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GATE 2024 Humanities & Social Sciences (XH) Question Paper

Graduate Aptitude Test in Engineering (GATE)

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General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	<p>If '→' denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____].</p> <p>Which one of the given options is appropriate to fill the blank?</p>
(A)	obfuscate
(B)	obliterate
(C)	fracture
(D)	fissure

Q.2	<p>In a locality, the houses are numbered in the following way:</p> <p>The house-numbers on one side of a road are consecutive odd integers starting from 301, while the house-numbers on the other side of the road are consecutive even numbers starting from 302. The total number of houses is the same on both sides of the road.</p> <p>If the difference of the sum of the house-numbers between the two sides of the road is 27, then the number of houses on each side of the road is</p>
(A)	27
(B)	52
(C)	54
(D)	26
Q.3	<p>For positive integers p and q, with $\frac{p}{q} \neq 1$, $\left(\frac{p}{q}\right)^{\frac{p}{q}} = p^{\left(\frac{p}{q}-1\right)}$. Then,</p>
(A)	$q^p = p^q$
(B)	$q^p = p^{2q}$
(C)	$\sqrt{q} = \sqrt{p}$
(D)	$\sqrt[p]{q} = \sqrt[q]{p}$

Q.4	Which one of the given options is a possible value of x in the following sequence? 3, 7, 15, x , 63, 127, 255
(A)	35
(B)	40
(C)	45
(D)	31
Q.5	On a given day, how many times will the second-hand and the minute-hand of a clock cross each other during the clock time 12:05:00 hours to 12:55:00 hours?
(A)	51
(B)	49
(C)	50
(D)	55

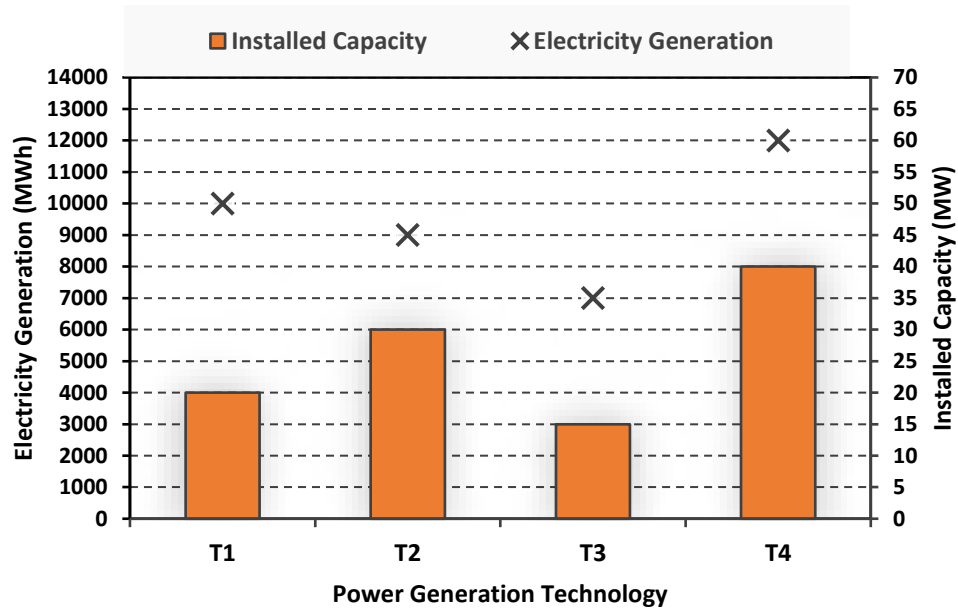
Q.6 – Q.10 Carry TWO marks Each

Q.6	<p>In the given text, the blanks are numbered (i)–(iv). Select the best match for all the blanks.</p> <p>From the ancient Athenian arena to the modern Olympic stadiums, athletics _____ (i) _____ the potential for a spectacle. The crowd _____ (ii) _____ with bated breath as the Olympian artist twists his body, stretching the javelin behind him. Twelve strides in, he begins to cross-step. Six cross-steps _____ (iii) _____ in an abrupt stop on his left foot. As his body _____ (iv) _____ like a door turning on a hinge, the javelin is launched skyward at a precise angle.</p>
(A)	(i) hold (ii) waits (iii) culminates (iv) pivot
(B)	(i) holds (ii) wait (iii) culminates (iv) pivot
(C)	(i) hold (ii) wait (iii) culminate (iv) pivots
(D)	(i) holds (ii) waits (iii) culminate (iv) pivots

