliers?
(A)	Expenditure multiplier
(B)	Balanced Budget multiplier
(C)	Lum-sum tax multiplier
(D)	Trade multiplier



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.33	Solaris is a firm that can install solar panels at an airport to generate electricity for the airport's usage. The company claims that in 70 percent of all airports where its solar panels are installed, an airport's electricity bill is reduced by at least 40 percent. The probability that an airport's electricity bill is reduced by at least 40 percent, in seven out of ten airports where the company's solar panels are installed, equals approximately:
(A)	0.082
(B)	0.002
(C)	0.490
(D)	0.267
Q.34	IndiaSMart is a retail shop that accepts either a Rupay credit card, or a Visa credit card. 31 percent of IndiaSMart's customers carry a Rupay credit card, 44 percent of its customers carry a Visa credit card, while 18 percent of its customers carry a Rupay credit card as well as a Visa credit card. What is the probability that a customer carries at least one of the two, i.e. either a Rupay or a Visa credit card?
(A)	0.75
(B)	0.93
(C)	0.57
(D)	0.49



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.37	Let $f(x, y)$ be a continuously differentiable homogenous function of degree 4. Which of the following is necessarily true?
(A)	$x \frac{\partial f(x, y)}{\partial x} + y \frac{\partial f(x, y)}{\partial y} = f(x, y)$
(B)	$x \frac{\partial f(x, y)}{\partial x} + y \frac{\partial f(x, y)}{\partial y} = 2f(x, y)$
(C)	$x \frac{\partial f(x, y)}{\partial x} + y \frac{\partial f(x, y)}{\partial y} = 4f(x, y)$
(D)	$x \frac{\partial f(x, y)}{\partial x} + y \frac{\partial f(x, y)}{\partial y} = 8f(x, y)$
Q.38	Which of the following committees was set-up to address issues related to capital account convertibility in India?
(A)	Tandon Committee
(B)	Abid Hussain Committee
(C)	Tarapore Committee
(D)	Percy Mistry Committee



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.39	<p>The demand curve for tea in Borduria is given by</p> $D(P) = 40 - 2P$ <p>and the domestic supply curve of tea in Borduria is given by</p> $S(P) = \frac{2}{3}P$ <p>Here $D(P)$ denotes quantity demanded when price is P and $S(P)$ is quantity supplied by domestic producers at price P. Tea is traded in a competitive world market and imported into Borduria at a price of 9 per unit. Initially there was no restriction on trade. However, as a result of lobbying by the domestic suppliers, the Bordurian government imposes a tariff of 3 per unit on each unit imported. As a result of the tariff, import of tea decreased by how many units?</p>
(A)	2
(B)	3
(C)	8
(D)	9
Q.40	Bretton Woods agreement gave birth to the following organization:
(A)	GATT
(B)	RBI
(C)	NAFTA
(D)	ASEAN

**GATE 2022 Humanities and Social Sciences - Economics (XH-C1)**

Q.41	Which one of the following is a test of heteroscedasticity?
(A)	White test
(B)	Jarque-Bera test
(C)	Breusch-Godfrey test
(D)	Ljung-box test
Q.42	The law that explains the relationship between income growth and the size of government expenditure is appropriately linked to:
(A)	Wagner's law
(B)	Okun's law
(C)	Walras law
(D)	Ricardian equivalence
Q.43	As per recent Economic Survey, how many states and Union Territories (UTs) are driven by services sector in India?
(A)	15
(B)	19
(C)	25
(D)	21



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.44	<p>An economy is characterized by the following production function:</p> $Y = AK^{0.25}L^{0.75}$ <p>where K denotes capital, L denotes labour, A denotes the total factor productivity and Y denotes output produced. All capital and labour are fully employed. Suppose that the growth rate of labour is 1%, the growth rate of capital is 4%, and the growth rate of output is 4%. The growth rate of total factor productivity A is</p>
(A)	1.5 %
(B)	1.75%
(C)	2.25%
(D)	2.5%



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.45 – Q.65 Carry TWO marks Each

Q.45	<p>Suppose a firm has the following production function:</p> $f(x_1, x_2, x_3, x_4) = \min\{x_1, x_2\} + \min\{x_3, x_4\}$ <p>The per unit cost of input x_i is given by w_i, where $i = 1, 2, 3, 4$. Suppose that $w_1 = 1, w_2 = 5, w_3 = 3$, and $w_4 = 6$. If the firm is minimizing cost, which of the following input choices by the firm can be observed?</p>
(A)	$x_1 > 0, x_2 = 0, x_3 > 0, x_4 = 0$
(B)	$x_1 > 0, x_2 > 0, x_3 = 0, x_4 = 0$
(C)	$x_1 > 0, x_2 = 0, x_3 = 0, x_4 > 0$
(D)	$x_1 = 0, x_2 = 0, x_3 > 0, x_4 > 0$
Q.46	<p>Suppose an econometrician had specified the following regression:</p> $y_t = \beta_1 + \beta_2 z_{2t} + \beta_3 z_{3t} + \beta_4 z_{4t} + \varepsilon_t$ <p>but a researcher estimated the following regression:</p> $y_t = \beta_1 + \beta_2 z_{2t} + \beta_3 z_{3t} + \beta_4 z_{4t} + \beta_5 z_{5t} + \varepsilon_t$ <p>What will be the consequence of including the irrelevant variable on the estimated coefficients?</p>
(A)	Coefficient estimates will be unbiased, consistent but inefficient
(B)	Coefficient estimates will be consistent, asymptotically efficient but biased
(C)	Coefficient estimates will be inconsistent and efficient
(D)	Coefficient estimates will be biased, consistent and efficient

GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.47	<p>Okun's law says that a 1% increase in unemployment for one year is associated with a 2% decrease in GDP growth. Suppose an economy has the following expectations augmented Phillips curve:</p> $\pi = \pi^e - \beta(U - U^N), \beta > 0$ <p>where π and π^e are the inflation and expected inflation rates, respectively. U and U^N are the unemployment and natural rate of unemployment, respectively. β measures sensitivity of inflation to unemployment gap. When $\beta = 2$, by what percentage does output fall short of full-employment given that the inflation rate, expected inflation rate and natural rate of unemployment are 8%, 10% and 6%, respectively?</p>
(A)	2
(B)	4
(C)	6
(D)	8
Q.48	<p>Let $f(x)$ be the probability distribution function of a random variable X, where</p> $f(x) = (5x^4/64) \quad \text{if } -2 < x < 2$ $= 0 \quad \text{otherwise}$ <p>Let \cdot denote the modulus function. Then, $P(X < 1)$ and $P(X^2 < 3)$ are given by (respectively):</p>
(A)	$(1/32)$ and $9(\sqrt{3}/32)$
(B)	$(5/64)$ and $5(\sqrt{3}/32)$
(C)	$(1/64)$ and $(\sqrt{3}/32)$
(D)	$2(\sqrt{3}/32)$ and $(1/32)$



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.49	Liquidity Adjustment Facility (LAF) uses the following instruments:
(A)	Call Money Rate and Mumbai Inter-bank Offered Rate
(B)	Repo Rate and Reverse Repo Rate
(C)	Bank Rate and Statutory Liquidity Ratio
(D)	Cash Reserve Ratio and Prime Lending Rate
Q.50	What is the weightage of manufacturing sector in the Index of Industrial Production (IIP) during 2020-2021? <i>Note: numbers are in approximate values</i>
(A)	78%
(B)	81%
(C)	65%
(D)	71%



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.51	The curve that explains the relationship between tax rate and tax revenue is known as:
(A)	Laffer curve
(B)	Engle curve
(C)	Beveridge curve
(D)	Phillips curve
Q.52	Suppose the estimated consumption equation of an economy is: $C = 40 + \beta Y_d$ where Y_d is the personal disposable income, β is the marginal propensity to consume (MPC). Government expenditure (G) is given as 90. Total tax (T_x) received is δY , where Y is aggregate output or real income and δ is tax to real income proportionality factor. Autonomous investment (I_A) is given as 80. What are the tax revenue and budget surplus of the government when $\beta = 0.75$ and $\delta = 0.20$? All units are measured in constant rupees.
(A)	Tax revenue = Rs. 105 and surplus = Rs. 15
(B)	Tax revenue = Rs. 118 and surplus = Rs. 28
(C)	Tax revenue = Rs. 110 and surplus = Rs. 20
(D)	Tax revenue = Rs. 125 and surplus = Rs. 35



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q.53</p>	<p>Consider a two-period consumption model in which a representative household lives for two periods only. In period 1, he earns income y_1 and consumes c_1. In period 2, he earns y_2 and consumes c_2. He can borrow and lend at the same rate of interest (r). His lifetime utility function is as follows:</p> $U(c_1, c_2) = \ln(c_1) + \beta \ln(c_2)$ <p>where $\beta > 0$ measures the sensitivity of future period's consumption. What will be the marginal propensity to consume of current consumption, i.e. $\frac{\partial c_1}{\partial y_1}$?</p>
(A)	$\frac{1}{1 + \beta}$
(B)	$\frac{1}{1 + \beta^2}$
(C)	$\frac{y_1}{1 + \beta}$
(D)	$\frac{y_1}{1 + \beta^2}$



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q. 54</p>	<p>Suppose an investigator has specified the following simultaneous equation model:</p> $y_{1,t} = \alpha_{1,0} + \alpha_{1,2}y_{2,t} + \alpha_2M_t + \alpha_3K_t + u_t \quad (1)$ $y_{2,t} = \alpha_{2,0} + \alpha_{2,1}y_{1,t} + \alpha_3I_t + v_t \quad (2)$ <p>where $y_{1,t}$ and $y_{2,t}$ are endogenous variables. M_t, K_t and I_t are predetermined variables. u_t and v_t are residual terms. Based on the order condition of identification, which one of the following statements are correct?</p>
<p>(A)</p>	<p>Equations (1) and (2) are exactly identified</p>
<p>(B)</p>	<p>Equation (1) is exactly identified and equation (2) is over-identified</p>
<p>(C)</p>	<p>Equation (1) is over-identified and equation (2) is exactly identified</p>
<p>(D)</p>	<p>Both the equations are under-identified</p>

GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q.56</p>	<p>A producer manufactures batteries by using techniques I and II. The capacities (in ampere hours) of 12 randomly selected batteries manufactured by using technique I are: 140, 132, 136, 142, 138, 150, 154, 150, 152, 136, 144 and 142. Moreover, the capacities (in ampere hours) of 14 randomly selected batteries manufactured by using technique II are: 144, 134, 132, 130, 136, 146, 140, 128, 131, 128, 150, 137, 130 and 135.</p> <p>Suppose that battery capacities manufactured by using techniques I and II are normally distributed, with unknown means, μ_I and μ_{II} respectively, and an unknown common variance σ^2. Consider the null hypothesis $H_0: (\mu_I - \mu_{II}) = \gamma$ ampere hours.</p> <p>For which of the following values of γ should the null hypothesis H_0 be accepted, against the alternative hypothesis $H_1: (\mu_I - \mu_{II}) \neq \gamma$ ampere hours, at 10% level of significance?</p> <p>Note that if Z is a standard normal variate, then: $P(Z \leq 1.282) = 0.900$, $P(Z \leq 1.645) = 0.950$, $P(Z \leq 1.960) = 0.975$ and $P(Z \leq 2.326) = 0.990$</p> <p>Further, if a random variable T follows the Student's t-distribution, with degrees of freedom r, then the α-percentile values $t_{\alpha,r}$ for various values of α and r are given by (where $P(T \leq t_{\alpha,r}) = \alpha$):</p> <p>$t_{0.90,24} = 1.318$, $t_{0.90,25} = 1.316$, $t_{0.90,26} = 1.315$, $t_{0.95,24} = 1.711$, $t_{0.95,25} = 1.708$, $t_{0.95,26} = 1.706$, $t_{0.975,24} = 2.064$, $t_{0.975,25} = 2.060$, $t_{0.975,26} = 2.056$.</p>
(A)	$\gamma = 4$
(B)	$\gamma = 7$
(C)	$\gamma = 10$
(D)	$\gamma = 13$



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.57	Tom and Jerry both arrive at a petrol pump. Without worrying about price, Tom says, “I want 10 liters of petrol.” Also, without worrying about price, Jerry says, “I want petrol worth 1000 rupees.” The own price elasticities of demand for Tom (denoted by ϵ_T) and Jerry (denoted by ϵ_J) are:
(A)	$\epsilon_T = 0, \epsilon_J = -\infty$
(B)	$\epsilon_T = 0, \epsilon_J = -1$
(C)	$\epsilon_T = -\infty, \epsilon_J = 0$
(D)	$\epsilon_T = -1, \epsilon_J = 0$
Q.58	Which of the following variables are pushed upwards by ‘Seigniorage’?
(A)	Money supply
(B)	Inflation
(C)	Tax rate
(D)	Interest rate



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.59	Suppose Raju enters the job market at age 25 and earns annual income of Rs. 6000. He retires at age 65 and his life expectancy is 75 years. He does not own any assets. Assume that Raju consumes annual income uniformly over his lifetime. What will be his average propensity to consume during employment years?
(A)	0.90
(B)	0.80
(C)	0.50
(D)	0.40
Q.60	<p>A monopolist faces the following inverse demand function:</p> $P = 40 - Q,$ <p>where P denotes price and Q denotes quantity. The monopolist has zero fixed cost and a marginal cost of 5 per unit of output produced. The monopolist aims to maximize profit. Suppose the government imposes a tax of 5 per unit of output on the monopolist. As a result, the price charged by the profit-maximizing monopolist to the consumer increases by:</p>
(A)	0
(B)	2.5
(C)	5
(D)	10



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

Q.61	In the flexible exchange rate environment with perfect capital mobility, a fiscal stimulus will be linked to which of the following statements?
(A)	Fiscal policy increases the domestic outcome
(B)	Fiscal policy does not increase the domestic output
(C)	Fiscal policy leads domestic exports to fall
(D)	Fiscal policy appreciates the domestic currency

Q.62	<p>Consider a lottery with two possible outcomes:</p> <ul style="list-style-type: none"> • Rupees 100 with probability 0.6 • Rupees 50 with probability 0.4 <p>The maximum amount that a risk-neutral person would be willing to pay to play the above lottery equals Rupees _____(in integer).</p>
Q.63	<p>Mr. Sharma's consumption preference for tea (denoted by x) and sugar (denoted by y) is given by the utility function</p> $U(x, y) = \min\{x, 2y\}$ <p>The price per unit of tea is 10 and the price per unit of sugar is 10. Mr. Sharma's total income is 900.</p> <p>The optimum quantity of tea purchased by Mr. Sharma equals _____(in integer).</p>



GATE 2022 Humanities and Social Sciences - Economics (XH-C1)

<p>Q.64</p>	<p>Suppose α is a real number between 0 and 1. Rohit is choosing x and y to maximize the following utility function:</p> $U(x, y) = x^2 + 2xy + y^2 + 4\alpha^2 + 8\alpha + 10$ <p>subject to the following constraints:</p> $2x + y = 10,$ $x, y \geq 0$ <p>Then the optimal value of y chosen by Rohit is _____ (in integer).</p>
<p>Q.65</p>	<p>In a competitive market for dry-cleaning, the inverse market demand function is given by</p> $P = 100 - Q$ <p>where P denotes price and Q denotes quantity. The (private) marginal cost (MC) of production for all the dry-cleaning firms together is given by</p> $MC = 20 + 2Q$ <p>The market pollution generated by the dry-cleaning processes of all firms creates external damages given by the marginal external cost (MEC):</p> $MEC = 2Q$ <p>The socially efficient output of dry-cleaning is _____ (in integer).</p>



Q. No.	Session	Question Type	Subject Name	Key/Range	Mark
1	4	MCQ	GA	C	1
2	4	MCQ	GA	D	1
3	4	MCQ	GA	C	1
4	4	MCQ	GA	C	1
5	4	MCQ	GA	C	1
6	4	MCQ	GA	B	2
7	4	MCQ	GA	D	2
8	4	MCQ	GA	A	2
9	4	MCQ	GA	C	2
10	4	MCQ	GA	C	2
11	4	MCQ	XH-B1	B	1
12	4	MCQ	XH-B1	C	1
13	4	MCQ	XH-B1	C	1
14	4	MCQ	XH-B1	B	1
15	4	MCQ	XH-B1	A	1
16	4	MSQ	XH-B1	B, C	1
17	4	NAT	XH-B1	33 to 33	1
18	4	MCQ	XH-B1	A	2
19	4	MCQ	XH-B1	D	2
20	4	MCQ	XH-B1	B	2
21	4	MCQ	XH-B1	A	2
22	4	MCQ	XH-B1	A OR D	2
23	4	MSQ	XH-B1	A, D	2
24	4	MSQ	XH-B1	A, D OR A, B, D	2
25	4	MSQ	XH-B1	B, C, D	2
26	4	NAT	XH-B1	2535 to 2535	2
27	4	MCQ	XH-C1	B	1
28	4	MCQ	XH-C1	D	1
29	4	MCQ	XH-C1	A	1
30	4	MCQ	XH-C1	A	1
31	4	MCQ	XH-C1	B	1
32	4	MCQ	XH-C1	B	1
33	4	MCQ	XH-C1	D	1
34	4	MCQ	XH-C1	C	1
35	4	MCQ	XH-C1	C	1
36	4	MCQ	XH-C1	A	1
37	4	MCQ	XH-C1	C	1
38	4	MCQ	XH-C1	C	1
39	4	MCQ	XH-C1	C	1
40	4	MCQ	XH-C1	A	1
41	4	MCQ	XH-C1	A	1
42	4	MCQ	XH-C1	A	1
43	4	MCQ	XH-C1	A	1
44	4	MCQ	XH-C1	C	1



45	4	MCQ	XH-C1	B	2
46	4	MCQ	XH-C1	A	2
47	4	MCQ	XH-C1	A	2
48	4	MCQ	XH-C1	A	2
49	4	MCQ	XH-C1	B	2
50	4	MCQ	XH-C1	A	2
51	4	MSQ	XH-C1	A	2
52	4	MSQ	XH-C1	A	2
53	4	MSQ	XH-C1	A	2
54	4	MSQ	XH-C1	B	2
55	4	MSQ	XH-C1	B	2
56	4	MSQ	XH-C1	A, B, C	2
57	4	MSQ	XH-C1	B	2
58	4	MSQ	XH-C1	A, B	2
59	4	MSQ	XH-C1	B	2
60	4	MSQ	XH-C1	B	2
61	4	MSQ	XH-C1	B, C, D	2
62	4	NAT	XH-C1	80 to 80	2
63	4	NAT	XH-C1	60 to 60	2
64	4	NAT	XH-C1	10 to 10	2
65	4	NAT	XH-C1	16 to 16	2

GATE 2022 General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark each.

Q.1	Inhaling the smoke from a burning _____ could _____ you quickly.
(A)	tire / tier
(B)	tire / tyre
(C)	tyre / tire
(D)	tyre / tier

Q.2	A sphere of radius r cm is packed in a box of cubical shape. What should be the minimum volume (in cm^3) of the box that can enclose the sphere?
(A)	$\frac{r^3}{8}$
(B)	r^3
(C)	$2r^3$
(D)	$8r^3$



Q.3	<p>Pipes P and Q can fill a storage tank in full with water in 10 and 6 minutes, respectively. Pipe R draws the water out from the storage tank at a rate of 34 litres per minute. P, Q and R operate at a constant rate.</p> <p>If it takes one hour to completely empty a full storage tank with all the pipes operating simultaneously, what is the capacity of the storage tank (in litres)?</p>
(A)	26.8
(B)	60.0
(C)	120.0
(D)	127.5

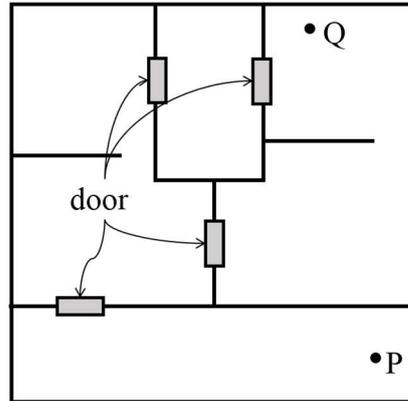


Q.4	<p>Six persons P, Q, R, S, T and U are sitting around a circular table facing the center not necessarily in the same order. Consider the following statements:</p> <ul style="list-style-type: none">• P sits next to S and T.• Q sits diametrically opposite to P.• The shortest distance between S and R is equal to the shortest distance between T and U. <p>Based on the above statements, Q is a neighbor of</p>
(A)	U and S
(B)	R and T
(C)	R and U
(D)	P and S

Q.5

A building has several rooms and doors as shown in the top view of the building given below. The doors are closed initially.

What is the minimum number of doors that need to be opened in order to go from the point P to the point Q?



(A) 4

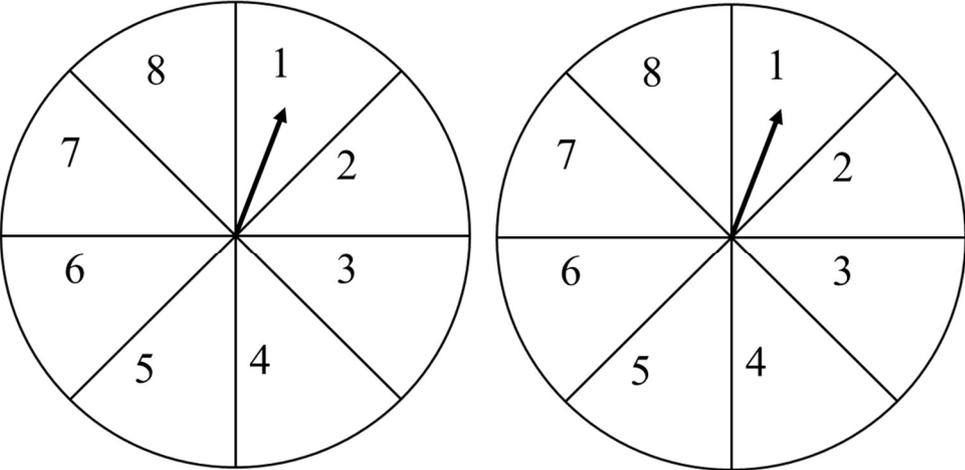
(B) 3

(C) 2

(D) 1

Q. 6 – Q. 10 Carry TWO marks each.

<p>Q.6</p>	<p>Rice, a versatile and inexpensive source of carbohydrate, is a critical component of diet worldwide. Climate change, causing extreme weather, poses a threat to sustained availability of rice. Scientists are working on developing Green Super Rice (GSR), which is resilient under extreme weather conditions yet gives higher yields sustainably.</p> <p>Which one of the following is the CORRECT logical inference based on the information given in the above passage?</p>
<p>(A)</p>	<p>GSR is an alternative to regular rice, but it grows only in an extreme weather</p>
<p>(B)</p>	<p>GSR may be used in future in response to adverse effects of climate change</p>
<p>(C)</p>	<p>GSR grows in an extreme weather, but the quantity of produce is lesser than regular rice</p>
<p>(D)</p>	<p>Regular rice will continue to provide good yields even in extreme weather</p>

<p>Q.7</p>	<p>A game consists of spinning an arrow around a stationary disk as shown below. When the arrow comes to rest, there are eight equally likely outcomes. It could come to rest in any one of the sectors numbered 1, 2, 3, 4, 5, 6, 7 or 8 as shown.</p> <p>Two such disks are used in a game where their arrows are independently spun.</p> <p>What is the probability that the sum of the numbers on the resulting sectors upon spinning the two disks is equal to 8 after the arrows come to rest?</p> <div style="text-align: center;">  </div>
<p>(A)</p>	<p>$\frac{1}{16}$</p>
<p>(B)</p>	<p>$\frac{5}{64}$</p>
<p>(C)</p>	<p>$\frac{3}{32}$</p>
<p>(D)</p>	<p>$\frac{7}{64}$</p>

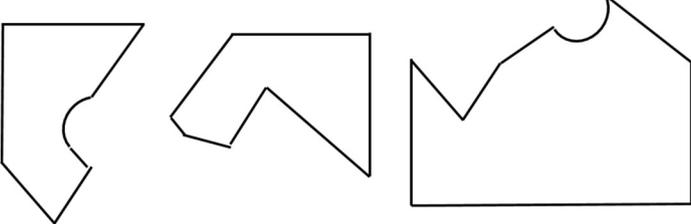
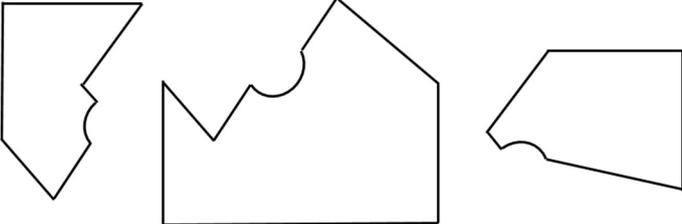
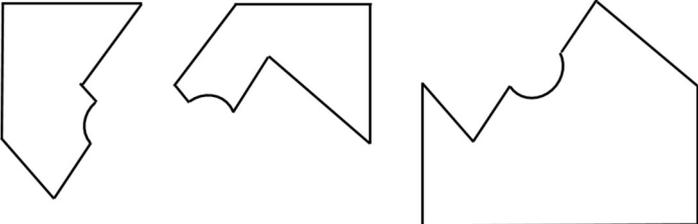
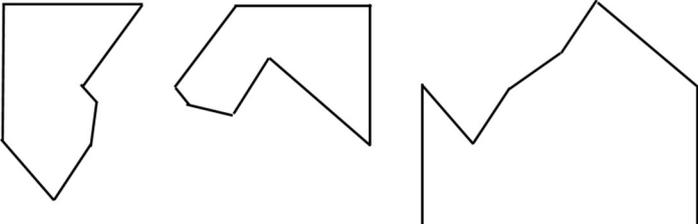