Q.7	<p>Three distinct sets of indistinguishable twins are to be seated at a circular table that has 8 identical chairs. Unique seating arrangements are defined by the relative positions of the people.</p> <p>How many unique seating arrangements are possible such that each person is sitting next to their twin?</p>
(A)	12
(B)	14
(C)	10
(D)	28

Q.8

The chart given below compares the Installed Capacity (MW) of four power generation technologies, T1, T2, T3, and T4, and their Electricity Generation (MWh) in a time of 1000 hours (h).



The Capacity Factor of a power generation technology is:

$$\text{Capacity Factor} = \frac{\text{Electricity Generation (MWh)}}{\text{Installed Capacity (MW)} \times 1000 \text{ (h)}}$$

Which one of the given technologies has the highest Capacity Factor?

(A) T1

(B) T2

(C) T3

(D) T4

Q.9	<p>In the 4×4 array shown below, each cell of the first three columns has either a cross (X) or a number, as per the given rule.</p> <table><tr><td>1</td><td>1</td><td>2</td><td></td></tr><tr><td>2</td><td>X</td><td>3</td><td></td></tr><tr><td>2</td><td>X</td><td>4</td><td></td></tr><tr><td>1</td><td>2</td><td>X</td><td></td></tr></table> <p>Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).</p> <p>As per this rule, the maximum number of crosses possible in the empty column is</p>	1	1	2		2	X	3		2	X	4		1	2	X	
1	1	2															
2	X	3															
2	X	4															
1	2	X															
(A)	0																
(B)	1																
(C)	2																
(D)	3																

Q.10	During a half-moon phase, the Earth-Moon-Sun form a right triangle. If the Moon-Earth-Sun angle at this half-moon phase is measured to be 89.85° , the ratio of the Earth-Sun and Earth-Moon distances is closest to
(A)	328
(B)	382
(C)	238
(D)	283

GATE 2024

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11– Q.17 Carry ONE mark Each

Q.11	Amma's tone in the context of the given passage is that of:
	For Amma, the difference between men and women was a kind of discrimination and inequality; she felt strongly about women's rights but was not familiar with concepts like gender and patriarchy. She would have dismissed Betty Friedan because she was predominantly dealing with the problems of white middle-class women in the United States. Amma, and women of her generation, could de-link the oppression of women from the wider struggle for the liberation of human beings from class exploitation and imperialism. So Amma continued to play her role as mother and wife, but would often complain: 'I am a doormat on which everyone wipes their emotional dirt off'.
(A)	Compromise
(B)	Protest
(C)	Contentment
(D)	Resignation

Q.12	Fill in the blanks by choosing the correct sequence for the following passage:
	I am wearing for the first time some (i)_____ that I have never been able to wear for long at a time, as they are horribly tight. I usually put them on just before giving a lecture. The painful pressure they exert on my feet goads my oratorical capacities to their utmost. This sharp and overwhelming pain makes me sing like a nightingale or like one of those Neapolitan singers who also wear (ii)_____ that are too tight. The visceral physical longing, the overwhelming torture provoked by my (iii)_____, forces me to extract from words distilled and sublime truths, generalized by the supreme inquisition of the pain my (iv)_____ suffer.
(A)	(i) patent-leather belt (ii) belts (iii) patent-leather belt (iv) waist
(B)	(i) patent-leather shoes (ii) bands (iii) patent-leather bands (iv) wrist
(C)	(i) patent-leather shoes (ii) shoes (iii) patent-leather shoes (iv) feet
(D)	(i) patent-leather jacket (ii) jacket (iii) patent-leather jacket (iv) body

Q.13	The appropriate synonym for the word 'ignite' in the following passage will be:
	Spirituality must be integrated with education. Self-realization is the focus. Each one of us must become aware of our higher self. We are links of a great past to a grand future. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavor will bring peace, prosperity and bliss to this nation.
(A)	Encourage
(B)	Simulate
(C)	Dissipate
(D)	Engross

Q.14	Which of the following sentences is punctuated correctly?
(A)	One day, I'll write a book, 'I said'. Not just a thriller but a real book, about real people.
(B)	'One day I'll write a book', I said, 'not just a thriller, but a real book, about real people.'
(C)	'One day I'll write a book', I said. 'Not just a thriller but, a real book, about real people'.
(D)	'One day I'll write a book', I said, not just a thriller, but a real book, about real people.'

Q.15	Fill in the blanks with the correct combination of tenses for the given sentence:
	Darwin's work (i)_____ a related effect that (ii)_____ influenced the development of environmental politics – a 'decentering' of the human being.
(A)	(i) have (ii) had
(B)	(i) had (ii) have
(C)	(i) had (ii) has
(D)	(i) has (ii) have

Q.16	Which of the following options holds similar relationship as the words, 'Music: Notes'?
(A)	Water: Cold drink
(B)	Paper: Class Notes
(C)	House: Bricks
(D)	Graphite: Charcoal

Q.17	In a particular code, if "RAMAN" is written as 52 and "MAP" is written as 33, then how will you code "CLICK"?
(A)	37
(B)	43
(C)	51
(D)	38

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

Q.18	On the basis of the statements given below, which valid assumption(s) can be made?
	<p>Statements:</p> <ul style="list-style-type: none"> • Life has suffering • Desire is the cause of suffering • The end of desire is the end of suffering • Desire can be reduced by following the noble eightfold path <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Suffering is because of wants 2. Life is not always full of suffering 3. The eightfold path can reduce suffering 4. Suffering is caused by life
(A)	Only 1, 3 and 4
(B)	Only 1, 2 and 3
(C)	Only 1 and 4
(D)	Only 2 and 3

Q.19	If 'KARAMCHAND' is coded as 'ICPCKEFCLF' what should be the code of 'CREATION'?
(A)	ATCCRKMP
(B)	ETGCVKQP
(C)	APCCRJMP
(D)	ETCGKRPM

Q.20	<p>Given an input line of numbers and words, a machine rearranges them following a particular rule in each step. Here is an illustration of an input and rearrangement sequence (Step 1 to Step 5):</p> <p>Input: 61 wb ob 48 45 29 34 sb pb lb</p> <p>Step 1: lb wb ob 48 45 29 34 sb pb 61</p> <p>Step 2: lb ob wb 45 29 34 sb pb 61 48</p> <p>Step 3: lb ob pb wb 29 34 sb 61 48 45</p> <p>Step 4: lb ob pb sb wb 29 61 48 45 34</p> <p>Step 5: lb ob pb sb wb 61 48 45 34 29</p> <p>Step 5 is the last step of the above arrangement.</p> <p>Based on the rules followed in the above steps, answer the following question:</p> <p>Input: cb kb eb 58 49 23 38 jb nb gb 69 82</p> <p>Which of the following represents the position of 58 in the fourth step? (Step-5 is the last step of the arrangement.)</p>
(A)	Second from the left
(B)	Fourth from the right
(C)	Third from the right
(D)	Seventh from the left

Q.21	<p>In a certain type of code, 'they play cricket together' is written as 'mv kb lb iv'; 'they score maximum points' is written as 'gb lb mb kv'; 'cricket score earned points' is written as 'mb gv kb kv' and 'points are earned together' is written as 'kv mv ob gv.'</p> <p>What is the code for 'earned maximum points'?</p>
(A)	gv gb kv
(B)	mv kb mb
(C)	lb iv ob
(D)	ob mb iv