Q.8	<p>Consider the following inequalities.</p> <p>(i) $3p - q < 4$</p> <p>(ii) $3q - p < 12$</p> <p>Which one of the following expressions below satisfies the above two inequalities?</p>
(A)	$p + q < 8$
(B)	$p + q = 8$
(C)	$8 \leq p + q < 16$
(D)	$p + q \geq 16$



<p>Q.9</p>	<p>Given below are three statements and four conclusions drawn based on the statements.</p> <p>Statement 1: Some engineers are writers.</p> <p>Statement 2: No writer is an actor.</p> <p>Statement 3: All actors are engineers.</p> <p>Conclusion I: Some writers are engineers.</p> <p>Conclusion II: All engineers are actors.</p> <p>Conclusion III: No actor is a writer.</p> <p>Conclusion IV: Some actors are writers.</p> <p>Which one of the following options can be logically inferred?</p>
<p>(A)</p>	<p>Only conclusion I is correct</p>
<p>(B)</p>	<p>Only conclusion II and conclusion III are correct</p>
<p>(C)</p>	<p>Only conclusion I and conclusion III are correct</p>
<p>(D)</p>	<p>Either conclusion III or conclusion IV is correct</p>



<p>Q.10</p>	<p>Which one of the following sets of pieces can be assembled to form a square with a single round hole near the center? Pieces cannot overlap.</p>
<p>(A)</p>	
<p>(B)</p>	
<p>(C)</p>	
<p>(D)</p>	



GATE 2022 English (XH-C2)

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

Q.11	A relationship is expressed as Iodine : Goitre . The pair(s) of words showing SIMILAR relationship is/are
	Space for Figure/Equation, if any:
(A)	Mango : Anaemia
(B)	Insulin : Diabetes
(C)	Fat : Obesity
(D)	Hormones : Heredity
Q.12	Three individuals are named P, Q, and R. Together they have a total of fifteen children of which nine are boys. P has three girls and Q has same number of boys. Q has one more child than P, who has four children. R has four more boys than the number of girls. The number of girls of R is equal to the number of boys of P. How many boys do R and P have?
	Space for Figure/Equation, if any:
(A)	$R = 3, P = 3$
(B)	$R = 4, P = 2$
(C)	$R = 5, P = 1$
(D)	$R = 2, P = 4$



GATE 2022 English (XH-C2)

Q.13	<p>A sentence has been given below.</p> <p><i>The train will leave at 8:30 PM, we have been ready by 7:30 PM, so that we can reach the station on time.</i></p> <p>To make the above sentence grammatically correct, the phrase marked in bold is to be replaced by</p>
	Space for Figure/Equation, if any:
(A)	were
(B)	are
(C)	must be
(D)	should have
Q.14	<p>Complete the sentence correctly using the options given below.</p> <p>Hastings ____ (p) ____ developed as a holiday resort after ____ (q) ____ .</p>
	Space for Figure/Equation, if any:
(A)	(p) = a seaside town, (q) = the first world war
(B)	(p) = , a seaside town, (q) = the First World War
(C)	(p) = , a Seaside Town, (q) = World War I
(D)	(p) = A seaside town (q) = World War I



GATE 2022 English (XH-C2)

Q.15	<p>The Arecibo telescope does not resemble what most of us think of when we hear the word telescope. Its reflective surface covers an area of 20 acres, which is quite remarkable. Dangling above it are towers and cables, sub-reflectors and antennas, all of which can be positioned using 26 motors to transmit radio waves and receive echoes with astonishing precision.</p> <p>From the passage, it can be inferred that most telescopes</p>
	Space for Figure/Equation, if any:
(A)	are not as large as Arecibo
(B)	do not have reflective surface
(C)	cannot be re-positioned
(D)	strictly have 26 motors



GATE 2022 English (XH-C2)

Q.16	<p>Tailgating another vehicle is unsafe and illegal. Many rear-end collisions are caused by drivers following too close to the vehicle in front of them. The rules state that a driver must keep significant distance from the vehicle in front in order to stop safely and avoid a collision. Drivers should allow a minimum two seconds gap between their vehicle and the one ahead. At 60 km per hour, this equates to a gap of 33 meters; at 100 km per hour, it equates to a gap of 55 meters. More distance is needed to safely stop in rain or poor visibility, as during rain slippery roads reduce the effectiveness of braking.</p> <p>Which of the following statement(s) can be inferred from the above passage?</p>
	Space for Figure/Equation, if any:
(A)	People drive faster in rain and under poor visibility.
(B)	Braking may not be as effective during rain as in the dry conditions.
(C)	Tailgating is against the road rules.
(D)	Collision has no relationship with tailgating.
Q.17	<p>There are three separate, but equal-sized boxes. Inside each box, there are two separate small boxes. Inside each of the small boxes, there are four even smaller boxes. The total number of boxes will be _____ .</p>
	Space for Figure/Equation, if any:

GATE 2022 English (XH-C2)

Q.18 – Q.26 Carry TWO marks Each

Q.18	<p>In a specific language, <i>xer dan</i> means “big horse”, <i>liro cas</i> means “red tomato” and <i>dum cas dan</i> means “big red barn”.</p> <p>The equivalent word for barn in this language is</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<i>dum</i>
(B)	<i>liro</i>
(C)	<i>dan</i>
(D)	<i>cas</i>
Q.19	<p>Park street is parallel to Rock street. Garden street is perpendicular (90°) to Lake street. Lake street is parallel to Rock street.</p> <p>For the situation described above, the TRUE statement is</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	Park street is perpendicular to Lake street
(B)	Rock street is parallel to Garden street
(C)	Park street is parallel to Garden street
(D)	Garden street is perpendicular to Park street



GATE 2022 English (XH-C2)

Q.20	Six examinations are required to be conducted in a week starting from Sunday to Saturday. Hindi is not scheduled on the first day and English is not scheduled before Hindi. Mathematics is scheduled one day after Physics. Biology is scheduled two days after Hindi. One day prior to Chemistry, there is no examination. Only one examination can be scheduled on a single day and Sunday is not an off day. What are the subjects scheduled on first and the last days?
	Space for Figure/Equation, if any:
(A)	First day Physics, Last day Biology
(B)	First day Physics, Last day Chemistry
(C)	First day Physics, Last day English
(D)	First day English, Last day Biology



GATE 2022 English (XH-C2)

<p>Q.21</p>	<p>A 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 P, Q, R, and S) are jumbled up.</p> <p><i>First sentence:</i> Smoke oozed up between the planks.</p> <p>P: Passengers were told to be ready to quit the ship.</p> <p>Q: The rising gale fanned the smouldering fire.</p> <p>R: Everyone now knew there was fire onboard.</p> <p>S: Flames broke out here and there.</p> <p><i>Sixth sentence:</i> Most people bore the shock bravely.</p> <p>The most logically CORRECT order for the given jumbled up sentences is</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>QSRP</p>
<p>(B)</p>	<p>QPSR</p>
<p>(C)</p>	<p>RSPQ</p>
<p>(D)</p>	<p>PQRS</p>



GATE 2022 English (XH-C2)

<p>Q.22</p>	<p>For a painting to succeed, it is essential that the painter and his public agree about what is significant. The subject of the painting may have a personal meaning for the painter or a common person; but there can also be the possibility of their agreement on its general meaning. It is at this point that the culture of the society and the period in question precedes the artists and her/his art. Renaissance art would have meant nothing to the Aztecs, and vice versa. If, to some extent, a few intellectuals can appreciate them both today, it is because their culture is a historical one. Its inspiration is history and all known developments to date.</p> <p>According to the passage, which of the following is/are NOT necessarily among the attributes needed for a painter to succeed?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>The subject must have a personal meaning for the painter.</p>
(B)	<p>The painter is able to communicate and justify the significance of its subject selection.</p>
(C)	<p>The painter and the public agree on what is significant.</p>
(D)	<p>The painting of the subjects is driven by public demand.</p>



GATE 2022 English (XH-C2)

Q.23	<p>Vinod has a pre-determined route. Each morning he delivers 37 newspapers to customers in his neighborhood. It takes Vinod 50 minutes to deliver all the papers. When Vinod was sick or had other engagements, his friend Tarun, who lives on the same street delivered the papers on his behalf.</p> <p>Find the statement(s) that must be TRUE according to the given information.</p>
	Space for Figure/Equation, if any:
(A)	Vinod and Tarun lived in the same locality.
(B)	It was dark outside when Vinod began his delivery.
(C)	It took Tarun more than 50 minutes to deliver the papers.
(D)	Tarun delivered 37 newspapers to customers.



GATE 2022 English (XH-C2)

<p>Q.24</p>	<p>Cholera, typhoid, diphtheria and tuberculosis cause huge number of deaths. Poor quality drinking water has always been the world’s greatest single carrier of sickness. Disease is transmitted when sewage and drinking water come into contact. Children are particularly vulnerable. In some of the poorest countries the infant mortality rate is high. The separation of sewage and the supply of clean drinking water are the domain of civil engineers, and their work makes a significant contribution to public health. That contribution was recognized when public sanitation was voted the greatest medical breakthrough, beating the discoveries including antibiotics and vaccines in a poll organized by the British Medical Journal.</p> <p>Identify the statement(s), which is/are NOT TRUE according to the passage.</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Children are less prone to water borne diseases.</p>
(B)	<p>The infant mortality rate was high in economically weaker countries.</p>
(C)	<p>The provision of sewage and drinking water should be adequately separated from each other.</p>
(D)	<p>The literature states that the public health and sanitation was never given its due importance.</p>



GATE 2022 English (XH-C2)

<p>Q.25</p>	<p>Shark's teeth have evolved to correspond to the diet of each particular species of shark. Consequently, the teeth of the great white shark bear little resemblance to those of the bull shark or nurse shark. There were essentially four different shark diets and thus four varieties of shark teeth. Sharks that feed on fish have needle like teeth, perfect for spearing and ripping. Sharks that eat mammals such as seals and sea lions have heavy, serrated teeth, typically triangular on the upper jaw and pointed on the lower jaw. Shark that feed in the benthic zone of the ocean have flattened teeth for crushing the shell of the creatures they find scuttling in the sand or clinging to rocks. Sharks that bask have teeth that are largely non-functional; these sharks filter food from the water by passing it through their gills.</p> <p>Which of the following is/are the CORRECT inference(s) as per the passage?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Shark's teeth are not specially designed for slaughter.</p>
(B)	<p>The shape of the shark's teeth relates to its prey.</p>
(C)	<p>Some species of sharks filter food through their gills.</p>
(D)	<p>Shark's teeth relate to its diet.</p>



GATE 2022 English (XH-C2)

Q.26	<p>A particular school management wants to contact all parents, all businessmen and all engineers. The following statistics are available with the school.</p> <p>Businessmen = 50</p> <p>Engineers = 25</p> <p>Parents = 2500</p> <p>Businessmen who are engineers = 0</p> <p>Businessmen who are parents = 25</p> <p>Engineers who are parents = 15</p> <p>The number of people needs to be contacted are _____ .</p>
	Space for Figure/Equation, if any:



GATE 2022 English (XH-C2)

Q.27 – Q.44 Carry ONE mark each

Q.27	<p>“He who is unable to live in society, or who has no need because he is sufficient for himself, must be either a beast or a god.”</p> <p>Who has given the above statement?</p>
(A)	Aristotle
(B)	Plato
(C)	Socrates
(D)	Rousseau
Q.28	<p>“History is not made only in statecraft; its lasting results are produced in the ranks of learned men.”</p> <p>Name the play from which the above excerpt has been taken.</p>
(A)	Mahesh Dattani’s <i>Thirty Days in September</i>
(B)	Vijay Tendulkar’s <i>Silence! The Court is in Session</i>
(C)	Girish Karnad’s <i>Tughlaq</i>
(D)	Rabindranath Tagore’s <i>Mukta-Dhara</i>

**GATE 2022 English (XH-C2)**

Q.29	Who amongst the following popularised the term ‘objective correlative’, which is often used in formalist criticism?
(A)	Virginia Woolf
(B)	C. S. Lewis
(C)	Matthew Arnold
(D)	T. S. Eliot
Q.30	Which of the following critics preferred Shakespeare’s comedies to his tragedies?
(A)	Samuel Johnson
(B)	Alexander Pope
(C)	John Dryden
(D)	Thomas De Quincey



GATE 2022 English (XH-C2)

Q.31	Who among the following has been credited with laying the foundation of comparative literature by Russian Formalists?
(A)	Viktor Shklovsky
(B)	Alexander Veselovsky
(C)	Vladimir Propp
(D)	Roman Jakobson
Q.32	<i>Lyrical Ballads</i> , considered to be the manifesto of Romantic Poetry, was first published in the year _____.
(A)	1795
(B)	1797
(C)	1789
(D)	1798



GATE 2022 English (XH-C2)

Q.33	<p>Identify the work from which the following excerpt has been taken:</p> <p>“In a universe that is suddenly deprived of illusions and of light, man feels a stranger. He is an irremediable exile This divorce between man and his life, the actor and his setting, truly constitutes the feeling of Absurdity.”</p>
(A)	Frantz Kafka’s <i>The Trial</i>
(B)	Samuel Beckett’s <i>Waiting for Godot</i>
(C)	Albert Camus’ <i>The Myth of Sisyphus</i>
(D)	Harold Pinter’s <i>The Homecoming</i>
Q.34	<p>What does gynocriticism recommend as an approach to literature?</p>
(A)	Considering women’s literature from men’s point of view
(B)	Examining women’s literature confirming gender stereotypes only
(C)	Becoming more familiar with the history of women and women’s writing
(D)	Becoming more familiar with gerontology



GATE 2022 English (XH-C2)

Q.35	Identify the novel which opens with the following lines: “It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair.”
(A)	Jane Austen’s <i>Emma</i>
(B)	Emily Brontë’s <i>Wuthering Heights</i>
(C)	Charles Dickens’ <i>A Tale of Two Cities</i>
(D)	H. G. Wells’ <i>The Time Machine</i>
Q.36	Which of the following terms does not form a part of seven types of ambiguities propounded by William Empson?
(A)	Simulacra
(B)	Metaphor
(C)	Pun
(D)	Simile

**GATE 2022 English (XH-C2)**

Q.37	Which of the following poem(s) has/have been influenced by Hindu philosophy?
(A)	The Solitary Reaper
(B)	Brahma
(C)	The Curse of Kehama
(D)	Kubla Khan
Q.38	Which of the following human behaviour(s) is/are important to a Freudian psychoanalytical study of William Shakespeare's <i>Hamlet</i> ?
(A)	Art of speaking
(B)	Changes in emotional states
(C)	Neurotic behaviour
(D)	Merry-making



GATE 2022 English (XH-C2)

Q.39	Which of the following novel-author combination(s) is/are correct?
(A)	<i>Where Shall We Go This Summer</i> -Jane Austen
(B)	<i>A Passage to England</i> - Nirad C Chaudhuri
(C)	<i>The Mayor of Casterbridge</i> -Thomas Hardy
(D)	<i>Pride and Prejudice</i> - Anita Desai
Q.40	Which of the following statements is/are correct about Phenomenology?
(A)	It is a form of methodological idealism, seeking to explore an abstraction called 'human consciousness'.
(B)	It is a philosophical method associated with Edmund Husserl.
(C)	It believes that the act of thinking and the object of thought are internally related, mutually dependent.
(D)	Heidegger's <i>Being and Time</i> is an important phenomenological treatise supporting the stand of Husserl.



GATE 2022 English (XH-C2)

Q.41	Chitra Divakaruni's <i>The Mistress of Spices</i> is _____.
(A)	an experiment in magic realism
(B)	about immigrant experience
(C)	a science fiction
(D)	an epistolary novel
Q.42	Which of the following is/are correct about postmodernist critics?
(A)	They foreground fiction and exemplify 'disappearance of the real'.
(B)	They foreground irony.
(C)	They tend towards reflexivity.
(D)	They challenge the distinction between high and low cultures.



GATE 2022 English (XH-C2)

Q.43	The literary theory of Deconstruction argues that _____.
(A)	texts are always heterogeneous
(B)	the meaning of a text never relies on context
(C)	any system for the production of meaning may be bound by context, yet also limitless
(D)	texts are always rigid in meaning
Q.44	In the context of the Reader-Response Theory, Louise M Rosenblatt in her essay “The Poem as Event”, considers that the reader should _____.
(A)	participate in a transaction with the text
(B)	act against a text
(C)	be acted upon by the text
(D)	reject the text

GATE 2022 English (XH-C2)

Q.45 – Q.65 Carry TWO marks each.

Q.45	Roland Barthes in his famous essay, “The Death of the Author” _____.
(A)	believes that the text is to be interpreted in the biographical context of the author
(B)	challenges the author’s claim as “cogito”, or origin of all knowledge
(C)	believes that the author has sole claim to his work
(D)	concludes that an author is an atypical product of his social milieu
Q.46	What is common among the following novels? Cormac McCarthy’s <i>The Road</i> George Orwell’s <i>Nineteen Eighty Four</i> Margaret Atwood’s <i>The Handmaid’s Tale</i>
(A)	These are examples of Utopian fiction.
(B)	These are examples of Dystopian fiction.
(C)	They present an idealistic picture of the world.
(D)	They abound in pleasant descriptions of landscapes, peoples and places.



GATE 2022 English (XH-C2)

Q.47

Match the following authors with their pseudonyms:

Author	Pseudonym
i. George Eliot	a. Victoria Lucas
ii. Sylvia Plath	b. Currer Bell
iii. H. H. Munro	c. Mary Ann Evans
iv. Charlotte Brontë	d. Saki

(A)

i-d, ii-b, iii-a, iv-c

(B)

i-b, ii-a, iii-c, iv-d

(C)

i-a, ii-d, iii-b, iv-c

(D)

i-c, ii-a, iii-d, iv-b

**GATE 2022 English (XH-C2)**

Q.48	<p>“This literary mode parallels the flouting of authority and inversion of social hierarchies that, in many cultures, are permitted in a season of It does so by introducing a mingling of voices from diverse social levels that are free to mock and subvert authority, to flout social norms by ribaldry, and to exhibit various ways of profaning what is ordinarily regarded as sacrosanct.”</p> <p>The above description explains the concept of _____.</p>
(A)	Magic Realism
(B)	Intertextuality
(C)	Carnavalesque
(D)	Heteroglossia



GATE 2022 English (XH-C2)

<p>Q.49</p>	<p>“Postcolonial perspectives emerge from the colonial testimony of Third World countries and the discourses of ‘minorities’ within the geopolitical divisions of East and West, North and South. They intervene in those ideological discourses of modernity that attempt to give a hegemonic ‘normality’ to the uneven development and the differential, often disadvantaged, histories of nations, races, communities, people.”</p> <p>The above commentary on the postcolonial perspective has been extracted from which of the following?</p>
<p>(A)</p>	<p>Edward Said’s <i>Orientalism</i></p>
<p>(B)</p>	<p>Homi K Bhabha’s <i>The Location of Culture</i></p>
<p>(C)</p>	<p>Leela Gandhi’s <i>Postcolonial Theory</i></p>
<p>(D)</p>	<p>Bill Ashcroft et al., eds. <i>The Post-colonial Studies Reader</i></p>



GATE 2022 English (XH-C2)

<p>Q.50</p>	<p>Match the following excerpts with their authors:</p> <table border="1" data-bbox="333 297 1372 768"> <tr> <td data-bbox="333 297 1082 387"> <p>i. Rapt, twirling in thy hand a withered spray, And waiting for the spark from heaven to fall.</p> </td> <td data-bbox="1082 297 1372 387"> <p>a. Jane Austen</p> </td> </tr> <tr> <td data-bbox="333 387 1082 600"> <p>ii. Shakespeare one gets acquainted with without knowing how. It is part of an English man's constitution. His thoughts and beauties are so spread abroad that one touches upon them everywhere, one is intimate with him by instinct.</p> </td> <td data-bbox="1082 387 1372 600"> <p>b. Thomas Hardy</p> </td> </tr> <tr> <td data-bbox="333 600 1082 685"> <p>iii. It is as natural to die as to be born; and to a little infant, perhaps, the one is as painful as the other.</p> </td> <td data-bbox="1082 600 1372 685"> <p>c. Matthew Arnold</p> </td> </tr> <tr> <td data-bbox="333 685 1082 768"> <p>iv. Happiness was but the occasional episode in a general drama of pain.</p> </td> <td data-bbox="1082 685 1372 768"> <p>d. Francis Bacon</p> </td> </tr> </table>	<p>i. Rapt, twirling in thy hand a withered spray, And waiting for the spark from heaven to fall.</p>	<p>a. Jane Austen</p>	<p>ii. Shakespeare one gets acquainted with without knowing how. It is part of an English man's constitution. His thoughts and beauties are so spread abroad that one touches upon them everywhere, one is intimate with him by instinct.</p>	<p>b. Thomas Hardy</p>	<p>iii. It is as natural to die as to be born; and to a little infant, perhaps, the one is as painful as the other.</p>	<p>c. Matthew Arnold</p>	<p>iv. Happiness was but the occasional episode in a general drama of pain.</p>	<p>d. Francis Bacon</p>
<p>i. Rapt, twirling in thy hand a withered spray, And waiting for the spark from heaven to fall.</p>	<p>a. Jane Austen</p>								
<p>ii. Shakespeare one gets acquainted with without knowing how. It is part of an English man's constitution. His thoughts and beauties are so spread abroad that one touches upon them everywhere, one is intimate with him by instinct.</p>	<p>b. Thomas Hardy</p>								
<p>iii. It is as natural to die as to be born; and to a little infant, perhaps, the one is as painful as the other.</p>	<p>c. Matthew Arnold</p>								
<p>iv. Happiness was but the occasional episode in a general drama of pain.</p>	<p>d. Francis Bacon</p>								
<p>(A)</p>	<p>i-a, ii-c, iii-b, iv-d</p>								
<p>(B)</p>	<p>i-b, ii-d, iii-a, iv-c</p>								
<p>(C)</p>	<p>i-c, ii-a, iii-d, iv-b</p>								
<p>(D)</p>	<p>i-d, ii-c, iii-b, iv-a</p>								



GATE 2022 English (XH-C2)

Q.51	Which of the following statements is the most appropriate in the context of Françoise d' Eaubonne's concept of Eco-feminism?
(A)	It is a revolution by women against men to protect Nature.
(B)	It is a philosophical idea to counter the oppression of women by men, as similar to the oppression and destruction of Nature by men.
(C)	It is a term used to describe how the human race could be saved by men initiating an ecological revolution.
(D)	It is a term used to describe the interface between women and technology.
Q.52	Which of the following books is considered as one of the sources behind T. S. Eliot's poem, <i>The Waste Land</i> ?
(A)	William James' <i>Principles of Psychology</i>
(B)	Jessie Weston's <i>From Ritual to Romance</i>
(C)	Franz Kafka's <i>The Metamorphosis</i>
(D)	Sigmund Freud's <i>Interpretation of Dreams</i>



GATE 2022 English (XH-C2)

Q.53	<p>“The people who believe most that our greatness and welfare are proved by our being very rich, and who most give their lives and thoughts to becoming rich, are just the very people whom we call Philistines.”</p> <p>What can be inferred from the above statement of Matthew Arnold?</p>
(A)	Greatness of people lies in their being rich and prosperous.
(B)	Material prosperity is not the true criterion of a nation’s achievement.
(C)	Philistines are great people.
(D)	Arnold thinks very highly of himself.
Q.54	‘Anagnorisis’, as used by Aristotle in his theory of Tragedy, stands for _____.
(A)	the hero’s recognition of his tragic flaw
(B)	the hero’s ignorance about his tragic flaw
(C)	the hero’s recognition of his adversary
(D)	the hero’s rejection of his tragic end



GATE 2022 English (XH-C2)

Q.55	Which of the following thinkers does not belong to the school of Existentialism?
(A)	Jean Paul Sartre
(B)	Albert Camus
(C)	Roland Barthes
(D)	Søren Kierkegaard
Q.56	Which of the following statement(s) is/are closely associated with the term Fetishism?
(A)	It is generally defined as an act of paying excessive attention or attributing mystical ability, to an inanimate thing.
(B)	It is related to Western theories of aesthetics, economics and psychology.
(C)	It is used in reference to religious objects believed to have magical or spiritual powers.
(D)	It is generally used to describe Gothic expressionism.



GATE 2022 English (XH-C2)

<p>Q.57</p>	<p>Why does the thin grey strand Floating up from the forgotten Cigarette between my fingers, Why does it trouble me?</p> <p>Ah, you will understand; When I carried my mother downstairs, A few times only, at the beginning Of her soft-foot malady,</p> <p>I should find, for a reprimand To my gaiety, a few long grey hairs On the breast of my coat; and one by one I watched them float up the dark chimney.</p> <p>Which of the following can be considered as correct about the above poem?</p>
(A)	It is written in the process of grieving for the poet's mother.
(B)	It is an autobiographical poem.
(C)	It is a symbolic poem.
(D)	It is a poem of youthful celebration.



GATE 2022 English (XH-C2)

Q.58	Which of the given examples of rhetorical/figurative devices is/are correctly paired?
(A)	‘What is man, that thou art mindful of him?’ : Paradox
(B)	‘Truth makes the greatest libel.’ : Personification
(C)	‘Reading furnishes the mind only with material of knowledge; it is thinking makes what we read ours.’ : Antithesis
(D)	‘It is a truth universally acknowledged that a single man in possession of a good fortune must be in want of a wife.’ : Irony
Q.59	As per the distinctions made by Toril Moi, regarding the terms ‘feminist’, ‘female’ and ‘feminine’, which of the following is/are correct?
(A)	The first is ‘a matter of economic manumission’.
(B)	The second is a ‘matter of psychology’.
(C)	The first is ‘a political position’.
(D)	The third is a set of ‘culturally defined characteristics’.



GATE 2022 English (XH-C2)

Q.60	Which of the following author(s) has/have won the Booker Prize twice?
(A)	Nadine Gordimer
(B)	J. G. Farrell
(C)	William Golding
(D)	Peter Carey
Q.61	<p>“Nothing feels normal to Ashima, it’s not so much the pain which she will survive. Its consequence: motherhood in a foreign land ... unmonitored by those she loves ... she is terrified to raise a child in a country where she knows so little, where life seems so tentative and spare.”</p> <p>In the above passage of <i>The Namesake</i>, the writer tries to say that Ashima _____.</p>
(A)	feels isolated in the new world
(B)	should have been surrounded by her own people
(C)	is facing a cultural shock
(D)	is able to adapt herself to an alien culture



GATE 2022 English (XH-C2)

Q.62	Jean Baudrillard, a post-modern thinker, has suggested that a sign refers to other signs. He has given four stages/phases to support his proposition. Which of the following do(es) not constitute a part of these stages/phases?
(A)	The sign disguises the fact that there is no corresponding reality underneath.
(B)	The sign is always peripheral.
(C)	The sign bears no relation to any reality at all.
(D)	The sign misrepresents or distorts the reality behind it.
Q.63	Which of the following apply/applies to the term 'parapraxis'?
(A)	It is used in connection with Marxist interpretation of literature.
(B)	It refers to an error in speech, memory, or physical action that occurs because of the interference of an unconscious subdued wish.
(C)	The term is generally associated with Jung.
(D)	The original German word referring to the term is 'Fehlleistung'.



GATE 2022 English (XH-C2)

<p>Q.64</p>	<p>The epilogue to William Congreve’s <i>The Way of the World</i>, given below, signals some warning(s). What is/are it/they?</p> <p style="text-align: center;">“Other there are whose malice we’d prevent, Such, who watch plays, with scurrilous intent To mark out who by characters are meant. These, with false glosses feed their own ill nature, And turn to libel, what was meant a satire.”</p>
<p>(A)</p>	<p>Critics should always be supportive of the author.</p>
<p>(B)</p>	<p>Critics should not look for portrait of real people in the play’s characters and remember that the play is a social satire.</p>
<p>(C)</p>	<p>Critics should avoid writing malicious reviews, lest they are accused of libel.</p>
<p>(D)</p>	<p>Critics should try to identify the real life equivalent for each character.</p>



GATE 2022 English (XH-C2)

Q.65	<p>Read the following lines and mark your correct observation(s):</p> <p>Take my shirt off and go in there to do the puja No thanks.</p> <p>Not me. But you go right ahead if that's what you want to do.</p> <p>Give me the match box before you go, will you?</p> <p>I will be out in the courtyard where no one will mind it if I smoke.</p>
(A)	The poem is written in the form of an ode.
(B)	The poem is skeptic in nature.
(C)	The poet uses surreal and astonishing images.
(D)	The poem expresses a rebellious attitude.



Q. No.	Session	Question Type	Subject Name	Key/Range	Mark
1	4	MCQ	GA	C	1
2	4	MCQ	GA	D	1
3	4	MCQ	GA	C	1
4	4	MCQ	GA	C	1
5	4	MCQ	GA	C	1
6	4	MCQ	GA	B	2
7	4	MCQ	GA	D	2
8	4	MCQ	GA	A	2
9	4	MCQ	GA	C	2
10	4	MCQ	GA	C	2
11	4	MCQ	XH-B1	B	1
12	4	MCQ	XH-B1	C	1
13	4	MCQ	XH-B1	C	1
14	4	MCQ	XH-B1	B	1
15	4	MCQ	XH-B1	A	1
16	4	MSQ	XH-B1	B, C	1
17	4	NAT	XH-B1	33 to 33	1
18	4	MCQ	XH-B1	A	2
19	4	MCQ	XH-B1	D	2
20	4	MCQ	XH-B1	B	2
21	4	MCQ	XH-B1	A	2
22	4	MCQ	XH-B1	A OR D	2
23	4	MSQ	XH-B1	A, D	2
24	4	MSQ	XH-B1	A, D OR A, B, D	2
25	4	MSQ	XH-B1	B, C, D	2
26	4	NAT	XH-B1	2535 to 2535	2
27	4	MCQ	XH-C2	A	1
28	4	MCQ	XH-C2	C	1
29	4	MCQ	XH-C2	D	1
30	4	MCQ	XH-C2	A	1
31	4	MCQ	XH-C2	B	1
32	4	MCQ	XH-C2	D	1
33	4	MCQ	XH-C2	C	1
34	4	MCQ	XH-C2	C	1
35	4	MCQ	XH-C2	C	1
36	4	MCQ	XH-C2	A	1
37	4	MSQ	XH-C2	B,C	1
38	4	MSQ	XH-C2	B,C	1
39	4	MSQ	XH-C2	B,C	1
40	4	MSQ	XH-C2	A,B,C	1
41	4	MSQ	XH-C2	A,B	1
42	4	MSQ	XH-C2	A,B,D	1
43	4	MSQ	XH-C2	A,C	1
44	4	MSQ	XH-C2	A,C	1



45	4	MCQ	XH-C2	B	2
46	4	MCQ	XH-C2	B	2
47	4	MCQ	XH-C2	D	2
48	4	MCQ	XH-C2	C	2
49	4	MCQ	XH-C2	B	2
50	4	MCQ	XH-C2	C	2
51	4	MCQ	XH-C2	B	2
52	4	MCQ	XH-C2	B	2
53	4	MCQ	XH-C2	B	2
54	4	MSQ	XH-C2	A	2
55	4	MSQ	XH-C2	C	2
56	4	MSQ	XH-C2	A,B,C	2
57	4	MSQ	XH-C2	A,B,C	2
58	4	MSQ	XH-C2	C,D	2
59	4	MSQ	XH-C2	C,D	2
60	4	MSQ	XH-C2	B,D	2
61	4	MSQ	XH-C2	A,B,C	2
62	4	MSQ	XH-C2	B	2
63	4	MSQ	XH-C2	B,D	2
64	4	MSQ	XH-C2	B,C	2
65	4	MSQ	XH-C2	B,D	2

GATE 2022 General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark each.

Q.1	Inhaling the smoke from a burning _____ could _____ you quickly.
(A)	tire / tier
(B)	tire / tyre
(C)	tyre / tire
(D)	tyre / tier

Q.2	A sphere of radius r cm is packed in a box of cubical shape. What should be the minimum volume (in cm^3) of the box that can enclose the sphere?
(A)	$\frac{r^3}{8}$
(B)	r^3
(C)	$2r^3$
(D)	$8r^3$



Q.3	<p>Pipes P and Q can fill a storage tank in full with water in 10 and 6 minutes, respectively. Pipe R draws the water out from the storage tank at a rate of 34 litres per minute. P, Q and R operate at a constant rate.</p> <p>If it takes one hour to completely empty a full storage tank with all the pipes operating simultaneously, what is the capacity of the storage tank (in litres)?</p>
(A)	26.8
(B)	60.0
(C)	120.0
(D)	127.5

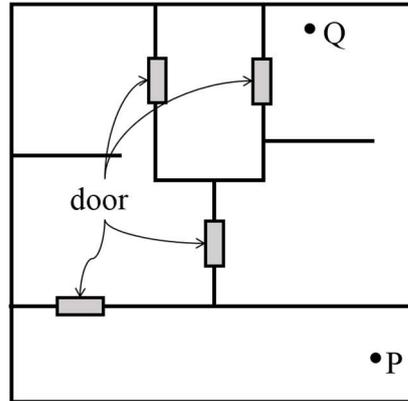


Q.4	<p>Six persons P, Q, R, S, T and U are sitting around a circular table facing the center not necessarily in the same order. Consider the following statements:</p> <ul style="list-style-type: none">• P sits next to S and T.• Q sits diametrically opposite to P.• The shortest distance between S and R is equal to the shortest distance between T and U. <p>Based on the above statements, Q is a neighbor of</p>
(A)	U and S
(B)	R and T
(C)	R and U
(D)	P and S

Q.5

A building has several rooms and doors as shown in the top view of the building given below. The doors are closed initially.

What is the minimum number of doors that need to be opened in order to go from the point P to the point Q?



(A) 4

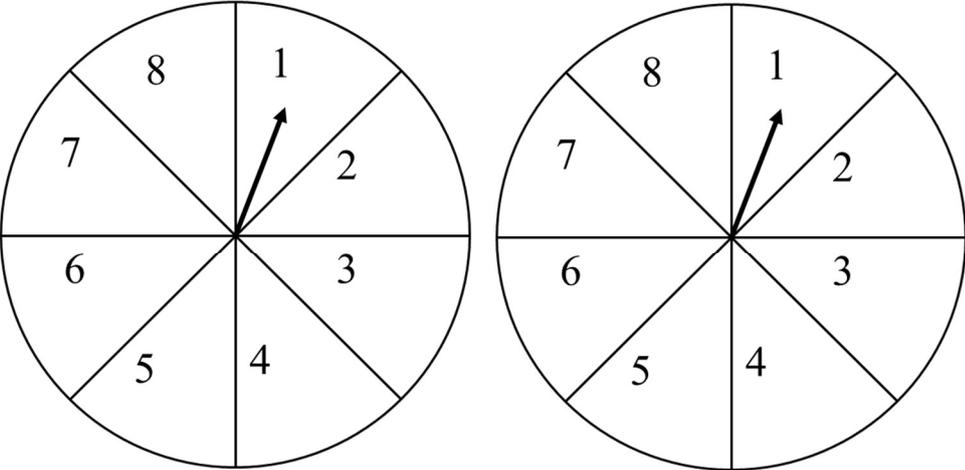
(B) 3

(C) 2

(D) 1

**Q. 6 – Q. 10 Carry TWO marks each.**

Q.6	<p>Rice, a versatile and inexpensive source of carbohydrate, is a critical component of diet worldwide. Climate change, causing extreme weather, poses a threat to sustained availability of rice. Scientists are working on developing Green Super Rice (GSR), which is resilient under extreme weather conditions yet gives higher yields sustainably.</p> <p>Which one of the following is the CORRECT logical inference based on the information given in the above passage?</p>
(A)	GSR is an alternative to regular rice, but it grows only in an extreme weather
(B)	GSR may be used in future in response to adverse effects of climate change
(C)	GSR grows in an extreme weather, but the quantity of produce is lesser than regular rice
(D)	Regular rice will continue to provide good yields even in extreme weather

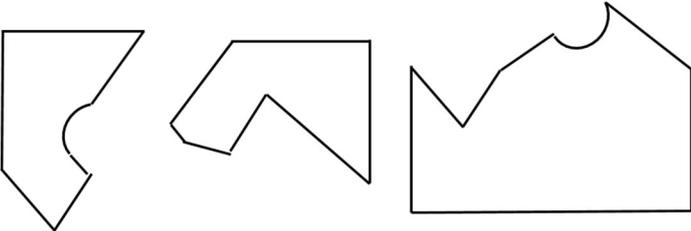
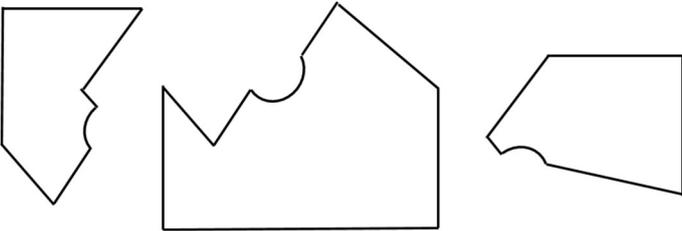
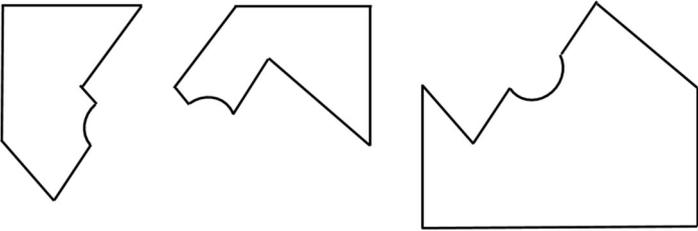
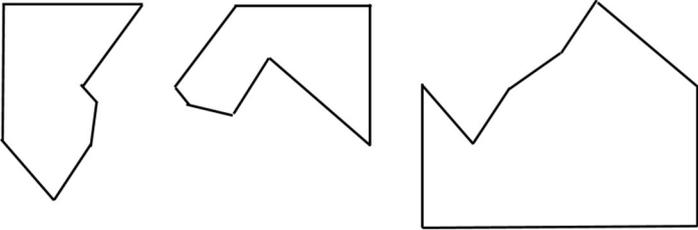
<p>Q.7</p>	<p>A game consists of spinning an arrow around a stationary disk as shown below. When the arrow comes to rest, there are eight equally likely outcomes. It could come to rest in any one of the sectors numbered 1, 2, 3, 4, 5, 6, 7 or 8 as shown.</p> <p>Two such disks are used in a game where their arrows are independently spun.</p> <p>What is the probability that the sum of the numbers on the resulting sectors upon spinning the two disks is equal to 8 after the arrows come to rest?</p> <div style="text-align: center;">  </div>
<p>(A)</p>	<p>$\frac{1}{16}$</p>
<p>(B)</p>	<p>$\frac{5}{64}$</p>
<p>(C)</p>	<p>$\frac{3}{32}$</p>
<p>(D)</p>	<p>$\frac{7}{64}$</p>



Q.8	<p>Consider the following inequalities.</p> <p>(i) $3p - q < 4$</p> <p>(ii) $3q - p < 12$</p> <p>Which one of the following expressions below satisfies the above two inequalities?</p>
(A)	$p + q < 8$
(B)	$p + q = 8$
(C)	$8 \leq p + q < 16$
(D)	$p + q \geq 16$



<p>Q.9</p>	<p>Given below are three statements and four conclusions drawn based on the statements.</p> <p>Statement 1: Some engineers are writers.</p> <p>Statement 2: No writer is an actor.</p> <p>Statement 3: All actors are engineers.</p> <p>Conclusion I: Some writers are engineers.</p> <p>Conclusion II: All engineers are actors.</p> <p>Conclusion III: No actor is a writer.</p> <p>Conclusion IV: Some actors are writers.</p> <p>Which one of the following options can be logically inferred?</p>
<p>(A)</p>	<p>Only conclusion I is correct</p>
<p>(B)</p>	<p>Only conclusion II and conclusion III are correct</p>
<p>(C)</p>	<p>Only conclusion I and conclusion III are correct</p>
<p>(D)</p>	<p>Either conclusion III or conclusion IV is correct</p>

<p>Q.10</p>	<p>Which one of the following sets of pieces can be assembled to form a square with a single round hole near the center? Pieces cannot overlap.</p>
<p>(A)</p>	
<p>(B)</p>	
<p>(C)</p>	
<p>(D)</p>	



GATE 2022 Linguistics (XH-C3)

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

Q.11	A relationship is expressed as Iodine : Goitre . The pair(s) of words showing SIMILAR relationship is/are
	Space for Figure/Equation, if any:
(A)	Mango : Anaemia
(B)	Insulin : Diabetes
(C)	Fat : Obesity
(D)	Hormones : Heredity
Q.12	Three individuals are named P, Q, and R. Together they have a total of fifteen children of which nine are boys. P has three girls and Q has same number of boys. Q has one more child than P, who has four children. R has four more boys than the number of girls. The number of girls of R is equal to the number of boys of P. How many boys do R and P have?
	Space for Figure/Equation, if any:
(A)	$R = 3, P = 3$
(B)	$R = 4, P = 2$
(C)	$R = 5, P = 1$
(D)	$R = 2, P = 4$



GATE 2022 Linguistics (XH-C3)

Q.13	<p>A sentence has been given below.</p> <p><i>The train will leave at 8:30 PM, we have been ready by 7:30 PM, so that we can reach the station on time.</i></p> <p>To make the above sentence grammatically correct, the phrase marked in bold is to be replaced by</p>
	Space for Figure/Equation, if any:
(A)	were
(B)	are
(C)	must be
(D)	should have
Q.14	<p>Complete the sentence correctly using the options given below.</p> <p>Hastings ____ (p) ____ developed as a holiday resort after ____ (q) ____ .</p>
	Space for Figure/Equation, if any:
(A)	(p) = a seaside town, (q) = the first world war
(B)	(p) = , a seaside town, (q) = the First World War
(C)	(p) = , a Seaside Town, (q) = World War I
(D)	(p) = A seaside town (q) = World War I



GATE 2022 Linguistics (XH-C3)

Q.15	<p>The Arecibo telescope does not resemble what most of us think of when we hear the word telescope. Its reflective surface covers an area of 20 acres, which is quite remarkable. Dangling above it are towers and cables, sub-reflectors and antennas, all of which can be positioned using 26 motors to transmit radio waves and receive echoes with astonishing precision.</p> <p>From the passage, it can be inferred that most telescopes</p>
	Space for Figure/Equation, if any:
(A)	are not as large as Arecibo
(B)	do not have reflective surface
(C)	cannot be re-positioned
(D)	strictly have 26 motors



GATE 2022 Linguistics (XH-C3)

Q.16	<p>Tailgating another vehicle is unsafe and illegal. Many rear-end collisions are caused by drivers following too close to the vehicle in front of them. The rules state that a driver must keep significant distance from the vehicle in front in order to stop safely and avoid a collision. Drivers should allow a minimum two seconds gap between their vehicle and the one ahead. At 60 km per hour, this equates to a gap of 33 meters; at 100 km per hour, it equates to a gap of 55 meters. More distance is needed to safely stop in rain or poor visibility, as during rain slippery roads reduce the effectiveness of braking.</p> <p>Which of the following statement(s) can be inferred from the above passage?</p>
	Space for Figure/Equation, if any:
(A)	People drive faster in rain and under poor visibility.
(B)	Braking may not be as effective during rain as in the dry conditions.
(C)	Tailgating is against the road rules.
(D)	Collision has no relationship with tailgating.
Q.17	<p>There are three separate, but equal-sized boxes. Inside each box, there are two separate small boxes. Inside each of the small boxes, there are four even smaller boxes. The total number of boxes will be _____ .</p>
	Space for Figure/Equation, if any:



GATE 2022 Linguistics (XH-C3)

Q.18 – Q.26 Carry TWO marks Each

Q.18	In a specific language, <i>xer dan</i> means “big horse”, <i>liro cas</i> means “red tomato” and <i>dum cas dan</i> means “big red barn”. The equivalent word for barn in this language is
	Space for Figure/Equation, if any:
(A)	<i>dum</i>
(B)	<i>liro</i>
(C)	<i>dan</i>
(D)	<i>cas</i>
Q.19	Park street is parallel to Rock street. Garden street is perpendicular (90°) to Lake street. Lake street is parallel to Rock street. For the situation described above, the TRUE statement is
	Space for Figure/Equation, if any:
(A)	Park street is perpendicular to Lake street
(B)	Rock street is parallel to Garden street
(C)	Park street is parallel to Garden street
(D)	Garden street is perpendicular to Park street



GATE 2022 Linguistics (XH-C3)

Q.20	Six examinations are required to be conducted in a week starting from Sunday to Saturday. Hindi is not scheduled on the first day and English is not scheduled before Hindi. Mathematics is scheduled one day after Physics. Biology is scheduled two days after Hindi. One day prior to Chemistry, there is no examination. Only one examination can be scheduled on a single day and Sunday is not an off day. What are the subjects scheduled on first and the last days?
	Space for Figure/Equation, if any:
(A)	First day Physics, Last day Biology
(B)	First day Physics, Last day Chemistry
(C)	First day Physics, Last day English
(D)	First day English, Last day Biology



GATE 2022 Linguistics (XH-C3)

<p>Q.21</p>	<p>A 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 P, Q, R, and S) are jumbled up.</p> <p><i>First sentence:</i> Smoke oozed up between the planks.</p> <p>P: Passengers were told to be ready to quit the ship.</p> <p>Q: The rising gale fanned the smouldering fire.</p> <p>R: Everyone now knew there was fire onboard.</p> <p>S: Flames broke out here and there.</p> <p><i>Sixth sentence:</i> Most people bore the shock bravely.</p> <p>The most logically CORRECT order for the given jumbled up sentences is</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>QSRP</p>
<p>(B)</p>	<p>QPSR</p>
<p>(C)</p>	<p>RSPQ</p>
<p>(D)</p>	<p>PQRS</p>



GATE 2022 Linguistics (XH-C3)

<p>Q.22</p>	<p>For a painting to succeed, it is essential that the painter and his public agree about what is significant. The subject of the painting may have a personal meaning for the painter or a common person; but there can also be the possibility of their agreement on its general meaning. It is at this point that the culture of the society and the period in question precedes the artists and her/his art. Renaissance art would have meant nothing to the Aztecs, and vice versa. If, to some extent, a few intellectuals can appreciate them both today, it is because their culture is a historical one. Its inspiration is history and all known developments to date.</p> <p>According to the passage, which of the following is/are NOT necessarily among the attributes needed for a painter to succeed?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>The subject must have a personal meaning for the painter.</p>
(B)	<p>The painter is able to communicate and justify the significance of its subject selection.</p>
(C)	<p>The painter and the public agree on what is significant.</p>
(D)	<p>The painting of the subjects is driven by public demand.</p>



GATE 2022 Linguistics (XH-C3)

Q.23	<p>Vinod has a pre-determined route. Each morning he delivers 37 newspapers to customers in his neighborhood. It takes Vinod 50 minutes to deliver all the papers. When Vinod was sick or had other engagements, his friend Tarun, who lives on the same street delivered the papers on his behalf.</p> <p>Find the statement(s) that must be TRUE according to the given information.</p>
	Space for Figure/Equation, if any:
(A)	Vinod and Tarun lived in the same locality.
(B)	It was dark outside when Vinod began his delivery.
(C)	It took Tarun more than 50 minutes to deliver the papers.
(D)	Tarun delivered 37 newspapers to customers.



GATE 2022 Linguistics (XH-C3)

Q.24	<p>Cholera, typhoid, diphtheria and tuberculosis cause huge number of deaths. Poor quality drinking water has always been the world's greatest single carrier of sickness. Disease is transmitted when sewage and drinking water come into contact. Children are particularly vulnerable. In some of the poorest countries the infant mortality rate is high. The separation of sewage and the supply of clean drinking water are the domain of civil engineers, and their work makes a significant contribution to public health. That contribution was recognized when public sanitation was voted the greatest medical breakthrough, beating the discoveries including antibiotics and vaccines in a poll organized by the British Medical Journal.</p> <p>Identify the statement(s), which is/are NOT TRUE according to the passage.</p>
	Space for Figure/Equation, if any:
(A)	Children are less prone to water borne diseases.
(B)	The infant mortality rate was high in economically weaker countries.
(C)	The provision of sewage and drinking water should be adequately separated from each other.
(D)	The literature states that the public health and sanitation was never given its due importance.