Q.22	Which of the statement(s) about the passage weaken(s) the argument presented?
	Scientists associate large brains with greater intelligence. However, in the evolutionary context it has also been identified that beyond a point, the size of the brain has not increased and yet after a particular period, in spite of no significant change in brain size humans have made significant progress. Certain researchers propose that this is because, while the overall brain size may not have changed, marked structural changes can be noticed in specific structures that run parallel to increase in human intelligence.
(A)	Recent studies refute the hypothesis that region-specific brain development is necessarily associated with rapid human progress
(B)	Neanderthal people's extinction was probably because of their brain size
(C)	Homo Sapiens and its destruction in the future may happen because of its rapid brain development
(D)	Recent studies show that Neanderthal people, with relatively smaller brains, were capable of complex language and social activities

Q. 23	The narrator's use of 'I' in the given passage is/are:
	I have never been any good at the more lurid sort of writing. Psychopathic killers, impotent war-heroes, self-tortured film stars, and seedy espionage agents must exist in the world, but strangely enough I do not come across them, and I prefer to write about the people and places I have known and the lives of those whose paths I have crossed. This crossing of paths makes for stories rather than novels, and although I have worked in both mediums, I am happier being a short-story writer than a novelist.
(A)	Self-conscious
(B)	Apologetic and regretful
(C)	Confessional and communicating
(D)	Egotistical and vain

Q.24	Which of the following recommended action(s) seem to be appropriate with the stated problem?
	Stated problem : Many students at educational institutes do not attend classes in the post-pandemic scenario.
(A)	Disciplinary action against all students should be taken as a warning.
(B)	Counselling sessions should be organized to address the issues such students face.
(C)	Surveys should be conducted to identify the reasons for their absence.
(D)	Course content should immediately be changed.

Q.25	Read the passage and identify the statement(s) which follow(s) from it:
	The purpose of this work is to inform educators about the brain science related to emotion and learning, and, more important, to offer strategies to apply these understandings to their own teaching. Although many of the approaches I describe will be familiar, integrating the lens of emotion and the brain may be a new concept. As an educator I had been trained in how to deliver content and organize my lessons, but I had not been taught how to design learning experiences that support emotions for learning.
(A)	The author wishes, through his work, to inform us about brain science and learning.
(B)	The author, through his work, wishes to offer strategies to apply our learnings to our teaching.
(C)	The author feels that the newness of his approach lies in linking emotion oriented approach to brain.
(D)	The author wants to use emotions as a strategy for learning.

Q.26	If A says that his mother is the daughter of B's mother, then how is B related to A?
(A)	Uncle
(B)	Aunt
(C)	Father
(D)	Brother

Economics (XH-C1)

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

Q.27 Which one of the following measures in the Keynesian framework is adopted to tame inflation in an economy?

- (A) Reduction in government spending
- (B) Reduction in the bank rate
- (C) Reduction in the repo rate
- (D) Increase in merchandise exports

Q. 28 If the difference between actual GDP and the trend output varies inversely with the difference between actual unemployment rate and the natural rate of unemployment, then such a relationship is called the

- (A) Okun's law
- (B) New Keynesian aggregate supply curve
- (C) Taylor Rule
- (D) New Keynesian Phillips curve

Q.29 In the sticky-price model of aggregate supply, if none of the firms in the market have flexible prices, then the short-run aggregate supply curve will be

- (A) horizontal
- (B) vertical
- (C) steeper than it would be if some firms had flexible prices
- (D) upward sloping to the right

Q.30 When transfer of income happens from the “not richer” individual to the “not poorer” individual, then such a transfer is known as

- (A) Regressive transfer
- (B) Additive transfer
- (C) Direct transfer
- (D) Indirect transfer

Q.31 In the context of the Harris-Todaro model of rural-urban migration, which one of the following is TRUE?

- (A) Unemployment in the urban sector emerges because rural-urban migration occurs primarily due to the higher expected wage income in the urban sector
- (B) Unemployment in the urban sector emerges because rural workers migrate to the cities and towns due to the expected shortage of unskilled labour in the urban sector
- (C) Unemployment in the urban sector emerges because the rural wage rate is institutionally fixed by the local body at a higher level than the urban wage rate
- (D) Unemployment in the rural sector emerges because urban workers migrate to the rural sector due to the higher expected wage income in the advanced economies

Q.32 The Minimum Support Prices in India are notified based on the recommendations of which one among the following Commissions?

- (A) Commission for Agricultural Costs and Prices
- (B) Commission for Farmers' Benefits and Costs
- (C) Commission for Agricultural Subsidy Costs and Prices
- (D) Commission for Agricultural Subsidy Benefits and Costs

Q.33 In an economy, the dependency ratio is the ratio of

- (A) non-working age group population to the working age group population
- (B) number of children to adults in the total population
- (C) number of unemployed to employed workers in the total labour force
- (D) total foreign aids and grants to the total (net) factor income from abroad

Q. 34 Which one of the following is NOT a source of finance of the Government of India?

- (A) Land revenue
- (B) Income tax
- (C) Corporate tax
- (D) Import duty

- Q. 35 In the Keynesian closed economy *IS-LM* model, where interest rate is plotted along the vertical axis and output is plotted along the horizontal axis, the product market schedule will be
- (A) relatively steeper if the interest elasticity of investment is low
 - (B) relatively steeper, the higher the marginal propensity to save
 - (C) relatively steeper if the interest elasticity of investment is very high
 - (D) relatively flatter when the interest elasticity of money demand is very high
- Q. 36 In the Keynesian system, the speculative demand for money arises because of
- (A) uncertainty of future interest rates
 - (B) uncertainty regarding bond prices and associated capital gains
 - (C) unexpected out-of-pocket expenditure
 - (D) the gap that emerges between income and sudden eventual expenditure
- Q.37 Which of the following statements is/are TRUE?
- (A) A firm experiences economies of scale when an increase in its output of a good or service brings a reduction in the average total cost of production
 - (B) A firm experiences economies of scope when an increase in its range of goods produced brings down the average total cost of production
 - (C) A firm experiences economies of scale when an increase in the range of products produced brings down the short-run average total cost of production
 - (D) A firm experiences economies of scope when an increase in its output of a good or service brings a reduction in the marginal cost of production

Q.38 Let x_1, x_2, \dots, x_n be an independently, and identically distributed (*iid*) random sample drawn from a population that follows the Normal Distribution $N(\mu, \sigma^2)$, where both the mean (μ) and variance (σ^2) are unknown. Let \bar{x} be the sample mean. The maximum likelihood estimator (MLE) of the variance ($\hat{\sigma}_{MLE}^2$) is/are then characterized by

- (A) $\hat{\sigma}_{MLE}^2 = \frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2$ which is a biased estimator of σ^2
- (B) $\hat{\sigma}_{MLE}^2 = \frac{1}{n} \sum_{i=1}^n (x_i^2 - \bar{x})^2$ which is a consistent estimator of σ^2
- (C) $\hat{\sigma}_{MLE}^2 = \frac{1}{n-1} \sum_{i=1}^n (x_i - \bar{x})^2$ which is an unbiased estimator of σ^2
- (D) $\hat{\sigma}_{MLE}^2 = \frac{1}{n-1} \sum_{i=1}^{n-1} (x_i - \bar{x})^2$ which is an unbiased and consistent estimator of σ^2

Q.39 Consider a simple pooled regression model: $y_{it} = \beta_0 + \beta_1 x_{it} + v_{it}$ where $v_{it} = \mu_i + \epsilon_{it}$ and $Cov(x_{it}, \mu_i) \neq 0$. Here, μ_i captures the unknown individual specific effects and ϵ_{it} is the idiosyncratic error uncorrelated with both x_{it} and μ_i . If the parameters of this model are estimated using the ordinary least squares (OLS) method, then the estimated slope coefficient will be

- (A) biased
- (B) inconsistent
- (C) unbiased but consistent
- (D) unbiased but efficient

Q.40 Which of the following factor(s) do NOT affect output and employment in the classical macroeconomic model?