GATE 2022 Linguistics (XH-C3)

<p>Q.25</p>	<p>Shark's teeth have evolved to correspond to the diet of each particular species of shark. Consequently, the teeth of the great white shark bear little resemblance to those of the bull shark or nurse shark. There were essentially four different shark diets and thus four varieties of shark teeth. Sharks that feed on fish have needle like teeth, perfect for spearing and ripping. Sharks that eat mammals such as seals and sea lions have heavy, serrated teeth, typically triangular on the upper jaw and pointed on the lower jaw. Shark that feed in the benthic zone of the ocean have flattened teeth for crushing the shell of the creatures they find scuttling in the sand or clinging to rocks. Sharks that bask have teeth that are largely non-functional; these sharks filter food from the water by passing it through their gills.</p> <p>Which of the following is/are the CORRECT inference(s) as per the passage?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Shark's teeth are not specially designed for slaughter.</p>
(B)	<p>The shape of the shark's teeth relates to its prey.</p>
(C)	<p>Some species of sharks filter food through their gills.</p>
(D)	<p>Shark's teeth relate to its diet.</p>



GATE 2022 Linguistics (XH-C3)

Q.26	<p>A particular school management wants to contact all parents, all businessmen and all engineers. The following statistics are available with the school.</p> <p>Businessmen = 50</p> <p>Engineers = 25</p> <p>Parents = 2500</p> <p>Businessmen who are engineers = 0</p> <p>Businessmen who are parents = 25</p> <p>Engineers who are parents = 15</p> <p>The number of people needs to be contacted are _____ .</p>
	Space for Figure/Equation, if any:



GATE 2022 Linguistics (XH-C3)
XH-C3 (Q.27 – Q.44 Carry ONE mark Each)

Q.27 Linguistic determinism is best captured in _____.

- (A) Generative grammar
- (B) Sound symbolism
- (C) Critical-age hypothesis
- (D) Sapir-Whorf hypothesis

Q.28 Match the phonological processes in column Y to their names in column X.

Column X	Column Y
P. Compensatory Lengthening	i. paka → paxa
Q. Assimilation	ii. parka → pa:ka
R. Spirantization	iii. parka → pakka
S. Fortition	iv. paxa → paka

- (A) P – ii, Q – iv, R – iii, S – i
- (B) P – iv, Q – ii, R – iii, S – i
- (C) P – ii, Q – iv, R – i, S – iii
- (D) P – iv, Q – ii, R – i, S – iii

**GATE 2022 Linguistics (XH-C3)**

Q.29 'Bilingual language acquisition' refers to the _____.

- (A) Simultaneous acquisition of two languages at a very early age
- (B) Learning of a second language after 18 years of age
- (C) Ability to acquire a second language during the first 12 months
- (D) Sequential acquisition of two languages in adulthood

Q.30 Which of the following is the sequence of derivation as per Minimalist Program?

- (A) Numeration → Spell-Out → Merge → Move
- (B) Numeration → Merge → Move → Spell-Out
- (C) Numeration → Move → Merge → Spell-Out
- (D) Merge → Move → Numeration → Spell-Out



GATE 2022 Linguistics (XH-C3)

Q.31 Linguistic determinism is the strongest form of the _____.

P. UN	(i) acronym
Q. geek	(ii) coinage
R. kindergarten	(iii) borrowing
S. UNICEF	(iv) abbreviation

- (A) P – (ii), Q – (iv), R – (i), S – (iii)
- (B) P – (iv), Q – (ii), R – (i), S – (iii)
- (C) P – (ii), Q – (iv), R – (iii), S – (i)
- (D) P – (iv), Q – (ii), R – (iii), S – (i)

Q.32 Which of the given statements is TRUE?

Statement (I): Every spoken language includes discrete sound segments that can all be defined by a finite set of sound properties or features.

Statement (II): Speakers of all languages are capable of producing and comprehending an infinite set of sentences.

- (A) Both statement (I) and statement (II) are correct
- (B) Both statement (I) and statement (II) are incorrect
- (C) Statement (I) is correct but statement (II) is incorrect
- (D) Statement (I) is incorrect but statement (II) is correct

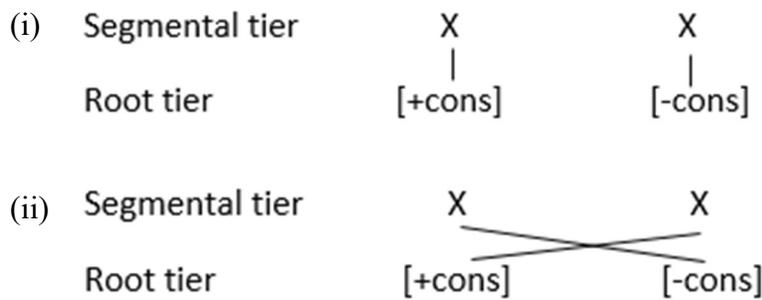


GATE 2022 Linguistics (XH-C3)

Q.33 The sound change of Proto-Indo-Aryan /p/ to Germanic /f/, deduced by comparing cognates like Latin pater, Sanskrit pita and English father, is an example of _____.

- (A) Grassman's Law
- (B) Lyman's Law
- (C) Grimm's Law
- (D) Verner's Law

Q.34 Which of the following diagrams depict(s) the violation of a principle of autosegmental phonology?



- (A) Representation (i)
- (B) Representation (ii)
- (C) Both (i) and (ii)
- (D) Neither (i) nor (ii)

**GATE 2022 Linguistics (XH-C3)**

Q.35 In the given sentences, the semantic relationship of hyponymy can be found in between _____.

- (i) The thing in the grass is a small snake.
- (ii) The thing in the grass is a small reptile.

(A) reptile : grass

(B) grass : snake

(C) snake : reptile

(D) small : snake

Q.36 Bill walked into a store in New York, looking for a restroom. He asked a storekeeper which floor the men's restroom is and he replied, /ðə fɔθ flɔ:/ for *the fourth floor*. What kind of store Bill must have walked into?

(A) A high class store

(B) A middle class store

(C) A lower class store

(D) A Latino owned store

**GATE 2022 Linguistics (XH-C3)**

- Q.37 Which of the followings occurred due to the *Great Vowel Shift* of the English language?
- (A) [a:] became [u:]
 - (B) All the front vowels shifted to back
 - (C) [ge:s] became [gi:s]
 - (D) The high, long vowels became diphthongized
- Q.38 Which of the following statements are true for the pulmonic consonant table in an IPA chart?
- (A) Voiceless consonants aligned to the left of the cell
 - (B) Places of articulation are arranged in rows
 - (C) Manners of articulation are arranged in columns
 - (D) The most constricted consonants to the least are arranged from the top to bottom

**GATE 2022 Linguistics (XH-C3)**

Q.39 Identify the compounds in the given data.

repeat	blackboard	toy factory	underestimate
deform	backward	bystander	sky-high

- (A) repeat and backward
- (B) blackboard and toy factory
- (C) sky-high and underestimate
- (D) bystander and deform

Q.40 In the production of the /z/ sound which of the following will take place?

- (A) Vocal cords will vibrate
- (B) Velum will be raised
- (C) The two lips will be in contact
- (D) Air will pass without any turbulence

**GATE 2022 Linguistics (XH-C3)**

Q.41 The phrase “the first person in space” refers to Yuri Gagarin. Which of the following could be used to determine *reference*?

(A) Russell’s Theory of Description

(B) Prototype Theory

(C) Speech Act Theory

(D) Gricean Maxims

Q.42 Which of the following statement(s) apply to *pidgins*?

(A) Pidgins have complex grammatical rules

(B) Pidgins do NOT have grammatical rules

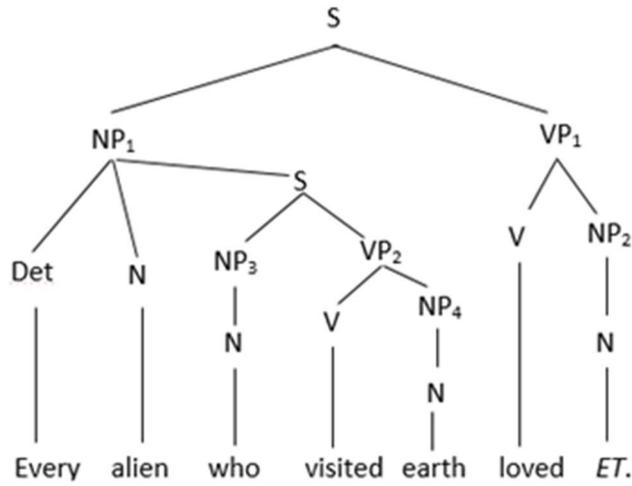
(C) Pidgin phonology is rule based

(D) Pidgins are passed on from one generation to the other



GATE 2022 Linguistics (XH-C3)

Q.43 In the given tree-structure NP₁ C-commands NP₂ but not vice versa because:



- (A) C-command cannot be a reciprocal relationship
- (B) No node dominates both NP₂ and NP₁
- (C) VP₁ dominates NP₂ and C-commands NP₁
- (D) VP₁ dominates NP₂ but not NP₁



GATE 2022 Linguistics (XH-C3)

Q.44 Which of the given pronunciations DO NOT conform to the phonological rule?

$$\left[\begin{array}{c} -\text{sonorant} \\ +\text{voiced} \end{array} \right] \rightarrow \left[\begin{array}{c} -\text{sonorant} \\ -\text{voiced} \end{array} \right] / \text{---}\#$$

- (A) [dud]
- (B) [kut]
- (C) [mutab]
- (D) [pum]

Q.45 – Q.65 Carry TWO marks Each

Q.45 Determine the correct nature of the following two utterances from the choices given below.

P: Hasnain said ki woh kal aayegaa
(COMP he tomorrow come.will)
“Hasnain said that he will come tomorrow”

Q: Rohan will get some desi vegetables.
(local)
“Rohan will get some local vegetables”

- (A) Code switching in P and Q
- (B) Borrowing in P and Q
- (C) Code switching in P and borrowing in Q
- (D) Borrowing in P and code switching in Q



GATE 2022 Linguistics (XH-C3)

Q.46 Consider the given script showing a sequence of 11 graphemes. It represents the sentence: /apa pal talip tani mil/. Each grapheme in the script contains a _____.

२२ २५ ५०५ ५५ ३५

- (A) Rhyme
- (B) Syllable
- (C) Consonant
- (D) Mora

Q.47 In the given examples, column Y are examples of _____ sentences.

X	Y
The cat chased the rat.	It is the cat that chased the rat.
The athlete broke the record.	It is the athlete that broke the record

- (A) Topicalization
- (B) Cleft
- (C) Pseudo-cleft
- (D) Gapping



GATE 2022 Linguistics (XH-C3)

Q.48 A second language speaker uses the word [phonetic] as a singular noun because she interprets the word [phonetics] as a plural noun. In doing so, she is deducing a new word by the process of _____.

- (A) Blocking
- (B) Back formation
- (C) Bracketing
- (D) Back tracking

Q.49 Given the rules P and Q, what is the name of the rule ordering in dialect X and Y?

Given:

Rule P: $t \rightarrow r / V_V$

Rule Q: $ai \rightarrow \Delta i / _ t$

	Dialect X		Dialect Y	
Input	taipraitə		taipraitə	typewriter
	P applies	taiprairə	Q applies	taipraitə
	Q applies	taiprairə	P applies	taiprairə

- (A) X has counter-feeding and Y has counter bleeding order
- (B) X has bleeding and Y has counter-bleeding order
- (C) X has counter-bleeding and Y has counter-feeding order
- (D) X has counter bleeding and Y has bleeding order

**GATE 2022 Linguistics (XH-C3)**

Q.50 Which of the given statements is/are TRUE?

Statement (I): Diglossia and dialect continuum are synonymous.

Statement (II): Bilingual speakers are also bidialectal.

- (A) Both statement (I) and statement (II) are correct
- (B) Both statement (I) and statement (II) are incorrect
- (C) Statement (I) is correct but statement (II) is incorrect
- (D) Statement (I) is incorrect but statement (II) is correct



GATE 2022 Linguistics (XH-C3)

Q.51 Look into the data from Micaocan Aztec and match the words (P-S) to their meaning (i-iv) and select the correct sequence.

nokali	my house	nokalimes	my houses
mokali	your house	ikali	his house
nokwahmili	my cornfield	mokwahmili	your cornfield
ikwahmili	his cornfield	nomakhwames	my friends
mopelomes	your dogs	mopelo	your dog

P. kali	(i) friend
Q. pelo	(ii) dog
R. kwahmili	(iii) cornfield
S. makhwa	(iv) house

- (A) P-(ii), Q-(iv), R-(i), S-(iii)
- (B) P-(iv), Q-(ii), R-(i), S-(iii)
- (C) P-(ii), Q-(iv), R-(iii), S-(i)
- (D) P-(iv), Q-(ii), R-(iii), S-(i)

**GATE 2022 Linguistics (XH-C3)**

Q.52 Match the languages (P – U) to the language families (i – iv) and select the correct sequence.

Languages	Language Families
P. Kannada	(i) Indo-Aryan
Q. Assamese	(ii) Dravidian
R. Khasi	(iii) Tibeto-Burman
S. Nepali	(iv) Austro-Asiatic
T. Manipuri	
U. Mundari	

- (A) P – (ii), Q – (i), R – (iv), S – (i), T – (iii), U – (iv)
- (B) P – (i), Q – (i), R – (iii), S – (iii), T – (iv), U – (i)
- (C) P – (ii), Q – (i), R – (iii), S – (i), T – (iii), U – (iv)
- (D) P – (i), Q – (i), R – (iv), S – (iii), T – (iii), U – (ii)

**GATE 2022 Linguistics (XH-C3)**

Q.53 Which of the given statements is/are TRUE?

Statement (I): The International Phonetic Alphabet (IPA) is a transcription system for describing human speech sounds from all languages.

Statement (II): The voiceless pharyngeal plosive sound is missing in the IPA chart because it is physiologically impossible to articulate.

- (A) Both statement (I) and statement (II) are correct
- (B) Both statement (I) and statement (II) are incorrect
- (C) Statement (I) is correct but statement (II) is incorrect
- (D) Statement (I) is incorrect but statement (II) is correct

Q.54 Match the terms in column X (P – S) to their descriptions in column Y (i – iv) and select the correct sequence.

Column X

P. Competence

Q. Performance

R. Sense

S. Reference

Column Y

i. one of the different meanings of an expression

ii. actual speech in a communicative context

iii. relation between an expression and its real world entity

iv. native speaker intuition

- (A) P – ii, Q – iv, R – iii, S – i
- (B) P – iv, Q – ii, R – iii, S – i
- (C) P – ii, Q – iv, R – i, S – iii
- (D) P – iv, Q – ii, R – i, S – iii

**GATE 2022 Linguistics (XH-C3)**

Q.55 Match the following morphological changes (P-S) to their type (i-iv) and select the correct sequence.

P. electric → electricity

Q. go → went

R. ox → oxen

S. think → thought

(i) Partial suppletion

(ii) Total suppletion

(iii) Lexically conditioned

(iv) Phonologically conditioned

(A) P – (ii), Q – (iv), R – (i), S – (iii)

(B) P – (iv), Q – (ii), R – (i), S – (iii)

(C) P – (ii), Q – (iv), R – (iii), S – (i)

(D) P – (iv), Q – (ii), R – (iii), S – (i)



GATE 2022 Linguistics (XH-C3)

Q.56 Which of the given statements is/are TRUE?

TELUGU	sita sita-NOM The book that	caduvina read Sita read is on	pustakam book the table.	tebul-payina table-on	peTTundi kept-BE
BANGLA	sita-r sita-GEN The book that	pOda read Sita read is on	boi book the table.	tebil-e table-on	ache kept-BE
SAMBALPURI	sita sita-NOM The book that	pOdithiba read Sita read is on	bOhi book the table.	tebul-pakhe table-on	Ochi kept-BE
HINDI	sita-ki sita-GEN The book that	padhi-hui read Sita read is on	kitaab book the table.	tebil-pe table-on	hei kept-BE

- (A) Bangla is similar to Hindi and Sambalpuri but not Telugu.
- (B) Bangla is similar to Hindi but not Sambalpuri.
- (C) Sambalpuri is similar to Telugu but not Bangla.
- (D) Sambalpuri is similar to Hindi but not Bangla.

**GATE 2022 Linguistics (XH-C3)**

- Q.57 Lesions in different areas of the left hemisphere lead to qualitatively distinct aphasia syndromes. Which of the given statements is/are TRUE?
- (A) The brain lesions associated with classical anomia involves the dominant angular gyrus.
 - (B) Conduction aphasia follows from a lesion in the posterior part of the inferior frontal gyrus.
 - (C) Wernicke's aphasia is the consequence of a lesion in the auditory association cortex of the temporal lobe.
 - (D) Broca's aphasia follows from localized lesions in the temporoparietal regions.

- Q.58 Consider the following data from English. Which linguistic change(s) is/are associated with the addition of the suffix '-able'?

This book is readable.

- (A) sociolinguistic change
- (B) grammatical category change
- (C) semantic change
- (D) typological change

**GATE 2022 Linguistics (XH-C3)**

Q.59 Children are biologically equipped to acquire all aspects of grammar. Which of the given statements is/are TRUE?

- (A) 'Telegraphic speech' occurs during the holophrastic stage.
- (B) Children generally go through three phases in the acquisition of an irregular form (overgeneralization).
- (C) Children learn approximately 100 words a day up to 12 months.
- (D) Mean length of utterances is used to measure a child's language development.

Q.60 Wolof speakers use a secret language called Kall. Words in Wolof are changed to Kall in a systematic manner, as shown in the data. In the change from Wolof to Kall, which of the given constraints cannot be violated?

Wolof	Kall	Gloss
sama	masa	my
jabar	barja	wife
ker	reke	home

- (A) MAX-IO
- (B) DEP-IO
- (C) FOOT-BINARITY
- (D) LINEARITY-IO

**GATE 2022 Linguistics (XH-C3)**

Q.61 The given sentence is ungrammatical because:

*Tailan believes that himself is smarter than Po

- (A) *Principle A* of Binding Theory is not satisfied.
- (B) *Principle B* of Binding Theory is not satisfied.
- (C) *Principle C* of Binding Theory is not satisfied.
- (D) Both *Po* and *Tailan* are possible antecedents for himself.

Q.62 Which of the given statements support the Design Features proposed by Hockett?

- (A) Humans produce as many sentences as they have acquired.
- (B) Sentences cannot be broken into smaller units as they have specific meaning.
- (C) Humans can talk about things that are not in their immediate vicinity.
- (D) Linguistic units do not bear any direct resemblance to the things they represent.



GATE 2022 Linguistics (XH-C3)

Q.63 Which of the given logical forms correspond to the following sentence where $x \in$ student, $y \in$ teacher and $A =$ admires?

Every student admires a teacher.

(A) $\forall x \exists y A(x, y)$

(B) $\forall y \exists x A(y, x)$

(C) $\exists x \forall y A(y, x)$

(D) $\exists y \forall x A(x, y)$

Q.64 Identify the possible set(s) of stops that correlate with the corresponding VOT values.

(A) $/p/ = 10, /p^h/ = 78, /b/ = -110$

(B) $/t/ = 120, /t^h/ = -110, /d/ = 67$

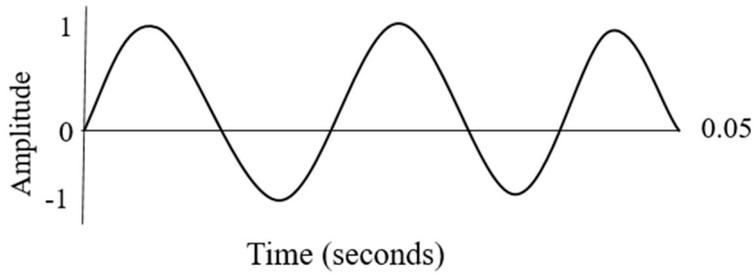
(C) $/k/ = -121, /k^h/ = 121, /g/ = -108$

(D) $/p^h/ = 89, /t^h/ = 92, /k^h/ = 98$



GATE 2022 Linguistics (XH-C3)

Q.65 The estimated fundamental frequency of the given sine wave is (in integer) _____ Hz.





Q. No.	Session	Question Type	Subject Name	Key/Range	Mark
1	4	MCQ	GA	C	1
2	4	MCQ	GA	D	1
3	4	MCQ	GA	C	1
4	4	MCQ	GA	C	1
5	4	MCQ	GA	C	1
6	4	MCQ	GA	B	2
7	4	MCQ	GA	D	2
8	4	MCQ	GA	A	2
9	4	MCQ	GA	C	2
10	4	MCQ	GA	C	2
11	4	MCQ	XH-B1	B	1
12	4	MCQ	XH-B1	C	1
13	4	MCQ	XH-B1	C	1
14	4	MCQ	XH-B1	B	1
15	4	MCQ	XH-B1	A	1
16	4	MSQ	XH-B1	B, C	1
17	4	NAT	XH-B1	33 to 33	1
18	4	MCQ	XH-B1	A	2
19	4	MCQ	XH-B1	D	2
20	4	MCQ	XH-B1	B	2
21	4	MCQ	XH-B1	A	2
22	4	MCQ	XH-B1	A OR D	2
23	4	MSQ	XH-B1	A, D	2
24	4	MSQ	XH-B1	A, D OR A, B, D	2
25	4	MSQ	XH-B1	B, C, D	2
26	4	NAT	XH-B1	2535 to 2535	2
27	4	MCQ	XH-C3	D	1
28	4	MCQ	XH-C3	MTA	1
29	4	MCQ	XH-C3	A	1
30	4	MCQ	XH-C3	B	1
31	4	MCQ	XH-C3	D	1
32	4	MCQ	XH-C3	A	1
33	4	MCQ	XH-C3	C	1
34	4	MSQ	XH-C3	B	1
35	4	MSQ	XH-C3	C	1
36	4	MSQ	XH-C3	C	1
37	4	MSQ	XH-C3	C,D	1
38	4	MSQ	XH-C3	A,D	1
39	4	MSQ	XH-C3	B,C	1
40	4	MSQ	XH-C3	A,B	1
41	4	MSQ	XH-C3	A	1
42	4	MSQ	XH-C3	C,D	1
43	4	MSQ	XH-C3	C,D	1
44	4	MSQ	XH-C3	A,C	1



45	4	MCQ	XH-C3	C	2
46	4	MCQ	XH-C3	D	2
47	4	MCQ	XH-C3	B	2
48	4	MCQ	XH-C3	B	2
49	4	MCQ	XH-C3	B	2
50	4	MCQ	XH-C3	B	2
51	4	MCQ	XH-C3	D	2
52	4	MCQ	XH-C3	A	2
53	4	MCQ	XH-C3	C	2
54	4	MCQ	XH-C3	D	2
55	4	MCQ	XH-C3	D	2
56	4	MSQ	XH-C3	B, C	2
57	4	MSQ	XH-C3	A,C	2
58	4	MSQ	XH-C3	B,C	2
59	4	MSQ	XH-C3	B,D	2
60	4	MSQ	XH-C3	A, C	2
61	4	MSQ	XH-C3	A	2
62	4	MSQ	XH-C3	C,D	2
63	4	MSQ	XH-C3	A, D	2
64	4	MSQ	XH-C3	A, D	2
65	4	NAT	XH-C3	50 to 50	2

GATE 2022 General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark each.

Q.1	Inhaling the smoke from a burning _____ could _____ you quickly.
(A)	tire / tier
(B)	tire / tyre
(C)	tyre / tire
(D)	tyre / tier

Q.2	A sphere of radius r cm is packed in a box of cubical shape. What should be the minimum volume (in cm^3) of the box that can enclose the sphere?
(A)	$\frac{r^3}{8}$
(B)	r^3
(C)	$2r^3$
(D)	$8r^3$



Q.3	<p>Pipes P and Q can fill a storage tank in full with water in 10 and 6 minutes, respectively. Pipe R draws the water out from the storage tank at a rate of 34 litres per minute. P, Q and R operate at a constant rate.</p> <p>If it takes one hour to completely empty a full storage tank with all the pipes operating simultaneously, what is the capacity of the storage tank (in litres)?</p>
(A)	26.8
(B)	60.0
(C)	120.0
(D)	127.5

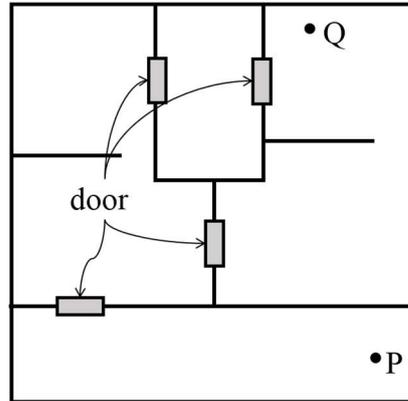


Q.4	<p>Six persons P, Q, R, S, T and U are sitting around a circular table facing the center not necessarily in the same order. Consider the following statements:</p> <ul style="list-style-type: none">• P sits next to S and T.• Q sits diametrically opposite to P.• The shortest distance between S and R is equal to the shortest distance between T and U. <p>Based on the above statements, Q is a neighbor of</p>
(A)	U and S
(B)	R and T
(C)	R and U
(D)	P and S

Q.5

A building has several rooms and doors as shown in the top view of the building given below. The doors are closed initially.

What is the minimum number of doors that need to be opened in order to go from the point P to the point Q?