- (A) Quantity of money
- (B) Level of government spending
- (C) Level of demand for investment goods
- (D) Technological progress

Q. 41 For the following function $f(x)$ to be a *probability density function*, the value of c will be _____ (*rounded off to two decimal places*).

$$f(x) = \begin{cases} \frac{c}{\sqrt{x}}; & 0 < x < 4 \text{ and } c > 0 \\ 0; & \text{otherwise} \end{cases}$$

Q.42 A six-face fair die is rolled once, with X being the number that appeared on the uppermost surface. Then the variance of X is _____ (*rounded off to three decimal places*).

Q. 43 Consider a Cobb-Douglas utility function given as $U(H) = (24 - H)^{1-a} (wH)^a$, where H is the number of hours spent working per day, and w is the wage rate per hour. If $a = \frac{1}{2}$, then the corresponding labour supply (in hours) is _____ (*in integer*).

Q. 44 For a given foreign currency, if the forward exchange rate of delivery is 20 and the current value of spot exchange rate is 8, then the forward premium will be _____ (*rounded off to two decimal places*).

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

- Q.45 Two friends Aditi and Raju are deciding independently whether to watch a movie or go to a music concert that evening. Both friends would prefer to spend the evening together than apart. Aditi would prefer that they watch a movie together, while Raju would prefer that they go to the concert together. The payoff matrix arising from their actions is presented below. p and $(1 - p)$ are the probabilities that Aditi will decide in favour of the movie and concert, respectively. Similarly, q and $(1 - q)$ are the probabilities that Raju will decide in favour of the movie and concert, respectively. Which one of the following options correctly contains all the Nash Equilibria?

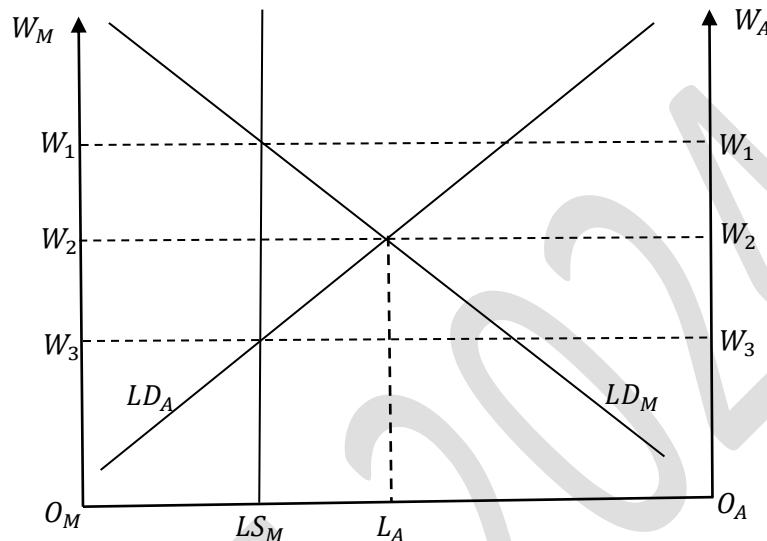
		Raju	
Aditi		Movie	Concert
	Movie	2,1	0,0
	Concert	0,0	1,2

- (A) $(p = 0, q = 0); (p = 1, q = 1); \left(p = \frac{2}{3}, q = \frac{1}{3}\right)$
- (B) $(p = 0, q = 1); (p = 1, q = 0); \left(p = \frac{2}{3}, q = \frac{1}{3}\right)$
- (C) $(p = 0, q = 0); (p = 1, q = 1); \left(p = \frac{1}{3}, q = \frac{2}{3}\right)$
- (D) $(p = 0, q = 1); (p = 1, q = 0); \left(p = \frac{1}{3}, q = \frac{2}{3}\right)$

Q.46 Consider a two good economy where a denotes consumption of apricots and b denotes consumption of bananas. Anu's utility function is $U^{Anu}(a, b) = a + 2b$, and Binu's utility function is $U^{Binu}(a, b) = \min\{a, 2b\}$. Anu initially has no apricots and 12 bananas. Binu initially has 12 apricots and no bananas. In the competitive equilibrium, which one of the following will be Anu's optimal consumption bundle?