(A) 4

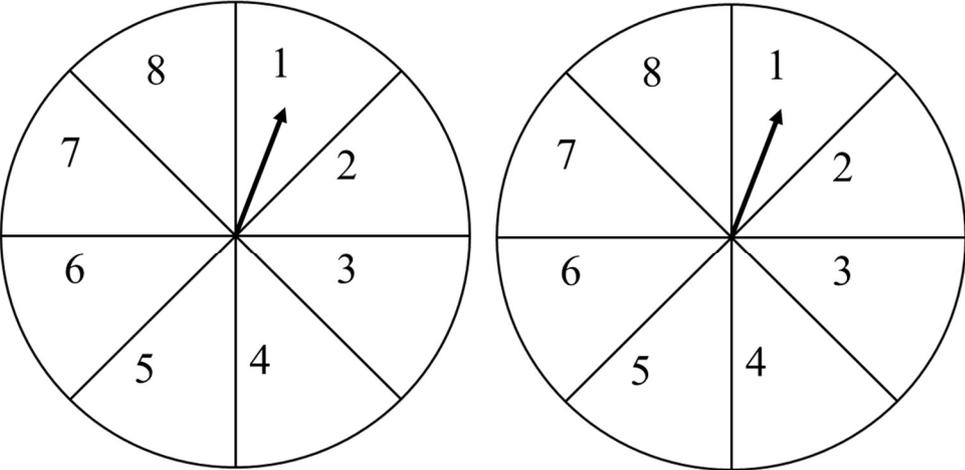
(B) 3

(C) 2

(D) 1

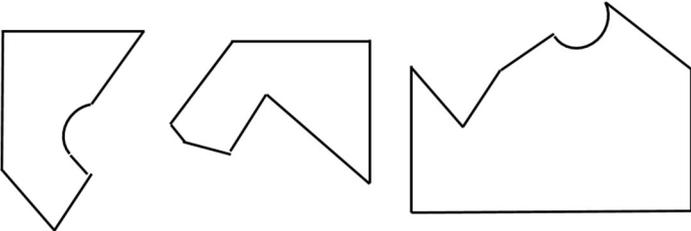
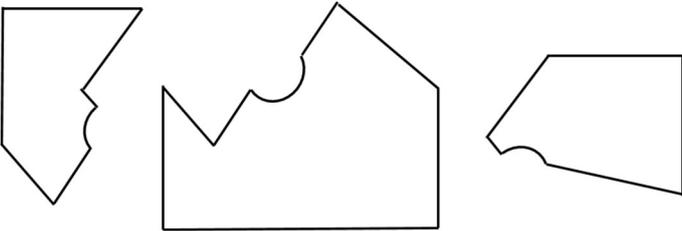
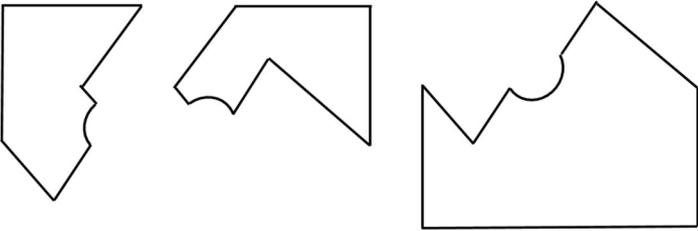
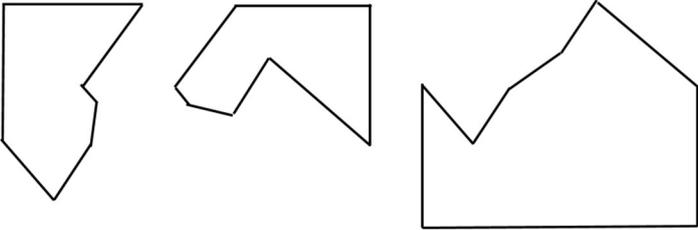
Q. 6 – Q. 10 Carry TWO marks each.

<p>Q.6</p>	<p>Rice, a versatile and inexpensive source of carbohydrate, is a critical component of diet worldwide. Climate change, causing extreme weather, poses a threat to sustained availability of rice. Scientists are working on developing Green Super Rice (GSR), which is resilient under extreme weather conditions yet gives higher yields sustainably.</p> <p>Which one of the following is the CORRECT logical inference based on the information given in the above passage?</p>
<p>(A)</p>	<p>GSR is an alternative to regular rice, but it grows only in an extreme weather</p>
<p>(B)</p>	<p>GSR may be used in future in response to adverse effects of climate change</p>
<p>(C)</p>	<p>GSR grows in an extreme weather, but the quantity of produce is lesser than regular rice</p>
<p>(D)</p>	<p>Regular rice will continue to provide good yields even in extreme weather</p>

<p>Q.7</p>	<p>A game consists of spinning an arrow around a stationary disk as shown below. When the arrow comes to rest, there are eight equally likely outcomes. It could come to rest in any one of the sectors numbered 1, 2, 3, 4, 5, 6, 7 or 8 as shown.</p> <p>Two such disks are used in a game where their arrows are independently spun.</p> <p>What is the probability that the sum of the numbers on the resulting sectors upon spinning the two disks is equal to 8 after the arrows come to rest?</p> <div style="text-align: center;">  </div>
<p>(A)</p>	<p>$\frac{1}{16}$</p>
<p>(B)</p>	<p>$\frac{5}{64}$</p>
<p>(C)</p>	<p>$\frac{3}{32}$</p>
<p>(D)</p>	<p>$\frac{7}{64}$</p>



Q.8	<p>Consider the following inequalities.</p> <p>(i) $3p - q < 4$</p> <p>(ii) $3q - p < 12$</p> <p>Which one of the following expressions below satisfies the above two inequalities?</p>
(A)	$p + q < 8$
(B)	$p + q = 8$
(C)	$8 \leq p + q < 16$
(D)	$p + q \geq 16$

<p>Q.10</p>	<p>Which one of the following sets of pieces can be assembled to form a square with a single round hole near the center? Pieces cannot overlap.</p>
<p>(A)</p>	
<p>(B)</p>	
<p>(C)</p>	
<p>(D)</p>	



GATE 2022 PHILOSOPHY (XH C4)

XH-B1: Q.1 – Q.17 Carry ONE mark Each

Q.11	A relationship is expressed as Iodine : Goitre. The pair(s) of words showing SIMILAR relationship is/are
	Space for Figure/Equation, if any:
(A)	Mango : Anaemia
(B)	Insulin : Diabetes
(C)	Fat : Obesity
(D)	Hormones : Heredity
Q.12	Three individuals are named P, Q, and R. Together they have a total of fifteen children of which nine are boys. P has three girls and Q has same number of boys. Q has one more child than P, who has four children. R has four more boys than the number of girls. The number of girls of R is equal to the number of boys of P. How many boys do R and P have?
	Space for Figure/Equation, if any:
(A)	$R = 3, P = 3$
(B)	$R = 4, P = 2$
(C)	$R = 5, P = 1$
(D)	$R = 2, P = 4$



GATE 2022 PHILOSOPHY (XH C4)

Q.13	<p>A sentence has been given below.</p> <p><i>The train will leave at 8:30 PM, we have been ready by 7:30 PM, so that we can reach the station on time.</i></p> <p>To make the above sentence grammatically correct, the phrase marked in bold is to be replaced by</p>
	Space for Figure/Equation, if any:
(A)	were
(B)	are
(C)	must be
(D)	should have
Q.14	<p>Complete the sentence correctly using the options given below.</p> <p>Hastings ____ (p) ____ developed as a holiday resort after ____ (q) ____ .</p>
	Space for Figure/Equation, if any:
(A)	(p) = a seaside town, (q) = the first world war
(B)	(p) = , a seaside town, (q) = the First World War
(C)	(p) = , a Seaside Town, (q) = World War I
(D)	(p) = A seaside town (q) = World War I



GATE 2022 PHILOSOPHY (XH C4)

Q.15	<p>The Arecibo telescope does not resemble what most of us think of when we hear the word telescope. Its reflective surface covers an area of 20 acres, which is quite remarkable. Dangling above it are towers and cables, sub-reflectors and antennas, all of which can be positioned using 26 motors to transmit radio waves and receive echoes with astonishing precision.</p> <p>From the passage, it can be inferred that most telescopes</p>
	Space for Figure/Equation, if any:
(A)	are not as large as Arecibo
(B)	do not have reflective surface
(C)	cannot be re-positioned
(D)	strictly have 26 motors



GATE 2022 PHILOSOPHY (XH C4)

Q.16	<p>Tailgating another vehicle is unsafe and illegal. Many rear-end collisions are caused by drivers following too close to the vehicle in front of them. The rules state that a driver must keep significant distance from the vehicle in front in order to stop safely and avoid a collision. Drivers should allow a minimum two seconds gap between their vehicle and the one ahead. At 60 km per hour, this equates to a gap of 33 meters; at 100 km per hour, it equates to a gap of 55 meters. More distance is needed to safely stop in rain or poor visibility, as during rain slippery roads reduce the effectiveness of braking.</p> <p>Which of the following statement(s) can be inferred from the above passage?</p>
	Space for Figure/Equation, if any:
(A)	People drive faster in rain and under poor visibility.
(B)	Braking may not be as effective during rain as in the dry conditions.
(C)	Tailgating is against the road rules.
(D)	Collision has no relationship with tailgating.
Q.17	<p>There are three separate, but equal-sized boxes. Inside each box, there are two separate small boxes. Inside each of the small boxes, there are four even smaller boxes. The total number of boxes will be _____ .</p>
	Space for Figure/Equation, if any:



GATE 2022 PHILOSOPHY (XH C4)

Q.18 – Q.26 Carry TWO marks Each

Q.18	<p>In a specific language, <i>xer dan</i> means “big horse”, <i>liro cas</i> means “red tomato” and <i>dum cas dan</i> means “big red barn”.</p> <p>The equivalent word for barn in this language is</p>
	Space for Figure/Equation, if any:
(A)	<i>dum</i>
(B)	<i>liro</i>
(C)	<i>dan</i>
(D)	<i>cas</i>
Q.19	<p>Park street is parallel to Rock street. Garden street is perpendicular (90°) to Lake street. Lake street is parallel to Rock street.</p> <p>For the situation described above, the TRUE statement is</p>
	Space for Figure/Equation, if any:
(A)	Park street is perpendicular to Lake street
(B)	Rock street is parallel to Garden street
(C)	Park street is parallel to Garden street
(D)	Garden street is perpendicular to Park street



GATE 2022 PHILOSOPHY (XH C4)

Q.20	Six examinations are required to be conducted in a week starting from Sunday to Saturday. Hindi is not scheduled on the first day and English is not scheduled before Hindi. Mathematics is scheduled one day after Physics. Biology is scheduled two days after Hindi. One day prior to Chemistry, there is no examination. Only one examination can be scheduled on a single day and Sunday is not an off day. What are the subjects scheduled on first and the last days?
	Space for Figure/Equation, if any:
(A)	First day Physics, Last day Biology
(B)	First day Physics, Last day Chemistry
(C)	First day Physics, Last day English
(D)	First day English, Last day Biology



GATE 2022 PHILOSOPHY (XH C4)

<p>Q.21</p>	<p>A 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 P, Q, R, and S) are jumbled up.</p> <p><i>First sentence:</i> Smoke oozed up between the planks.</p> <p>P: Passengers were told to be ready to quit the ship.</p> <p>Q: The rising gale fanned the smouldering fire.</p> <p>R: Everyone now knew there was fire onboard.</p> <p>S: Flames broke out here and there.</p> <p><i>Sixth sentence:</i> Most people bore the shock bravely.</p> <p>The most logically CORRECT order for the given jumbled up sentences is</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>QSRP</p>
<p>(B)</p>	<p>QPSR</p>
<p>(C)</p>	<p>RSPQ</p>
<p>(D)</p>	<p>PQRS</p>



GATE 2022 PHILOSOPHY (XH C4)

<p>Q.22</p>	<p>For a painting to succeed, it is essential that the painter and his public agree about what is significant. The subject of the painting may have a personal meaning for the painter or a common person; but there can also be the possibility of their agreement on its general meaning. It is at this point that the culture of the society and the period in question precedes the artists and her/his art. Renaissance art would have meant nothing to the Aztecs, and vice versa. If, to some extent, a few intellectuals can appreciate them both today, it is because their culture is a historical one. Its inspiration is history and all known developments to date.</p> <p>According to the passage, which of the following is/are NOT necessarily among the attributes needed for a painter to succeed?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>The subject must have a personal meaning for the painter.</p>
(B)	<p>The painter is able to communicate and justify the significance of its subject selection.</p>
(C)	<p>The painter and the public agree on what is significant.</p>
(D)	<p>The painting of the subjects is driven by public demand.</p>



GATE 2022 PHILOSOPHY (XH C4)

Q.23	<p>Vinod has a pre-determined route. Each morning he delivers 37 newspapers to customers in his neighborhood. It takes Vinod 50 minutes to deliver all the papers. When Vinod was sick or had other engagements, his friend Tarun, who lives on the same street delivered the papers on his behalf.</p> <p>Find the statement(s) that must be TRUE according to the given information.</p>
	Space for Figure/Equation, if any:
(A)	Vinod and Tarun lived in the same locality.
(B)	It was dark outside when Vinod began his delivery.
(C)	It took Tarun more than 50 minutes to deliver the papers.
(D)	Tarun delivered 37 newspapers to customers.



GATE 2022 PHILOSOPHY (XH C4)

<p>Q.24</p>	<p>Cholera, typhoid, diphtheria and tuberculosis cause huge number of deaths. Poor quality drinking water has always been the world’s greatest single carrier of sickness. Disease is transmitted when sewage and drinking water come into contact. Children are particularly vulnerable. In some of the poorest countries the infant mortality rate is high. The separation of sewage and the supply of clean drinking water are the domain of civil engineers, and their work makes a significant contribution to public health. That contribution was recognized when public sanitation was voted the greatest medical breakthrough, beating the discoveries including antibiotics and vaccines in a poll organized by the British Medical Journal.</p> <p>Identify the statement(s), which is/are NOT TRUE according to the passage.</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Children are less prone to water borne diseases.</p>
(B)	<p>The infant mortality rate was high in economically weaker countries.</p>
(C)	<p>The provision of sewage and drinking water should be adequately separated from each other.</p>
(D)	<p>The literature states that the public health and sanitation was never given its due importance.</p>



GATE 2022 PHILOSOPHY (XH C4)

<p>Q.25</p>	<p>Shark’s teeth have evolved to correspond to the diet of each particular species of shark. Consequently, the teeth of the great white shark bear little resemblance to those of the bull shark or nurse shark. There were essentially four different shark diets and thus four varieties of shark teeth. Sharks that feed on fish have needle like teeth, perfect for spearing and ripping. Sharks that eat mammals such as seals and sea lions have heavy, serrated teeth, typically triangular on the upper jaw and pointed on the lower jaw. Shark that feed in the benthic zone of the ocean have flattened teeth for crushing the shell of the creatures they find scuttling in the sand or clinging to rocks. Sharks that bask have teeth that are largely non-functional; these sharks filter food from the water by passing it through their gills.</p> <p>Which of the following is/are the CORRECT inference(s) as per the passage?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Shark’s teeth are not specially designed for slaughter.</p>
(B)	<p>The shape of the shark’s teeth relates to its prey.</p>
(C)	<p>Some species of sharks filter food through their gills.</p>
(D)	<p>Shark’s teeth relate to its diet.</p>



GATE 2022 PHILOSOPHY (XH C4)

Q.26	<p>A particular school management wants to contact all parents, all businessmen and all engineers. The following statistics are available with the school.</p> <p>Businessmen = 50</p> <p>Engineers = 25</p> <p>Parents = 2500</p> <p>Businessmen who are engineers = 0</p> <p>Businessmen who are parents = 25</p> <p>Engineers who are parents = 15</p> <p>The number of people needs to be contacted are _____ .</p>
	Space for Figure/Equation, if any:



GATE 2022 PHILOSOPHY (XH C4)
XH-C4 (Q.27 – Q.44 Carry ONE mark Each)

Q.27	<p>Let us consider the cases of Shweta and Rani. While Shweta has access to, and can afford to buy good quality dairy products, she and her spouse decide to pursue a vegan lifestyle. Therefore, she no longer buys milk or dairy-based products for her family. Rani's family on the other hand, has a meagre income. Although Rani's children like milk and kheer, Rani refrains from buying milk and instead spends on rice.</p> <p>In light of the concepts of <i>functioning</i> and <i>capability</i> as defined by Martha Nussbaum, which one of the following options holds for the above cases?</p>
(A)	They differ on the basis of capability
(B)	They differ on the basis of functioning
(C)	They differ on the basis of both functioning and capability
(D)	They do not differ since the end-result is the same in both
Q.28	<p>In the <i>opposition of propositions</i>, which one among the following is the contradictory of <i>A</i> proposition?</p>
(A)	Only <i>O</i>
(B)	Only <i>E</i>
(C)	Only <i>I</i>
(D)	<i>E</i> and <i>O</i>



GATE 2022 PHILOSOPHY (XH C4)

Q.29	<p>A study in Europe concluded that whenever there is an increase in the circulation of fake news in social media, the ruling party gains political mileage. Conversely, a proportionate decrease in the circulation of fake news, corresponds to the decline in its popularity.</p> <p>Which one of Mill's methods is entailed in the above reasoning?</p>
(A)	Method of Concomitant Variation
(B)	Joint Method of Agreement and Difference
(C)	Method of Residues
(D)	Method of Difference
Q.30	<p>Which one among the following Greek philosophers upholds the ontology of things by stating that 'all things are flowing' and 'nothing ever is, everything is becoming'?</p>
(A)	Heraclitus
(B)	Pythagoras
(C)	Thales
(D)	Anaxagoras



GATE 2022 PHILOSOPHY (XH C4)

Q.31	Which one among the following will be in agreement with Rene Descartes' confirmation of the <i>cogito</i> , in his <i>Discourse on Method</i> ?
(A)	Self exists as an imperfect thing
(B)	Self exists as a perfect thing
(C)	Only the world exists
(D)	Only the self exists
Q.32	According to Immanuel Kant, <i>duty</i> as rationally conceived is determined by:
(A)	The will as an <i>a priori</i> principle
(B)	The self-interest of the will
(C)	The divine will
(D)	The desire as the will
Q.33	Which one among the following is NOT a <i>pramāṇa</i> in Sāṅkhya epistemology?
(A)	Comparison (<i>upamāna</i>)
(B)	Perception (<i>dr̥ṣṭa/pratyakṣa</i>)
(C)	Inference (<i>anumāna</i>)
(D)	Valid testimony (<i>āptavacana</i>)

**GATE 2022 PHILOSOPHY (XH C4)**

Q.34	'Hare's horn (śaśa-viṣāṇa)', according to the Philosophy of Yoga, is a valid example of which kind of citta-vṛtti?
(A)	Constructive Imagination (vikalpa)
(B)	Wrong cognition or false knowledge (viparyaya)
(C)	Absence of cognition or sleep (nidra)
(D)	Memory (smṛti)
Q.35	According to Jaimini, in Mīmāṃsā, which one among the following is a command or injunction that impels humans to perform action?
(A)	Dharma
(B)	Apūrva
(C)	Adṛṣṭa
(D)	Niṣkāmakarma



GATE 2022 PHILOSOPHY (XH C4)

Q.36	According to Vaiśeṣika theory of atomism, which one of the following is NOT atomic?
(A)	Ether (ākāśa)
(B)	Earth (pṛthvi)
(C)	Fire (tejas)
(D)	Air (vāyu)
Q.37	The Cārvāka system rejects inference (anumāna) as a pramāṇa because it does not accept:
(A)	Invariable concomitance (vyāpti)
(B)	Comparison (upamāna) as a pramāṇa
(C)	The theory of pramāṇa altogether
(D)	Śabda as a pramāṇa
Q.38	The <i>Muṇḍakopaniṣad</i> distinguishes between ‘higher knowledge’ (parā vidyā) and ‘lower knowledge’ (aparā vidyā). What does the higher knowledge (parā vidyā) imply?
(A)	Knowledge of the Ātman
(B)	Knowledge of the World
(C)	Knowledge of Karma
(D)	Knowledge of God



GATE 2022 PHILOSOPHY (XH C4)

Q.39	In the <i>Bhagavadgītā</i> , the conception of ‘lokasamgraha’ denotes that the perfect person:
(A)	Purely <i>acts</i> for the wellbeing and welfare of humanity.
(B)	Purely <i>concentrates</i> on the Absolute by negating the world.
(C)	Fully <i>detaches</i> herself/himself from worldly affairs.
(D)	Fully <i>devotes</i> herself/himself to speak about God to people.
Q.40	S. Radhakrishnan, in his <i>An Idealistic View of Life</i> , delineates the nature of ultimate reality as “pure consciousness, pure freedom and infinite possibility.” Which school of Indian Philosophy influenced him most?
(A)	Advaita Vedānta
(B)	Sāṅkhya
(C)	Cārvāka
(D)	Mīmāṃsā

**GATE 2022 PHILOSOPHY (XH C4)**

Q.43	Jīva and Ajīva are the Categories (padārtha) in Jainism. Which of the following are included in Ajīva?
(A)	Matter (pudgala)
(B)	Space (ākāśa)
(C)	Motion (dharma)
(D)	Cause (hetu)
Q.44	In the Śaivasiddhānta, the Supreme Reality is called Pati, the individual self/soul is called Paśu, and the fetters which bind the souls are called Pāśa. Which of the following are included in Pāśa?
(A)	Karma
(B)	Māyā
(C)	Kāma
(D)	Moha



GATE 2022 PHILOSOPHY (XH C4)

Q.45 – Q.65 Carry TWO marks Each

<p>Q.45</p>	<p>Read the passage carefully and answer the question:</p> <p>“Only, unlike Kant, we do not see man as being essentially a positive will. On the contrary, he is first defined as a negativity. He is first at a distance from himself. He can coincide with himself only by agreeing never to rejoin himself. There is within him a perpetual playing with the negative, and he thereby escapes himself, he escapes his freedom. And it is precisely because an evil will is here possible that the words “to will oneself free” have a meaning. Therefore, not only do we assert that the existentialist doctrine permits the elaboration of an ethics, but it even appears to us as the only philosophy in which an ethics has its place. For, in a metaphysics of transcendence, in the classical sense of the term, evil is reduced to error; and in humanistic philosophies it is impossible to account for it, man being defined as complete in a complete world. Existentialism alone gives - like religions - a real role to evil, and it is this, perhaps, which make its judgments so gloomy. Men do not like to feel themselves in danger.”</p> <p style="text-align: right;">- Simone de Beauvoir, <i>The Ethics of Ambiguity</i></p> <p>Which one of the following claim is made in the passage regarding <i>Existentialism</i>?</p>
<p>(A)</p>	<p>Its emphasis on negativity means that it can account for evil.</p>
<p>(B)</p>	<p>It cannot give rise to an ethic since it rejects the idea of evil.</p>
<p>(C)</p>	<p>It believes that evil is a kind of error.</p>
<p>(D)</p>	<p>It must withhold judgments about evil.</p>



GATE 2022 PHILOSOPHY (XH C4)

Q.46	Keeping in mind the central commitments of John Dewey's Pragmatism, which one of the following applies to his concept of <i>experience</i> ?
(A)	It involves transaction between the individual and her environment.
(B)	It is an inferior source of knowledge.
(C)	It is shaped by the environment but cannot modify the environment.
(D)	It is overridden by reason in validating knowledge.
Q.47	All Covid-19 patients are fighters No Covid-19 patients are children Therefore, no children are fighters Which one among the following options determines the <i>mood</i> , <i>figure</i> , and <i>fallacy</i> of the above argument?
(A)	AEE, III Figure, Illicit Major
(B)	AEE, II Figure, Undistributed Middle
(C)	AEE, III Figure, Illicit Minor
(D)	AEE, II Figure, Existential Fallacy

GATE 2022 PHILOSOPHY (XH C4)

Q.48	In the theory of causation, the effect (kārya) is non-existent (asat) before its creation; it is a new beginning (ārambha). Which one of the following schools of thought in Indian philosophy upholds this theory?
(A)	Nyāya
(B)	Vedānta
(C)	Yoga
(D)	Sāṅkhya
Q.49	<p>Read the passage carefully and answer the question:</p> <p>“Passive resistance is a method of securing rights by personal suffering; it is the reverse of resistance by arms. When I refuse to do a thing that is repugnant to my conscience, I use soul-force. For instance, the Government of the day has passed a law which is applicable to me. I do not like it. If by using violence I force the Government to repeal the law, I am employing what may be termed body-force. If I do not obey the law and accept the penalty for its breach, I use soul-force. It involves sacrifice of self.”</p> <p style="text-align: right;">– M. K. Gandhi, <i>Hind Swaraj or Indian Home Rule</i></p> <p>Which one among the following is NOT in conformity with the above passage?</p>
(A)	Soul-force is brute force
(B)	Passive resistance involves sacrifice
(C)	Conscience is the soul-force
(D)	Active resistance is body-force



GATE 2022 PHILOSOPHY (XH C4)

Q.50	In light of Merleau-Ponty's concepts of the <i>body</i> and <i>perception</i> in his <i>Phenomenology of Perception</i> , which of the following claim(s) is/are true about my body?
(A)	It is the vantage-point of my perception.
(B)	It is the subject of perception.
(C)	It can appear in my perception just like other objects.
(D)	It is not embedded in my field of perception.
Q.51	Plato's <i>theory of recollection</i> sheds light on the origins of knowledge. Which among the following option(s) does it intend to explain?
(A)	Philosophical and mathematical discoveries
(B)	Our linguistic capacities
(C)	Innateness of knowledge
(D)	Only higher learning but not the ordinary learning



GATE 2022 PHILOSOPHY (XH C4)

Q.52	Which among the following is/are correct statement(s) about Aristotle's approach to the study of logic and its contribution to science (<i>episteme</i>)?
(A)	Logic is a mere tool and not an end in itself.
(B)	Logic makes an important but incomplete contribution to science.
(C)	The mind-independent nature of things is not accessible only through Logic.
(D)	Science employs only Deductive Logic.
Q.53	Which among the following statement(s) is/are in accordance with John Locke's epistemological concern in his <i>An essay concerning human understanding</i> ?
(A)	All our knowledge ultimately derives from experience.
(B)	Experience immediately provides us with ideas, not knowledge as such.
(C)	Reason has no role to play in our acquisition of knowledge.
(D)	Our knowledge has no limits.
Q.54	Which among the following fundamental rationalist beliefs concerning the cause and effect relation does David Hume <i>reject</i> ?
(A)	Causes contain their effects.
(B)	Causes entail their effects.
(C)	There is necessary connection between cause and effect.
(D)	Causal reasoning is not like demonstrative reasoning.



GATE 2022 PHILOSOPHY (XH C4)

Q.55	If Immanuel Kant is said to have brought about a Copernican revolution in philosophy, it is because of the following reasons:
(A)	For bringing foundational change in metaphysics.
(B)	For showing that objects conform to perception and not perception to objects.
(C)	For placing mind at the center of epistemology.
(D)	For bringing foundational change in the theory of morality.
Q.56	What differentiates Logical Positivism of the Vienna Circle from the earlier forms of Empiricism and Positivism of Hume, Mach, Comte and Mill?
(A)	In holding that the ultimate basis of knowledge rests upon public experimental verification rather than personal experience.
(B)	In holding that metaphysical doctrines are not false but meaningless.
(C)	In holding that all genuine knowledge about nature can be expressed in a single language common to all the sciences.
(D)	In confirming the possibility of <i>synthetic a priori</i> .



GATE 2022 PHILOSOPHY (XH C4)

Q.57	Bertrand Russell's philosophy of Logical Atomism intends to establish his methodological and metaphysical standpoints. Which among the following is/are in accordance with his doctrine?
(A)	Everything we experience can be analyzed into logical atoms.
(B)	Logical atoms are particulars, qualities, and relations.
(C)	Logical atoms are universals, and not about qualities and relations.
(D)	We can apprehend the reality as it is in itself, unaffected by the medium of thought.
Q.58	Using the theories of punishment to argue <i>for</i> or <i>against</i> capital punishment, which among the following is/are true?
(A)	A combination of Utilitarian and Deterrent theories will argue for capital punishment.
(B)	A combination of Utilitarian and Retributive theories will argue for capital punishment.
(C)	A combination of Utilitarian and Reformative theories will argue against capital punishment.
(D)	A combination of Reformative and Retributive theories will argue against capital punishment.



GATE 2022 PHILOSOPHY (XH C4)

Q.59	Gilbert Ryle believed that Descartes' mind-body dualism commits a <i>category mistake</i> . Which of the following motive(s) of Descartes lead(s) to this category mistake?
(A)	Endorsement of the claims of mechanics but not the Hobbesian kind
(B)	Belief in religion and morality
(C)	The mental cannot be a variety of the mechanical
(D)	Complete endorsement of Hobbesian mechanics
Q.60	Ludwig Wittgenstein, in his <i>Tractatus Logico-Philosophicus</i> , writes, "A picture can depict any reality whose form it has." Which of the following proposition(s) will be in line with this?
(A)	A picture can always <i>display</i> a pictorial form.
(B)	A picture has logical form.
(C)	A logical picture can <i>depict</i> the world.
(D)	A picture can <i>depict</i> its pictorial form.



GATE 2022 PHILOSOPHY (XH C4)

Q.61	<p>Select the CORRECT combinations of the Vedanta schools (Group-I) and their propounders (Group-II) from the table.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Group - I</th> <th style="text-align: center;">Group - II</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">(a) Dvaita</td> <td style="text-align: center;">(i) Śankara</td> </tr> <tr> <td style="text-align: center;">(b) Śuddhādvaita</td> <td style="text-align: center;">(ii) Rāmānuja</td> </tr> <tr> <td style="text-align: center;">(c) Advaita</td> <td style="text-align: center;">(iii) Madhva</td> </tr> <tr> <td style="text-align: center;">(d) Viśiṣṭādvaita</td> <td style="text-align: center;">(iv) Nimbārka</td> </tr> </tbody> </table>	Group - I	Group - II	(a) Dvaita	(i) Śankara	(b) Śuddhādvaita	(ii) Rāmānuja	(c) Advaita	(iii) Madhva	(d) Viśiṣṭādvaita	(iv) Nimbārka
Group - I	Group - II										
(a) Dvaita	(i) Śankara										
(b) Śuddhādvaita	(ii) Rāmānuja										
(c) Advaita	(iii) Madhva										
(d) Viśiṣṭādvaita	(iv) Nimbārka										
(A)	(a) and (iii)										
(B)	(d) and (ii)										
(C)	(b) and (i)										
(D)	(c) and (iv)										
Q.62	Which of the following is/are part of the six pāramitās (ṣaḍpāramitā) in Buddhism?										
(A)	Charity or giving (dāna)										
(B)	Virtuous conduct (śīla)										
(C)	Forbearance or patience (kṣānti)										
(D)	Non-violence (ahimsā)										



GATE 2022 PHILOSOPHY (XH C4)

Q.63	<p>Read the passage carefully and answer the question:</p> <p>“Habits of the constitutional morality may be essential for the maintenance of a constitutional form of government. But the maintenance of a constitutional form of Government is not the same thing as a self-government by the people. Similarly, it may be granted that adult suffrage can produce government of the people in the logical sense of the phrase, <i>i.e.</i>, in contrast to the government of a king. But it cannot by itself be said to bring about a democratic government, in the sense of the government by the people and for the people.”</p> <p style="text-align: center;">- B. R. Ambedkar, “Democracy”, <i>The Essential Writings of B. R. Ambedkar</i></p> <p>Which of the following statements is/are NOT in conformity with the above passage?</p>
(A)	The maintenance of self-governance is always maintenance of constitutional government.
(B)	Constitutional morality may not be essential for preservation of constitutional form of government.
(C)	Adult suffrage itself is sufficient to bring about a democratic government.
(D)	Elected government is logically in contrast to the government of a king.



GATE 2022 PHILOSOPHY (XH C4)

Q.64	<p>Read the passage carefully and answer the question:</p> <p>“What do I mean by the ideal of universal religion? I do not mean any one universal philosophy, or any one universal mythology, or any one universal ritual held by all; for I know that this world must go on working, wheel within wheel, this intricate mass of machinery, most complex, most wonderful. What can we do then? We can make it run smoothly, we can lessen the friction; we can grease the wheels, as it were. How? By recognizing natural necessity of variation. Just as we have recognized unity by our very nature, so we must also recognize variation. We must learn that truth may be expressed in a hundred thousand ways, and that each of these ways is true as far as it goes. We must learn that same thing can be viewed from a hundred different standpoints, and yet be the same thing.”</p> <p>– Swami Vivekananda, “The Ideal of a Universal Religion”, <i>The Complete Works of Swami Vivekananda</i>, Vol.II</p> <p>Which of the following is/are characteristics of Vivekananda’s <i>ideal of universal religion</i>?</p>
(A)	No adherence to any particular religion
(B)	Celebration of differences
(C)	Recognition of multiple truths
(D)	Reduction of all religions into a single religion



GATE 2022 PHILOSOPHY (XH C4)

<p>Q.65</p>	<p>Read the song carefully and answer the question:</p> <p>Deliverance is not for me in renunciation. I feel the embrace of freedom in a thousand bonds of delight.</p> <p>Thou ever pourest for me the fresh draught of thy wine of various colours and fragrance, filling this earthen vessel to the brim.</p> <p>My world will light its hundred different lamps with thy flame and place them before the altar of thy temple.</p> <p>No, I will never shut the doors of my senses. The delights of sight and hearing and touch will bear thy delight.</p> <p>Yes, all my illusions will burn into illumination of joy, and all my desires ripen into fruits of love.</p> <p style="text-align: right;">- Rabindranath Tagore, <i>Gitanjali</i>, Song 73</p> <p>The above song voices Tagore's philosophy of life. Which among the following is/are in conformity with the message of the song?</p>
<p>(A)</p>	<p>Denial of asceticism.</p>
<p>(B)</p>	<p>Worldliness and divinity are not at odds with each other.</p>
<p>(C)</p>	<p>Appreciation and enjoyment of the world.</p>
<p>(D)</p>	<p>Denial of sensuous indulgence in the world.</p>



Q. No.	Session	Question Type	Subject Name	Key/Range	Mark
1	4	MCQ	GA	C	1
2	4	MCQ	GA	D	1
3	4	MCQ	GA	C	1
4	4	MCQ	GA	C	1
5	4	MCQ	GA	C	1
6	4	MCQ	GA	B	2
7	4	MCQ	GA	D	2
8	4	MCQ	GA	A	2
9	4	MCQ	GA	C	2
10	4	MCQ	GA	C	2
11	4	MCQ	XH-B1	B	1
12	4	MCQ	XH-B1	C	1
13	4	MCQ	XH-B1	C	1
14	4	MCQ	XH-B1	B	1
15	4	MCQ	XH-B1	A	1
16	4	MSQ	XH-B1	B, C	1
17	4	NAT	XH-B1	33 to 33	1
18	4	MCQ	XH-B1	A	2
19	4	MCQ	XH-B1	D	2
20	4	MCQ	XH-B1	B	2
21	4	MCQ	XH-B1	A	2
22	4	MCQ	XH-B1	A OR D	2
23	4	MSQ	XH-B1	A, D	2
24	4	MSQ	XH-B1	A, D OR A, B, D	2
25	4	MSQ	XH-B1	B, C, D	2
26	4	NAT	XH-B1	2535 to 2535	2
27	4	MCQ	XH-C4	A	1
28	4	MCQ	XH-C4	A	1
29	4	MCQ	XH-C4	A	1
30	4	MCQ	XH-C4	A	1
31	4	MCQ	XH-C4	A	1
32	4	MCQ	XH-C4	A	1
33	4	MCQ	XH-C4	A	1
34	4	MCQ	XH-C4	A	1
35	4	MCQ	XH-C4	A	1
36	4	MCQ	XH-C4	A	1
37	4	MCQ	XH-C4	A	1
38	4	MCQ	XH-C4	A	1
39	4	MCQ	XH-C4	A	1
40	4	MCQ	XH-C4	A	1
41	4	MSQ	XH-C4	A,B,C	1
42	4	MSQ	XH-C4	A,B	1
43	4	MSQ	XH-C4	A,B,C	1
44	4	MSQ	XH-C4	A,B	1



45	4	MCQ	XH-C4	A	2
46	4	MCQ	XH-C4	A	2
47	4	MCQ	XH-C4	A	2
48	4	MCQ	XH-C4	A	2
49	4	MCQ	XH-C4	A	2
50	4	MSQ	XH-C4	A,B	2
51	4	MSQ	XH-C4	A,B,C	2
52	4	MSQ	XH-C4	A,B,C	2
53	4	MSQ	XH-C4	A,B	2
54	4	MSQ	XH-C4	A,B,C	2
55	4	MSQ	XH-C4	A,B,C	2
56	4	MSQ	XH-C4	A,B,C	2
57	4	MSQ	XH-C4	A,B	2
58	4	MSQ	XH-C4	A,B OR A, B, C	2
59	4	MSQ	XH-C4	A,B,C	2
60	4	MSQ	XH-C4	A,B,C	2
61	4	MSQ	XH-C4	A,B	2
62	4	MSQ	XH-C4	A,B,C	2
63	4	MSQ	XH-C4	A,B,C	2
64	4	MSQ	XH-C4	A,B	2
65	4	MSQ	XH-C4	A,B,C	2

GATE 2022 General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark each.

Q.1	Inhaling the smoke from a burning _____ could _____ you quickly.
(A)	tire / tier
(B)	tire / tyre
(C)	tyre / tire
(D)	tyre / tier

Q.2	A sphere of radius r cm is packed in a box of cubical shape. What should be the minimum volume (in cm^3) of the box that can enclose the sphere?
(A)	$\frac{r^3}{8}$
(B)	r^3
(C)	$2r^3$
(D)	$8r^3$



Q.3	<p>Pipes P and Q can fill a storage tank in full with water in 10 and 6 minutes, respectively. Pipe R draws the water out from the storage tank at a rate of 34 litres per minute. P, Q and R operate at a constant rate.</p> <p>If it takes one hour to completely empty a full storage tank with all the pipes operating simultaneously, what is the capacity of the storage tank (in litres)?</p>
(A)	26.8
(B)	60.0
(C)	120.0
(D)	127.5

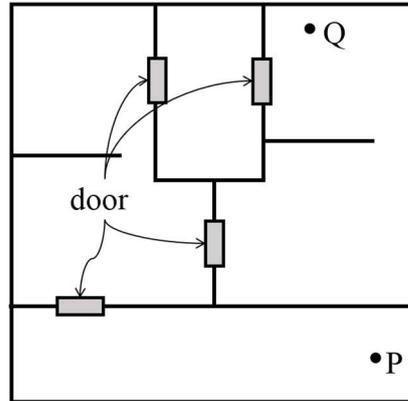


Q.4	<p>Six persons P, Q, R, S, T and U are sitting around a circular table facing the center not necessarily in the same order. Consider the following statements:</p> <ul style="list-style-type: none">• P sits next to S and T.• Q sits diametrically opposite to P.• The shortest distance between S and R is equal to the shortest distance between T and U. <p>Based on the above statements, Q is a neighbor of</p>
(A)	U and S
(B)	R and T
(C)	R and U
(D)	P and S

Q.5

A building has several rooms and doors as shown in the top view of the building given below. The doors are closed initially.

What is the minimum number of doors that need to be opened in order to go from the point P to the point Q?



(A) 4

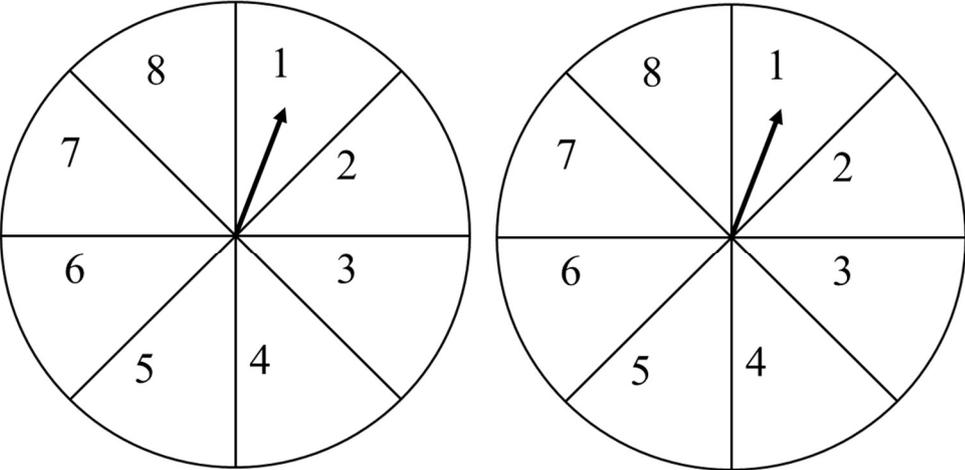
(B) 3

(C) 2

(D) 1

Q. 6 – Q. 10 Carry TWO marks each.

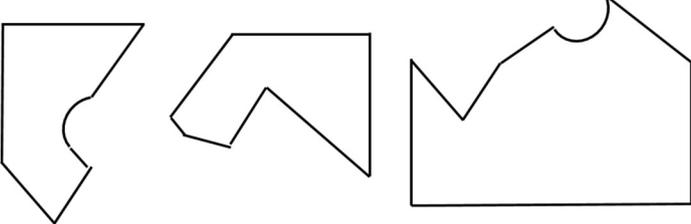
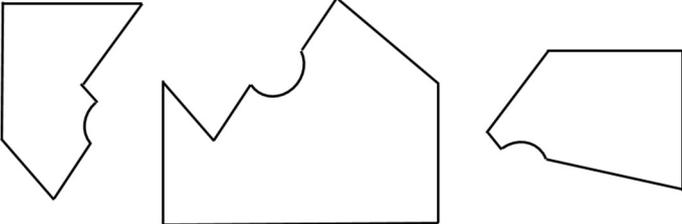
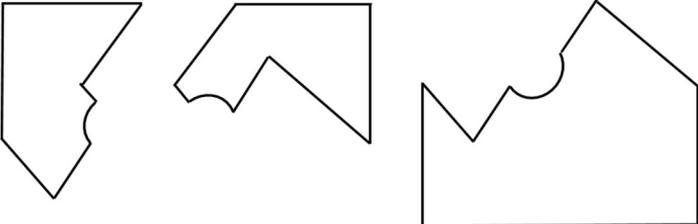
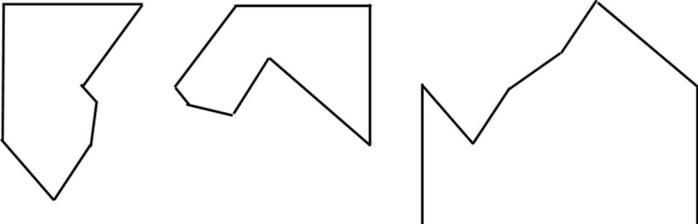
<p>Q.6</p>	<p>Rice, a versatile and inexpensive source of carbohydrate, is a critical component of diet worldwide. Climate change, causing extreme weather, poses a threat to sustained availability of rice. Scientists are working on developing Green Super Rice (GSR), which is resilient under extreme weather conditions yet gives higher yields sustainably.</p> <p>Which one of the following is the CORRECT logical inference based on the information given in the above passage?</p>
<p>(A)</p>	<p>GSR is an alternative to regular rice, but it grows only in an extreme weather</p>
<p>(B)</p>	<p>GSR may be used in future in response to adverse effects of climate change</p>
<p>(C)</p>	<p>GSR grows in an extreme weather, but the quantity of produce is lesser than regular rice</p>
<p>(D)</p>	<p>Regular rice will continue to provide good yields even in extreme weather</p>

<p>Q.7</p>	<p>A game consists of spinning an arrow around a stationary disk as shown below. When the arrow comes to rest, there are eight equally likely outcomes. It could come to rest in any one of the sectors numbered 1, 2, 3, 4, 5, 6, 7 or 8 as shown.</p> <p>Two such disks are used in a game where their arrows are independently spun.</p> <p>What is the probability that the sum of the numbers on the resulting sectors upon spinning the two disks is equal to 8 after the arrows come to rest?</p> <div style="text-align: center;">  </div>
<p>(A)</p>	<p>$\frac{1}{16}$</p>
<p>(B)</p>	<p>$\frac{5}{64}$</p>
<p>(C)</p>	<p>$\frac{3}{32}$</p>
<p>(D)</p>	<p>$\frac{7}{64}$</p>



Q.8	<p>Consider the following inequalities.</p> <p>(i) $3p - q < 4$</p> <p>(ii) $3q - p < 12$</p> <p>Which one of the following expressions below satisfies the above two inequalities?</p>
(A)	$p + q < 8$
(B)	$p + q = 8$
(C)	$8 \leq p + q < 16$
(D)	$p + q \geq 16$



<p>Q.10</p>	<p>Which one of the following sets of pieces can be assembled to form a square with a single round hole near the center? Pieces cannot overlap.</p>
<p>(A)</p>	
<p>(B)</p>	
<p>(C)</p>	
<p>(D)</p>	



GATE 2022 Psychology (XH-C5)

XH-B1: Q.11 – Q.27 Carry ONE mark Each

Q.11	A relationship is expressed as Iodine : Goitre . The pair(s) of words showing SIMILAR relationship is/are
	Space for Figure/Equation, if any:
(A)	Mango : Anaemia
(B)	Insulin : Diabetes
(C)	Fat : Obesity
(D)	Hormones : Heredity
Q.12	Three individuals are named P, Q, and R. Together they have a total of fifteen children of which nine are boys. P has three girls and Q has same number of boys. Q has one more child than P, who has four children. R has four more boys than the number of girls. The number of girls of R is equal to the number of boys of P. How many boys do R and P have?
	Space for Figure/Equation, if any:
(A)	$R = 3, P = 3$
(B)	$R = 4, P = 2$
(C)	$R = 5, P = 1$
(D)	$R = 2, P = 4$



GATE 2022 Psychology (XH-C5)

Q.13	<p>A sentence has been given below.</p> <p><i>The train will leave at 8:30 PM, we have been ready by 7:30 PM, so that we can reach the station on time.</i></p> <p>To make the above sentence grammatically correct, the phrase marked in bold is to be replaced by</p>
	Space for Figure/Equation, if any:
(A)	were
(B)	are
(C)	must be
(D)	should have
Q.14	<p>Complete the sentence correctly using the options given below.</p> <p>Hastings ____ (p) ____ developed as a holiday resort after ____ (q) ____ .</p>
	Space for Figure/Equation, if any:
(A)	(p) = a seaside town, (q) = the first world war
(B)	(p) = , a seaside town, (q) = the First World War
(C)	(p) = , a Seaside Town, (q) = World War I
(D)	(p) = A seaside town (q) = World War I



GATE 2022 Psychology (XH-C5)

Q.15	<p>The Arecibo telescope does not resemble what most of us think of when we hear the word telescope. Its reflective surface covers an area of 20 acres, which is quite remarkable. Dangling above it are towers and cables, sub-reflectors and antennas, all of which can be positioned using 26 motors to transmit radio waves and receive echoes with astonishing precision.</p> <p>From the passage, it can be inferred that most telescopes</p>
	Space for Figure/Equation, if any:
(A)	are not as large as Arecibo
(B)	do not have reflective surface
(C)	cannot be re-positioned
(D)	strictly have 26 motors



GATE 2022 Psychology (XH-C5)

Q.16	<p>Tailgating another vehicle is unsafe and illegal. Many rear-end collisions are caused by drivers following too close to the vehicle in front of them. The rules state that a driver must keep significant distance from the vehicle in front in order to stop safely and avoid a collision. Drivers should allow a minimum two seconds gap between their vehicle and the one ahead. At 60 km per hour, this equates to a gap of 33 meters; at 100 km per hour, it equates to a gap of 55 meters. More distance is needed to safely stop in rain or poor visibility, as during rain slippery roads reduce the effectiveness of braking.</p> <p>Which of the following statement(s) can be inferred from the above passage?</p>
	Space for Figure/Equation, if any:
(A)	People drive faster in rain and under poor visibility.
(B)	Braking may not be as effective during rain as in the dry conditions.
(C)	Tailgating is against the road rules.
(D)	Collision has no relationship with tailgating.
Q.17	<p>There are three separate, but equal-sized boxes. Inside each box, there are two separate small boxes. Inside each of the small boxes, there are four even smaller boxes. The total number of boxes will be _____ .</p>
	Space for Figure/Equation, if any:

GATE 2022 Psychology (XH-C5)

Q.18 – Q.26 Carry TWO marks Each

Q.18	In a specific language, <i>xer dan</i> means “big horse”, <i>liro cas</i> means “red tomato” and <i>dum cas dan</i> means “big red barn”. The equivalent word for barn in this language is
	Space for Figure/Equation, if any:
(A)	<i>dum</i>
(B)	<i>liro</i>
(C)	<i>dan</i>
(D)	<i>cas</i>
Q.19	Park street is parallel to Rock street. Garden street is perpendicular (90°) to Lake street. Lake street is parallel to Rock street. For the situation described above, the TRUE statement is
	Space for Figure/Equation, if any:
(A)	Park street is perpendicular to Lake street
(B)	Rock street is parallel to Garden street
(C)	Park street is parallel to Garden street
(D)	Garden street is perpendicular to Park street



GATE 2022 Psychology (XH-C5)

Q.20	Six examinations are required to be conducted in a week starting from Sunday to Saturday. Hindi is not scheduled on the first day and English is not scheduled before Hindi. Mathematics is scheduled one day after Physics. Biology is scheduled two days after Hindi. One day prior to Chemistry, there is no examination. Only one examination can be scheduled on a single day and Sunday is not an off day. What are the subjects scheduled on first and the last days?
	Space for Figure/Equation, if any:
(A)	First day Physics, Last day Biology
(B)	First day Physics, Last day Chemistry
(C)	First day Physics, Last day English
(D)	First day English, Last day Biology



GATE 2022 Psychology (XH-C5)

<p>Q.21</p>	<p>A 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 P, Q, R, and S) are jumbled up.</p> <p><i>First sentence:</i> Smoke oozed up between the planks.</p> <p>P: Passengers were told to be ready to quit the ship.</p> <p>Q: The rising gale fanned the smouldering fire.</p> <p>R: Everyone now knew there was fire onboard.</p> <p>S: Flames broke out here and there.</p> <p><i>Sixth sentence:</i> Most people bore the shock bravely.</p> <p>The most logically CORRECT order for the given jumbled up sentences is</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>QSRP</p>
<p>(B)</p>	<p>QPSR</p>
<p>(C)</p>	<p>RSPQ</p>
<p>(D)</p>	<p>PQRS</p>



GATE 2022 Psychology (XH-C5)

<p>Q.22</p>	<p>For a painting to succeed, it is essential that the painter and his public agree about what is significant. The subject of the painting may have a personal meaning for the painter or a common person; but there can also be the possibility of their agreement on its general meaning. It is at this point that the culture of the society and the period in question precedes the artists and her/his art. Renaissance art would have meant nothing to the Aztecs, and vice versa. If, to some extent, a few intellectuals can appreciate them both today, it is because their culture is a historical one. Its inspiration is history and all known developments to date.</p> <p>According to the passage, which of the following is/are NOT necessarily among the attributes needed for a painter to succeed?</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>The subject must have a personal meaning for the painter.</p>
<p>(B)</p>	<p>The painter is able to communicate and justify the significance of its subject selection.</p>
<p>(C)</p>	<p>The painter and the public agree on what is significant.</p>
<p>(D)</p>	<p>The painting of the subjects is driven by public demand.</p>



GATE 2022 Psychology (XH-C5)

Q.23	<p>Vinod has a pre-determined route. Each morning he delivers 37 newspapers to customers in his neighborhood. It takes Vinod 50 minutes to deliver all the papers. When Vinod was sick or had other engagements, his friend Tarun, who lives on the same street delivered the papers on his behalf.</p> <p>Find the statement(s) that must be TRUE according to the given information.</p>
	Space for Figure/Equation, if any:
(A)	Vinod and Tarun lived in the same locality.
(B)	It was dark outside when Vinod began his delivery.
(C)	It took Tarun more than 50 minutes to deliver the papers.
(D)	Tarun delivered 37 newspapers to customers.



GATE 2022 Psychology (XH-C5)

<p>Q.24</p>	<p>Cholera, typhoid, diphtheria and tuberculosis cause huge number of deaths. Poor quality drinking water has always been the world’s greatest single carrier of sickness. Disease is transmitted when sewage and drinking water come into contact. Children are particularly vulnerable. In some of the poorest countries the infant mortality rate is high. The separation of sewage and the supply of clean drinking water are the domain of civil engineers, and their work makes a significant contribution to public health. That contribution was recognized when public sanitation was voted the greatest medical breakthrough, beating the discoveries including antibiotics and vaccines in a poll organized by the British Medical Journal.</p> <p>Identify the statement(s), which is/are NOT TRUE according to the passage.</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Children are less prone to water borne diseases.</p>
(B)	<p>The infant mortality rate was high in economically weaker countries.</p>
(C)	<p>The provision of sewage and drinking water should be adequately separated from each other.</p>
(D)	<p>The literature states that the public health and sanitation was never given its due importance.</p>



GATE 2022 Psychology (XH-C5)

<p>Q.25</p>	<p>Shark's teeth have evolved to correspond to the diet of each particular species of shark. Consequently, the teeth of the great white shark bear little resemblance to those of the bull shark or nurse shark. There were essentially four different shark diets and thus four varieties of shark teeth. Sharks that feed on fish have needle like teeth, perfect for spearing and ripping. Sharks that eat mammals such as seals and sea lions have heavy, serrated teeth, typically triangular on the upper jaw and pointed on the lower jaw. Shark that feed in the benthic zone of the ocean have flattened teeth for crushing the shell of the creatures they find scuttling in the sand or clinging to rocks. Sharks that bask have teeth that are largely non-functional; these sharks filter food from the water by passing it through their gills.</p> <p>Which of the following is/are the CORRECT inference(s) as per the passage?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Shark's teeth are not specially designed for slaughter.</p>
(B)	<p>The shape of the shark's teeth relates to its prey.</p>
(C)	<p>Some species of sharks filter food through their gills.</p>
(D)	<p>Shark's teeth relate to its diet.</p>



GATE 2022 Psychology (XH-C5)

Q.26	<p>A particular school management wants to contact all parents, all businessmen and all engineers. The following statistics are available with the school.</p> <p>Businessmen = 50</p> <p>Engineers = 25</p> <p>Parents = 2500</p> <p>Businessmen who are engineers = 0</p> <p>Businessmen who are parents = 25</p> <p>Engineers who are parents = 15</p> <p>The number of people needs to be contacted are _____ .</p>
	Space for Figure/Equation, if any:

**GATE 2022 Psychology (XH-C5)**
XH -C5 (Q.27 – Q.44 Carry ONE mark Each)

Q.27	The construct validity of a test is assessed through _____.
(A)	Convergent and Discriminant validity
(B)	Concurrent and Predictive validity
(C)	Convergent and Predictive validity
(D)	Discriminant and Predictive validity
Q.28	Memory involves three stages. Find out the correct sequence from the following:
(A)	Storage, Encoding, Retrieval
(B)	Retrieval, Encoding, Storage
(C)	Encoding, Storage, Retrieval
(D)	Decoding, Encoding, Storage

**GATE 2022 Psychology (XH-C5)**

Q.29	Erickson's fifth stage of psychosocial development is
(A)	Identity vs role confusion
(B)	Intimacy vs isolation
(C)	Generative vs stagnation
(D)	Integrity vs despair
Q.30	Test developers use reverse coding of certain items in a scale to offset the effects of _____.
(A)	Social desirability
(B)	Acquiescence
(C)	Faking
(D)	Random responding



GATE 2022 Psychology (XH-C5)

Q.31	According to Kohlberg's theory of Moral development, at which level individuals judge morality in terms of abstract principles?
(A)	Pre-conventional
(B)	Post-conventional
(C)	Conventional
(D)	Transcendental
Q.32	You had been driving a car with manual-gear for 5 years. Recently, you started driving a new car with an auto- gear. If you are having any trouble, it is most likely due to _____.
(A)	Proactive interference
(B)	Retroactive interference
(C)	Anterograde interference
(D)	Learning Difficulties
Q.33	Which of the following is not a behaviour therapy technique?
(A)	Flooding
(B)	Countertransference
(C)	Counterconditioning
(D)	Systematic desensitization

**GATE 2022 Psychology (XH-C5)**

Q.34	According to Robert Sternberg, “Street Smarts” refers to –
(A)	Analytical intelligence
(B)	Creative intelligence
(C)	Emotional intelligence
(D)	Practical intelligence
Q.35	Research design in which several age groups of participants are studied at one particular point of time is called:
(A)	Cross-sequential design
(B)	Functional design
(C)	Cross-sectional design
(D)	Longitudinal design



GATE 2022 Psychology (XH-C5)

Q.36	Proximo-distal direction of development explains the nature of the development from _____.
(A)	Top to bottom
(B)	Internal organs to external organs
(C)	Centre to periphery
(D)	Sensory organ to motor organs
Q.37	A cricket player who could not play an easy ball and gets out without scoring any run and blames the pitch, is an expression of _____.
(A)	Sublimation
(B)	Regression
(C)	Projection
(D)	Rationalization

Q.38	The process through which we seek to identify the causes of other's behaviour and gain knowledge of their stable traits and dispositions is known as _____.
(A)	Distribution
(B)	Dissemination
(C)	Retribution
(D)	Attribution



GATE 2022 Psychology (XH-C5)

Q.39	Which of the following techniques is used to measure the variations in the activity of Ascending Reticular Activating System (ARAS)?
(A)	ECG
(B)	PET
(C)	fMRI
(D)	EEG

Q.40	The statement “I can do no wrong, but, you can do no right”, refers to _____.
(A)	The self-serving bias
(B)	The self-other bias
(C)	The other-self bias
(D)	The other- serving bias

Q.41	Which of the following is a qualitative research design where learned experiences of individuals are examined in their life world?
(A)	Phenomenology
(B)	Ethnography
(C)	Focused-group discussion
(D)	Grounded-theory



GATE 2022 Psychology (XH-C5)

Q.42	Which part of the brain is responsible for transferring information from STM to LTM?
(A)	Amygdala
(B)	Hypothalamus
(C)	Hippocampus
(D)	Cerebellum
Q.43	The mean of a distribution is 14 and standard deviation is 5. What would be the value of coefficient of variation? (<i>round off to two decimal places</i>)
Q.44	Swami gets a test score of 190, the mean is 150 and SD is 25. Assuming normal distribution, the Z score would be _____. (<i>round off to one decimal place</i>)

GATE 2022 Psychology (XH-C5)

Q.45 – Q.65 Carry TWO marks Each

Q.45	Which of the following statement(s) is/are correct regarding Multiple Analysis of Variance (MANOVA)?
(A)	Tests the mean difference of more than two groups on one dependent variable.
(B)	Tests the mean difference of more than two groups across several dependent variables.
(C)	The independent variable is measured on a nominal scale and dependent variable on an interval or ratio scale.
(D)	The dependent variable is measured on nominal scale and independent variable on an interval or ratio scale.
Q.46	Which of the following statements is/are related to observational learning?
(A)	Remembering the steps to perform a task
(B)	A person in a dinner wants to know how to use the utensils by watching others
(C)	A person uses chocolate to motivate his son to perform the task
(D)	A person is capable of reproducing the action after viewing it



GATE 2022 Psychology (XH-C5)

Q.47	Find out the statements which are related to different types of reliability?
(A)	The same test is administered to the same people at two points in time
(B)	Give the test once and have it scored by two scorers or by two methods
(C)	Give the test in one administration and then split the test into two halves for scoring
(D)	The extent to which people score on a measure are correlated with other variables
Q.48	Which of the following statement(s) regarding test scores and their interpretations is/are correct?
(A)	Frequency distribution are graphs to help us understand the distribution of test scores
(B)	Normal probability distribution is a theoretical distribution to help us understand the distribution of test scores
(C)	Central tendency measures are numerical tools to help us locate the middle of a distribution of a test score
(D)	Measurement of variability are numerical tools to help us understand the spread of a distribution of a test score
Q.49	Which of the following statement(s) is/are correct regarding the negative symptoms of schizophrenia?
(A)	Auditory hallucination, persecution, and disorganized thinking
(B)	Lack of effect in situation, poor motivation, and social withdrawal
(C)	Loss of interest in day-to-day activities, lack of will, and difficulty in expressing emotions
(D)	Visual hallucination, delusions of grandeur, and delusion of control

GATE 2022 Psychology (XH-C5)

Q.50	Which of the following statement(s) is/are correct about children with ADHD (Attention Deficit Hyperactivity Disorder)?
(A)	They have deficit in brain related executive function
(B)	They have difficulty to control voluntary movements, verbal expression and problem solving due to frontal lobes
(C)	Cerebellum (an area of the brain) does not work properly, which coordinates muscular activity
(D)	It is also known as hypokinetic disorder
Q.51	Which of the following assumptions are correct about equity theory?
(A)	Focusses on procedural justice
(B)	Motivation is influenced by relative and absolute rewards
(C)	Referent is the other-inside
(D)	Achieving balance between input-output
Q.52	Which of the following statement(s) are related to Bem's theory of self-perception?
(A)	It starts with development of one's basic self-concept
(B)	Behaviour is a source of knowledge
(C)	It is related to attitude formation
(D)	It suggests that people change their attitude because of their behaviour



GATE 2022 Psychology (XH-C5)

Q.53	Which of the following statements are related to social cognition?
(A)	How individuals interpret, analyze, remember and use information about the social world
(B)	How people create mental structure to organise knowledge about the social world
(C)	How people think about themselves and the social world
(D)	It does not allow interaction between people and the environment
Q.54	Which of the following theory(ies) is/are related to work motivation?
(A)	Motivation-Hygiene Theory
(B)	Expectancy Theory
(C)	Trait Theory
(D)	ERG Theory
Q.55	Which of the following are not part of Thurstone's theory of primary mental abilities?
(A)	Numerical Ability
(B)	Word Fluency
(C)	Analytical Ability
(D)	Short-Term Memory



GATE 2022 Psychology (XH-C5)

Q.56	Which of the following are the competencies of a Bystander?
(A)	Deciding how to help a person in need
(B)	Deciding how to avoid a person at the time of his/her distress
(C)	Deciding to standby with a person at the time of his/her emergency
(D)	Too busy to help
Q.57	Which of the following functions are related to pancreas?
(A)	Release of hormones
(B)	Converts food we eat into fuel for the body cells
(C)	It regulates the level of glucose in the blood
(D)	It damages digestive system
Q.58	Which of the following psychologists do not belong to behaviourism?
(A)	Sigmund Freud
(B)	B. F. Skinner
(C)	William James
(D)	J. B. Watson



GATE 2022 Psychology (XH-C5)

Q.59	Which of the following theories of emotion explains that arousal must occur before experience of emotion?
(A)	Schachter & Singer's Theory
(B)	Hertzberg's Theory
(C)	Cannon-Bard's Theory
(D)	Maslow's Theory
Q.60	Who among the following psychologists do not belong to the domain of emotional intelligence?
(A)	David Mayer
(B)	Sigmund Freud
(C)	William James
(D)	Robert R. Baron
Q.61	Which of the followings are the projective tests of personality?
(A)	Rorschach Inkblot Test
(B)	16 PF
(C)	TAT
(D)	WAT



GATE 2022 Psychology (XH-C5)

Q.62	Which of the followings are not learning disorders?
(A)	Dyslexia
(B)	Dystopia
(C)	Dysgraphia
(D)	Dystonia
Q.63	Which of the following concepts are not related to Piaget's theory of cognitive development?
(A)	Imprinting
(B)	Attachment
(C)	Schemas
(D)	Zone of Proximal Development
Q.64	Which of the following statement(s) is/are correct regarding exploratory factor analysis (EFA) technique?
(A)	It helps to reduce large number of variables into few numbers of factors.
(B)	It helps researchers to investigate concepts that cannot easily be measured directly.
(C)	It extracts maximum common variance from all variables and put them into a common score.
(D)	A technique used to verify the factor structure of a set of observed variables.

**GATE 2022 Psychology (XH-C5)**

Q.65	If you want to examine the difference between the work values of employees in public and private sector and the relationship of work values with employee engagement, what would be the appropriate statistics to test the hypotheses?
(A)	F-test
(B)	t-test
(C)	Pearson Product moment correlation
(D)	Chi-square



Q. No.	Session	Question Type	Subject Name	Key/Range	Mark
1	4	MCQ	GA	C	1
2	4	MCQ	GA	D	1
3	4	MCQ	GA	C	1
4	4	MCQ	GA	C	1
5	4	MCQ	GA	C	1
6	4	MCQ	GA	B	2
7	4	MCQ	GA	D	2
8	4	MCQ	GA	A	2
9	4	MCQ	GA	C	2
10	4	MCQ	GA	C	2
11	4	MCQ	XH-B1	B	1
12	4	MCQ	XH-B1	C	1
13	4	MCQ	XH-B1	C	1
14	4	MCQ	XH-B1	B	1
15	4	MCQ	XH-B1	A	1
16	4	MSQ	XH-B1	B, C	1
17	4	NAT	XH-B1	33 to 33	1
18	4	MCQ	XH-B1	A	2
19	4	MCQ	XH-B1	D	2
20	4	MCQ	XH-B1	B	2
21	4	MCQ	XH-B1	A	2
22	4	MCQ	XH-B1	A OR D	2
23	4	MSQ	XH-B1	A, D	2
24	4	MSQ	XH-B1	A, D OR A, B, D	2
25	4	MSQ	XH-B1	B, C, D	2
26	4	NAT	XH-B1	2535 to 2535	2
27	4	MCQ	XH-C5	A	1
28	4	MCQ	XH-C5	C	1
29	4	MCQ	XH-C5	A	1
30	4	MCQ	XH-C5	B	1
31	4	MCQ	XH-C5	B	1
32	4	MCQ	XH-C5	A	1
33	4	MCQ	XH-C5	B	1
34	4	MCQ	XH-C5	D	1
35	4	MCQ	XH-C5	C	1
36	4	MCQ	XH-C5	C	1
37	4	MCQ	XH-C5	C	1
38	4	MCQ	XH-C5	D	1
39	4	MCQ	XH-C5	D	1
40	4	MCQ	XH-C5	A	1
41	4	MCQ	XH-C5	A	1
42	4	MCQ	XH-C5	C	1
43	4	NAT	XH-C5	35.71 to 35.72	1
44	4	NAT	XH-C5	1.6 to 1.6	1



45	4	MSQ	XH-C5	B,C	2
46	4	MSQ	XH-C5	A,B,D	2
47	4	MSQ	XH-C5	A,B,C	2
48	4	MSQ	XH-C5	B,C,D	2
49	4	MSQ	XH-C5	B,C	2
50	4	MSQ	XH-C5	A,B,C	2
51	4	MSQ	XH-C5	B,C,D	2
52	4	MSQ	XH-C5	B,C, D	2
53	4	MSQ	XH-C5	A,B,C	2
54	4	MSQ	XH-C5	A,B,D	2
55	4	MSQ	XH-C5	C,D	2
56	4	MSQ	XH-C5	A,C	2
57	4	MSQ	XH-C5	A,B,C	2
58	4	MSQ	XH-C5	A,C	2
59	4	MSQ	XH-C5	A OR A,C	2
60	4	MSQ	XH-C5	B,C, D	2
61	4	MSQ	XH-C5	A,C,D	2
62	4	MSQ	XH-C5	B,D	2
63	4	MSQ	XH-C5	A,B,D	2
64	4	MSQ	XH-C5	A,B,C	2
65	4	MSQ	XH-C5	A,B,C	2

GATE 2022 General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark each.

Q.1	Inhaling the smoke from a burning _____ could _____ you quickly.
(A)	tire / tier
(B)	tire / tyre
(C)	tyre / tire
(D)	tyre / tier

Q.2	A sphere of radius r cm is packed in a box of cubical shape. What should be the minimum volume (in cm^3) of the box that can enclose the sphere?
(A)	$\frac{r^3}{8}$
(B)	r^3
(C)	$2r^3$
(D)	$8r^3$



Q.3	<p>Pipes P and Q can fill a storage tank in full with water in 10 and 6 minutes, respectively. Pipe R draws the water out from the storage tank at a rate of 34 litres per minute. P, Q and R operate at a constant rate.</p> <p>If it takes one hour to completely empty a full storage tank with all the pipes operating simultaneously, what is the capacity of the storage tank (in litres)?</p>
(A)	26.8
(B)	60.0
(C)	120.0
(D)	127.5

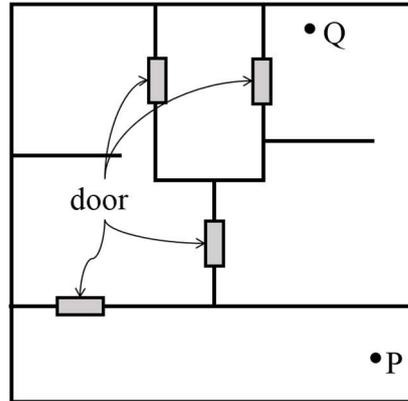


Q.4	<p>Six persons P, Q, R, S, T and U are sitting around a circular table facing the center not necessarily in the same order. Consider the following statements:</p> <ul style="list-style-type: none">• P sits next to S and T.• Q sits diametrically opposite to P.• The shortest distance between S and R is equal to the shortest distance between T and U. <p>Based on the above statements, Q is a neighbor of</p>
(A)	U and S
(B)	R and T
(C)	R and U
(D)	P and S

Q.5

A building has several rooms and doors as shown in the top view of the building given below. The doors are closed initially.

What is the minimum number of doors that need to be opened in order to go from the point P to the point Q?

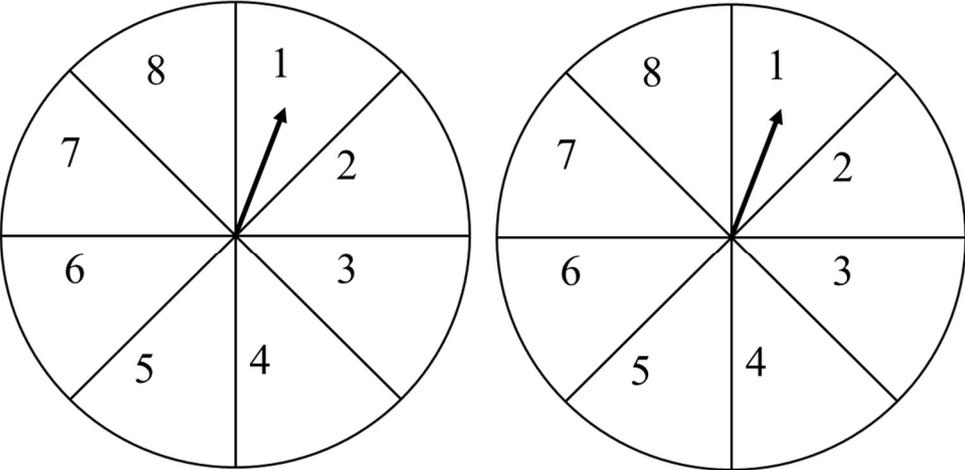


(A) 4

(B) 3

(C) 2

(D) 1

<p>Q.7</p>	<p>A game consists of spinning an arrow around a stationary disk as shown below. When the arrow comes to rest, there are eight equally likely outcomes. It could come to rest in any one of the sectors numbered 1, 2, 3, 4, 5, 6, 7 or 8 as shown.</p> <p>Two such disks are used in a game where their arrows are independently spun.</p> <p>What is the probability that the sum of the numbers on the resulting sectors upon spinning the two disks is equal to 8 after the arrows come to rest?</p> <div style="text-align: center;">  </div>
<p>(A) $\frac{1}{16}$</p>	
<p>(B) $\frac{5}{64}$</p>	
<p>(C) $\frac{3}{32}$</p>	
<p>(D) $\frac{7}{64}$</p>	

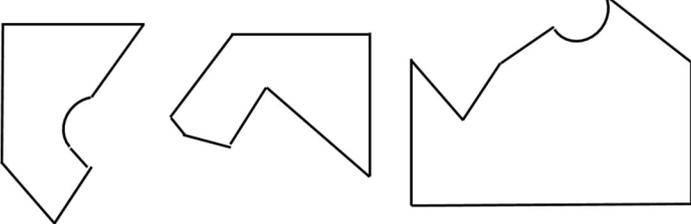
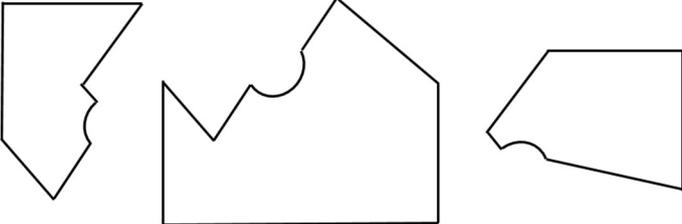
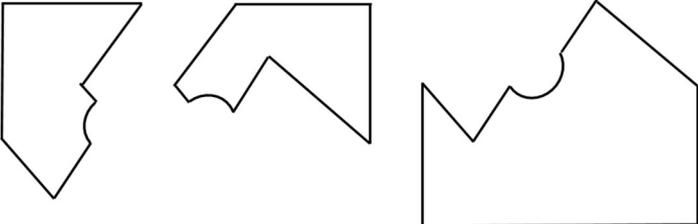
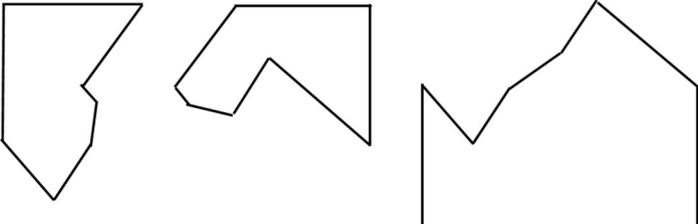


Q.8	<p>Consider the following inequalities.</p> <p>(i) $3p - q < 4$</p> <p>(ii) $3q - p < 12$</p> <p>Which one of the following expressions below satisfies the above two inequalities?</p>
(A)	$p + q < 8$
(B)	$p + q = 8$
(C)	$8 \leq p + q < 16$
(D)	$p + q \geq 16$



<p>Q.9</p>	<p>Given below are three statements and four conclusions drawn based on the statements.</p> <p>Statement 1: Some engineers are writers.</p> <p>Statement 2: No writer is an actor.</p> <p>Statement 3: All actors are engineers.</p> <p>Conclusion I: Some writers are engineers.</p> <p>Conclusion II: All engineers are actors.</p> <p>Conclusion III: No actor is a writer.</p> <p>Conclusion IV: Some actors are writers.</p> <p>Which one of the following options can be logically inferred?</p>
<p>(A)</p>	<p>Only conclusion I is correct</p>
<p>(B)</p>	<p>Only conclusion II and conclusion III are correct</p>
<p>(C)</p>	<p>Only conclusion I and conclusion III are correct</p>
<p>(D)</p>	<p>Either conclusion III or conclusion IV is correct</p>



<p>Q.10</p>	<p>Which one of the following sets of pieces can be assembled to form a square with a single round hole near the center? Pieces cannot overlap.</p>
<p>(A)</p>	
<p>(B)</p>	
<p>(C)</p>	
<p>(D)</p>	

GATE 2022 Sociology (XH-C6)

XH-B1: Q.11 – Q.27 Carry ONE mark Each

Q.11	A relationship is expressed as Iodine : Goitre . The pair(s) of words showing SIMILAR relationship is/are
	Space for Figure/Equation, if any:
(A)	Mango : Anaemia
(B)	Insulin : Diabetes
(C)	Fat : Obesity
(D)	Hormones : Heredity
Q.12	Three individuals are named P, Q, and R. Together they have a total of fifteen children of which nine are boys. P has three girls and Q has same number of boys. Q has one more child than P, who has four children. R has four more boys than the number of girls. The number of girls of R is equal to the number of boys of P. How many boys do R and P have?
	Space for Figure/Equation, if any:
(A)	$R = 3, P = 3$
(B)	$R = 4, P = 2$
(C)	$R = 5, P = 1$
(D)	$R = 2, P = 4$



GATE 2022 Sociology (XH-C6)

Q.13	<p>A sentence has been given below.</p> <p><i>The train will leave at 8:30 PM, we have been ready by 7:30 PM, so that we can reach the station on time.</i></p> <p>To make the above sentence grammatically correct, the phrase marked in bold is to be replaced by</p>
	Space for Figure/Equation, if any:
(A)	were
(B)	are
(C)	must be
(D)	should have
Q.14	<p>Complete the sentence correctly using the options given below.</p> <p>Hastings ____ (p) ____ developed as a holiday resort after ____ (q) ____ .</p>
	Space for Figure/Equation, if any:
(A)	(p) = a seaside town, (q) = the first world war
(B)	(p) = , a seaside town, (q) = the First World War
(C)	(p) = , a Seaside Town, (q) = World War I
(D)	(p) = A seaside town (q) = World War I



GATE 2022 Sociology (XH-C6)

Q.15	<p>The Arecibo telescope does not resemble what most of us think of when we hear the word telescope. Its reflective surface covers an area of 20 acres, which is quite remarkable. Dangling above it are towers and cables, sub-reflectors and antennas, all of which can be positioned using 26 motors to transmit radio waves and receive echoes with astonishing precision.</p> <p>From the passage, it can be inferred that most telescopes</p>
	Space for Figure/Equation, if any:
(A)	are not as large as Arecibo
(B)	do not have reflective surface
(C)	cannot be re-positioned
(D)	strictly have 26 motors



GATE 2022 Sociology (XH-C6)

Q.16	<p>Tailgating another vehicle is unsafe and illegal. Many rear-end collisions are caused by drivers following too close to the vehicle in front of them. The rules state that a driver must keep significant distance from the vehicle in front in order to stop safely and avoid a collision. Drivers should allow a minimum two seconds gap between their vehicle and the one ahead. At 60 km per hour, this equates to a gap of 33 meters; at 100 km per hour, it equates to a gap of 55 meters. More distance is needed to safely stop in rain or poor visibility, as during rain slippery roads reduce the effectiveness of braking.</p> <p>Which of the following statement(s) can be inferred from the above passage?</p>
	Space for Figure/Equation, if any:
(A)	People drive faster in rain and under poor visibility.
(B)	Braking may not be as effective during rain as in the dry conditions.
(C)	Tailgating is against the road rules.
(D)	Collision has no relationship with tailgating.
Q.17	<p>There are three separate, but equal-sized boxes. Inside each box, there are two separate small boxes. Inside each of the small boxes, there are four even smaller boxes. The total number of boxes will be _____ .</p>
	Space for Figure/Equation, if any:

GATE 2022 Sociology (XH-C6)

Q.18 – Q.26 Carry TWO marks Each

Q.18	<p>In a specific language, <i>xer dan</i> means “big horse”, <i>liro cas</i> means “red tomato” and <i>dum cas dan</i> means “big red barn”.</p> <p>The equivalent word for barn in this language is</p>
	Space for Figure/Equation, if any:
(A)	<i>dum</i>
(B)	<i>liro</i>
(C)	<i>dan</i>
(D)	<i>cas</i>
Q.19	<p>Park street is parallel to Rock street. Garden street is perpendicular (90°) to Lake street. Lake street is parallel to Rock street.</p> <p>For the situation described above, the TRUE statement is</p>
	Space for Figure/Equation, if any:
(A)	Park street is perpendicular to Lake street
(B)	Rock street is parallel to Garden street
(C)	Park street is parallel to Garden street
(D)	Garden street is perpendicular to Park street



GATE 2022 Sociology (XH-C6)

Q.20	Six examinations are required to be conducted in a week starting from Sunday to Saturday. Hindi is not scheduled on the first day and English is not scheduled before Hindi. Mathematics is scheduled one day after Physics. Biology is scheduled two days after Hindi. One day prior to Chemistry, there is no examination. Only one examination can be scheduled on a single day and Sunday is not an off day. What are the subjects scheduled on first and the last days?
	Space for Figure/Equation, if any:
(A)	First day Physics, Last day Biology
(B)	First day Physics, Last day Chemistry
(C)	First day Physics, Last day English
(D)	First day English, Last day Biology



GATE 2022 Sociology (XH-C6)

<p>Q.21</p>	<p>A 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 P, Q, R, and S) are jumbled up.</p> <p><i>First sentence:</i> Smoke oozed up between the planks.</p> <p>P: Passengers were told to be ready to quit the ship.</p> <p>Q: The rising gale fanned the smouldering fire.</p> <p>R: Everyone now knew there was fire onboard.</p> <p>S: Flames broke out here and there.</p> <p><i>Sixth sentence:</i> Most people bore the shock bravely.</p> <p>The most logically CORRECT order for the given jumbled up sentences is</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>QSRP</p>
<p>(B)</p>	<p>QPSR</p>
<p>(C)</p>	<p>RSPQ</p>
<p>(D)</p>	<p>PQRS</p>



GATE 2022 Sociology (XH-C6)

<p>Q.22</p>	<p>For a painting to succeed, it is essential that the painter and his public agree about what is significant. The subject of the painting may have a personal meaning for the painter or a common person; but there can also be the possibility of their agreement on its general meaning. It is at this point that the culture of the society and the period in question precedes the artists and her/his art. Renaissance art would have meant nothing to the Aztecs, and vice versa. If, to some extent, a few intellectuals can appreciate them both today, it is because their culture is a historical one. Its inspiration is history and all known developments to date.</p> <p>According to the passage, which of the following is/are NOT necessarily among the attributes needed for a painter to succeed?</p>
	<p>Space for Figure/Equation, if any:</p>
<p>(A)</p>	<p>The subject must have a personal meaning for the painter.</p>
<p>(B)</p>	<p>The painter is able to communicate and justify the significance of its subject selection.</p>
<p>(C)</p>	<p>The painter and the public agree on what is significant.</p>
<p>(D)</p>	<p>The painting of the subjects is driven by public demand.</p>



GATE 2022 Sociology (XH-C6)

Q.23	<p>Vinod has a pre-determined route. Each morning he delivers 37 newspapers to customers in his neighborhood. It takes Vinod 50 minutes to deliver all the papers. When Vinod was sick or had other engagements, his friend Tarun, who lives on the same street delivered the papers on his behalf.</p> <p>Find the statement(s) that must be TRUE according to the given information.</p>
	Space for Figure/Equation, if any:
(A)	Vinod and Tarun lived in the same locality.
(B)	It was dark outside when Vinod began his delivery.
(C)	It took Tarun more than 50 minutes to deliver the papers.
(D)	Tarun delivered 37 newspapers to customers.



GATE 2022 Sociology (XH-C6)

<p>Q.24</p>	<p>Cholera, typhoid, diphtheria and tuberculosis cause huge number of deaths. Poor quality drinking water has always been the world’s greatest single carrier of sickness. Disease is transmitted when sewage and drinking water come into contact. Children are particularly vulnerable. In some of the poorest countries the infant mortality rate is high. The separation of sewage and the supply of clean drinking water are the domain of civil engineers, and their work makes a significant contribution to public health. That contribution was recognized when public sanitation was voted the greatest medical breakthrough, beating the discoveries including antibiotics and vaccines in a poll organized by the British Medical Journal.</p> <p>Identify the statement(s), which is/are NOT TRUE according to the passage.</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Children are less prone to water borne diseases.</p>
(B)	<p>The infant mortality rate was high in economically weaker countries.</p>
(C)	<p>The provision of sewage and drinking water should be adequately separated from each other.</p>
(D)	<p>The literature states that the public health and sanitation was never given its due importance.</p>



GATE 2022 Sociology (XH-C6)

<p>Q.25</p>	<p>Shark’s teeth have evolved to correspond to the diet of each particular species of shark. Consequently, the teeth of the great white shark bear little resemblance to those of the bull shark or nurse shark. There were essentially four different shark diets and thus four varieties of shark teeth. Sharks that feed on fish have needle like teeth, perfect for spearing and ripping. Sharks that eat mammals such as seals and sea lions have heavy, serrated teeth, typically triangular on the upper jaw and pointed on the lower jaw. Shark that feed in the benthic zone of the ocean have flattened teeth for crushing the shell of the creatures they find scuttling in the sand or clinging to rocks. Sharks that bask have teeth that are largely non-functional; these sharks filter food from the water by passing it through their gills.</p> <p>Which of the following is/are the CORRECT inference(s) as per the passage?</p>
	<p>Space for Figure/Equation, if any:</p>
(A)	<p>Shark’s teeth are not specially designed for slaughter.</p>
(B)	<p>The shape of the shark’s teeth relates to its prey.</p>
(C)	<p>Some species of sharks filter food through their gills.</p>
(D)	<p>Shark’s teeth relate to its diet.</p>



GATE 2022 Sociology (XH-C6)

Q.26	<p>A particular school management wants to contact all parents, all businessmen and all engineers. The following statistics are available with the school.</p> <p>Businessmen = 50</p> <p>Engineers = 25</p> <p>Parents = 2500</p> <p>Businessmen who are engineers = 0</p> <p>Businessmen who are parents = 25</p> <p>Engineers who are parents = 15</p> <p>The number of people needs to be contacted are _____ .</p>
	Space for Figure/Equation, if any:

**GATE 2022 Sociology (XH-C6)****Q. 27 – Q. 44 Multiple Choice Questions (MCQ), carry ONE mark each**

Q.27 In a questionnaire based survey, the following item was asked to a respondent:

“I found the course interesting and structured.”

Yes No

Which one of the given options clearly describes the item?

- (A) This is a double barreled item.
- (B) This is a leading item.
- (C) This is negatively worded item.
- (D) This item is correctly constructed.

Q.28 Which one of the following is used in causal analysis?

- (A) Pearson correlation
- (B) Linear regression
- (C) Frequency distribution
- (D) Standard deviation

**GATE 2022 Sociology (XH-C6)**

Q.29 Which one of the given options reflects Karl Popper's falsification principle?

- (A) Any theory is scientific only if it allows empirical facts to disprove it
- (B) Manipulation of observational data will help the researchers to give new results
- (C) Scientists should not report false data
- (D) Lab based scientific experiments cannot be falsified

Q.30 Resource mobilization theory of social movements analyses social movements as _____.

- (A) the rational undertakings by activists in a movement as they build a collective project
- (B) the emotional dynamics of the activists in a movement
- (C) the pre-existing solidarities of movement entrepreneurs that bring people together
- (D) the revolutionary potential of ordinary people

**GATE 2022 Sociology (XH-C6)**

Q.31 Which one of the following methods uses a control group while validating the impact of intervention programmes?

- (A) Qualitative interviews
- (B) Quantitative survey
- (C) Experimental designs
- (D) National sample survey

Q.32 Which is not a trait of a sociological theory?

- (A) It is logically interconnected propositions.
- (B) It has no relationship with the data.
- (C) It can be speculative.
- (D) It may predict facts.

**GATE 2022 Sociology (XH-C6)**

Q.33 According to Pierre Bourdieu, the way one speaks or having an accent is _____ form of cultural capital.

- (A) an objectified
- (B) an embodied
- (C) an institutionalized
- (D) an unusual

Q.34 Which one of the given options is not a latent function of attending a university?

- (A) To receive a certificate or a degree
- (B) To find a suitable spouse
- (C) To establish startups
- (D) To improve physical fitness

**GATE 2022 Sociology (XH-C6)**

Q.35 Who among the following highlighted the concept of 'Swaraj' in the reconstruction of traditional village life?

- (A) Jawaharlal Nehru
- (B) Mahatma Gandhi
- (C) B.R. Ambedkar
- (D) Ram Mohan Roy

Q.36 In the 1960s, India adopted a heavy usage of high yielding varieties of seed, chemical fertilizers, pesticides, and new machines to raise the productivity of agricultural land. This process was described as _____.

- (A) White Revolution
- (B) Land Revolution
- (C) Green Revolution
- (D) Technology Revolution

**GATE 2022 Sociology (XH-C6)**

Q.37 Among the Toda of South India, property is inherited patrilineally and ritualistic privileges are inherited matrilineally. This is an example of _____.

- (A) unilateral descent
- (B) matrilineal descent
- (C) pragmatic descent
- (D) bilateral descent

Q.38 Which of the following scholars described India's villages as a 'den of ignorance, narrow-mindedness and communalism'?

- (A) B.R. Ambedkar
- (B) M.K. Gandhi
- (C) Jawaharlal Nehru
- (D) S.S. Jodhka

**GATE 2022 Sociology (XH-C6)**

Q.39 Who among the following gave the concept of 'global village'?

- (A) Marshall McLuhan
- (B) Anthony Giddens
- (C) Roland Robertson
- (D) T.H. Marshall

Q.40 Commodity chain is defined as _____.

- (A) a series of production stages, or network of labour inputs, distributed globally among production sites
- (B) importing commodities to meet the domestic needs
- (C) outsourcing the marketing of commodities to private agencies
- (D) import substituted industrialization

**GATE 2022 Sociology (XH-C6)**

Q.41 Which of the following is a process wherein socialist states guide economic growth through the planned allocation of public and human resources, as an alternative to allocation through the market?

- (A) Social capitalism
- (B) Centralized planning
- (C) Corporatism
- (D) Developmentalism

Q.42 An approach that reformulates development emphasizing essential human needs over and above rising incomes is referred to as _____.

- (A) integrated development approach
- (B) endogenous development approach
- (C) basic needs approach
- (D) community development approach

**GATE 2022 Sociology (XH-C6)**

- Q.43 Which of the following scholars emphasized the subaltern perspective in social movements involving peasants?
- (A) Veena Das
 - (B) Geeta Chakraborty-Spivak
 - (C) Jan Breman
 - (D) Ranajit Guha
- Q.44 Which of the following institutions provides the structural link between caste and gender in kinship in India?
- (A) Panchayat
 - (B) Class
 - (C) Household
 - (D) Marriage

**GATE 2022 Sociology (XH-C6)****Q. 45 – Q. 65 Multiple Choice Question (MCQ), carry TWO marks each**

Q.45 A researcher is conducting a survey about internet use among the students. She was asked to follow a probability sampling technique. Which one of the given options is most suitable?

- (A) Stand in front of the library located in her college and hand over the survey questionnaires.
- (B) Collect the email ids of the students and send the questionnaire.
- (C) Collect the roster of students from the college administration and give the questionnaire to those selected through a lottery.
- (D) Give the questionnaires to a data collection agency.

Q.46 According to Talcott Parsons, the dichotomies of pattern variables or alternatives an actor can choose in society are: ascription vs _____; affectivity vs _____; and diffuseness vs _____.

- (A) achievement, neutrality, specificity
- (B) attribution, emotion, distraction
- (C) achievement, hatred, specificity
- (D) attribution, neutrality, distraction

**GATE 2022 Sociology (XH-C6)**

Q.47 According to Peter Blau, there is _____ price in social exchange but only _____ exchange ratio between two social benefits, because personal considerations and social norms influence the process of _____.

- (A) an exact equilibrium, an approximate, social exchange
- (B) no exact equilibrium, an equal, social exchange
- (C) no exact equilibrium, an approximate, social exchange
- (D) no exact equilibrium, an approximate, social relationships

Q.48 ANOVA means _____.

- (A) analysis of variance
- (B) analysis of variable average
- (C) another variable average
- (D) a non-parametric variable

**GATE 2022 Sociology (XH-C6)**

Q.49 A researcher got excited on seeing a celebrity tweeting about COVID19. She downloaded one million tweets using a software application. Then she analyzed the data to find out whether celebrities have a social conscience. What is this research approach called?

- (A) Abductive approach
- (B) Inductive approach
- (C) Deductive approach
- (D) Operations approach

Q.50 According to Robert Merton, innovation is a mode of adaptation when cultural goals are _____ and institutionalized means are _____.

- (A) accepted, rejected
- (B) rejected, accepted
- (C) accepted, accepted
- (D) rejected, rejected



GATE 2022 Sociology (XH-C6)

Q.51 According to Erving Goffman, _____ refers to an institution where all aspects of a person's life are regulated by a single authority. Through a process of _____ ceremony, the person shall become secondary and invisible in the overbearing social environment.

- (A) university, graduation
- (B) total institution, degradation
- (C) university, degradation
- (D) total institution, graduation

Q.52 Match the following:

A	Village as 'vicinity'	I	F.G. Bailey
B	Village as waiting room for industrial labour markets	II	M.N. Srinivas
C	Sanskritization	III	Dipankar Gupta
D	Study of Bisipara village	IV	Jonathan Parry
		V	Kathleen Gough

- (A) A-III, B-II, C-V, D-I
- (B) A-III, B-IV, C-II, D-I
- (C) A-V, B-III, C-II, D-I
- (D) A-IV, B-III, C-II, D-V

**GATE 2022 Sociology (XH-C6)**

Q.53 According to Walt W. Rostow, all nations pass through _____ stages of economic development and _____ stage marks the interval when the old blocks and resistances to steady growth are finally overcome.

- (A) five, the take-off
- (B) four, the drive to maturity
- (C) five, the preconditions for take-off
- (D) four, the age of high consumption

Which of the following statements are correct?

[i] Gustavo Esteva argues that the 1949 address of the US President Harry S. Truman marks the opening of the era of development.

Q.54

[ii] According to Escobar, 'development can best be described as an apparatus that links forms of knowledge about the Third World with the deployment of forms of power and intervention, resulting in the mapping and production of Third World societies'.

- (A) [i] only
- (B) [ii] only
- (C) Both [i] and [ii]
- (D) Neither [i] nor [ii]

**GATE 2022 Sociology (XH-C6)****Q. 55 – Q. 65 Multiple Select Question (MSQ), carry TWO marks each**

Q.55 Which among the listed options most closely replicate(s) Jurgen Habermas' idea of the public sphere?

- (A) PayTM App
- (B) Facebook
- (C) IRCTC Portal
- (D) YouTube

In the light of given information, which pairs are correct?

Q.56 M1: Anthony Giddens M2: Robert Merton M3: George Ritzer
X1: Macdonaldization of society X2: Mathew Effect X3: The Third Way

- (A) M1X3
- (B) M2X2
- (C) M1X1
- (D) M2X3

**GATE 2022 Sociology (XH-C6)**

Q.57 What concepts were studied in the famous Milgram social experiment where teachers did not hesitate to give electric shocks to learners?

- (A) Conformity
- (B) Obedience
- (C) Deviance
- (D) Consciousness

Q.58 According to Max Weber, in addition to power what are the other TWO distinct components of stratification?

- (A) Status
- (B) Class
- (C) Counter Culture
- (D) Social Control

**GATE 2022 Sociology (XH-C6)**

- Q.59 While writing on the diversity of rural settlements, Bernard Cohn has identified which of the following village patterns?
- (A) Nucleated Village
 - (B) Hamleted Village
 - (C) Dispersed Village
 - (D) Joint Village
- Q.60 According to Andre Gunder Frank, which of the following factors are responsible for the development of underdevelopment in Latin America?
- (A) The survival of archaic institutions
 - (B) The relationship between the satellite and the metropolis
 - (C) The existence of capital shortage in developed regions
 - (D) Participation in the process of world capitalist development

**GATE 2022 Sociology (XH-C6)**

- Q.61 Which of the following statements describe the concept of sustainable development?
- (A) Shrinking role of the government in favour of the market forces
 - (B) Meeting the needs of the present without compromising the needs of the future generations
 - (C) Conserving natural resources and adopting appropriate technologies
 - (D) Privileging of the urban classes and manufacturing sector over rural society
- Q.62 The categories of caste and tribe have been understood as colonial constructions. Which statements instantiate the above?
- (A) British anthropologists used the categories of caste and tribe to further knowledge and understanding of Indian society.
 - (B) The character of these categories were solidified through processes of enumeration and classification undertaken during British rule.
 - (C) These categories had no existence prior to British rule.
 - (D) Census operations and administrative practices of the colonial regime made these categories what they are today.

**GATE 2022 Sociology (XH-C6)**

- Q.63 Which statements express the ideas of A. M. Shah with regard to family and household in India?
- (A) Households are task-oriented residence units while families are kinship groupings that need not be localized.
 - (B) Households imply the entire biradari (kin network) while families are neo-local units.
 - (C) Households are operational units that function with a family and kinship ideology.
 - (D) The family provides the larger ideological set-up within which the household operates.
- Q.64 According to Celestin Bougle, the spirit of the caste system is determined by the mutual repulsion that exists between castes. Identify TWO different aspects in which such mutual repulsion is manifested:
- (A) Upward mobility
 - (B) Endogamy
 - (C) Westernization
 - (D) Commensal restrictions

**GATE 2022 Sociology (XH-C6)**

Q.65 Which of the following statements explain and illustrate the term ‘tragedy of commons’?

- (A) Wasteland development and the ensuing privatization of commons
- (B) Transference of rights and control from the community to development agencies
- (C) Regeneration of ecologically appropriate tree cover
- (D) Socially appropriate community control over a regenerated resource base



Q. No.	Session	Question Type	Subject Name	Key/Range	Mark
1	4	MCQ	GA	C	1
2	4	MCQ	GA	D	1
3	4	MCQ	GA	C	1
4	4	MCQ	GA	C	1
5	4	MCQ	GA	C	1
6	4	MCQ	GA	B	2
7	4	MCQ	GA	D	2
8	4	MCQ	GA	A	2
9	4	MCQ	GA	C	2
10	4	MCQ	GA	C	2
11	4	MCQ	XH-B1	B	1
12	4	MCQ	XH-B1	C	1
13	4	MCQ	XH-B1	C	1
14	4	MCQ	XH-B1	B	1
15	4	MCQ	XH-B1	A	1
16	4	MSQ	XH-B1	B, C	1
17	4	NAT	XH-B1	33 to 33	1
18	4	MCQ	XH-B1	A	2
19	4	MCQ	XH-B1	D	2
20	4	MCQ	XH-B1	B	2
21	4	MCQ	XH-B1	A	2
22	4	MCQ	XH-B1	A OR D	2
23	4	MSQ	XH-B1	A, D	2
24	4	MSQ	XH-B1	A, D OR A, B, D	2
25	4	MSQ	XH-B1	B, C, D	2
26	4	NAT	XH-B1	2535 to 2535	2
27	4	MCQ	XH-C6	A	1
28	4	MCQ	XH-C6	B	1
29	4	MCQ	XH-C6	A	1
30	4	MCQ	XH-C6	A	1
31	4	MCQ	XH-C6	C	1
32	4	MCQ	XH-C6	B	1
33	4	MCQ	XH-C6	B	1
34	4	MCQ	XH-C6	A	1
35	4	MCQ	XH-C6	B	1
36	4	MCQ	XH-C6	C	1
37	4	MCQ	XH-C6	D	1
38	4	MCQ	XH-C6	A	1
39	4	MCQ	XH-C6	A	1
40	4	MCQ	XH-C6	A	1
41	4	MCQ	XH-C6	B	1
42	4	MCQ	XH-C6	C	1
43	4	MCQ	XH-C6	D	1
44	4	MCQ	XH-C6	D	1



45	4	MCQ	XH-C6	C	2
46	4	MCQ	XH-C6	A	2
47	4	MCQ	XH-C6	C	2
48	4	MCQ	XH-C6	A	2
49	4	MCQ	XH-C6	B	2
50	4	MCQ	XH-C6	A	2
51	4	MCQ	XH-C6	B	2
52	4	MCQ	XH-C6	B	2
53	4	MCQ	XH-C6	A	2
54	4	MCQ	XH-C6	C	2
55	4	MSQ	XH-C6	B, D	2
56	4	MSQ	XH-C6	A, B	2
57	4	MSQ	XH-C6	A, B	2
58	4	MSQ	XH-C6	A, B	2
59	4	MSQ	XH-C6	A, B, C	2
60	4	MSQ	XH-C6	B, D	2
61	4	MSQ	XH-C6	B, C	2
62	4	MSQ	XH-C6	A, B, D	2
63	4	MSQ	XH-C6	A, C, D	2
64	4	MSQ	XH-C6	B, D	2
65	4	MSQ	XH-C6	A, B	2