- (A) 6 apricots and 9 bananas
- (B) 9 apricots and 9 bananas
- (C) 4 apricots and 10 bananas
- (D) 0 apricots and 12 bananas

- Q. 47 A dual economy consisting of a manufacturing sector (M) and an agricultural sector (A) is depicted in the figure below. $O_M O_A$ is the total labour available in the economy of which $O_M L S_M$ is the labour supply in the manufacturing sector before any migration was allowed among the labourers. The vertical axis in the left (right) side measures the wage in the manufacturing, W_M (agricultural, W_A) sector. LD_M (LD_A) is the demand of labour in the manufacturing (agricultural) sector with respect to O_M (O_A) as the origin. If wages are flexible, and labour is allowed to migrate between these two sectors, then it will be TRUE that



- (A) Total amount of labour that will migrate from the agricultural sector to the manufacturing sector will be $L_A L S_M$
- (B) Total amount of labour that will migrate from the manufacturing sector to the agricultural sector will be $L S_M L_A$
- (C) The wage in the manufacturing sector will be W_3
- (D) The wage in the agricultural sector will be W_1

Q.48 If X and Y are two random variables with the joint probability density function

$$f(x, y) = \begin{cases} \frac{2}{3}(x + 2y); & \text{for } 0 < x, y < 1 \\ 0; & \text{otherwise} \end{cases},$$

then $E\left[X|Y = \frac{1}{2}\right]$ will be

(A) $\frac{5}{9}$

(B) $\frac{4}{9}$

(C) $\frac{1}{3}$

(D) $\frac{2}{3}$

Q.49 If a discrete random variable X follows the uniform distribution and assumes only the values 8, 9, 11, 15, 18, and 20, then $P(|X - 14| < 5)$ is

(A) $\frac{1}{2}$

(B) $\frac{1}{5}$

(C) $\frac{1}{4}$

(D) $\frac{2}{3}$

Q.50 Assume the following probabilities for two events, A and B : $P(A) = 0.50$, $P(B) = 0.70$, and $P(A \cup B) = 0.85$. Then we can conclude that

(A) A and B are mutually independent

(B) A and B are equally likely

(C) A and B are not mutually independent

(D) A and B are mutually exclusive

- Q. 51 The following table provides different statistical model specifications along with the elasticity of y_t with respect to x_t . Which one of the following options is correct?

Row	Statistical Model	Elasticity
1	$y_t = \beta_1 + \beta_2 \frac{1}{x_t} + \varepsilon_t$	$-\frac{\beta_2}{x_t^2}$
2	$y_t = \beta_1 - \beta_2 \ln(x_t) + \varepsilon_t$	$-\frac{\beta_2}{x_t}$
3	$\ln(y_t) = \beta_1 + \beta_2 \ln(x_t) + \varepsilon_t$	β_2
4	$\ln(y_t) = \beta_1 + \beta_2 x_t + \varepsilon_t$	$\beta_2 x_t$
5	$\ln(y_t) = \beta_1 + \beta_2 \ln(x_t) + \varepsilon_t$	$\beta_2 \exp(x_t)$
6	$\ln(y_t) = \beta_1 + \beta_2 x_t + \varepsilon_t$	$\beta_2 \frac{1}{\exp(x_t)}$

- (A) Only rows 3 and 4 are correct
- (B) Only rows 1 and 2 are correct
- (C) Only rows 3 and 5 are correct
- (D) Only rows 4 and 6 are correct

Q. 52 An incumbent firm (I) faces the possibility of entry by a challenger firm (C). If C enters, I may either accommodate or fight. If C does not enter, its payoff is 1, while I 's payoff is 2. If C enters, and I accommodates, their payoffs are 2 and 1, respectively. However, if C 's entry is met with a fight by I , their payoffs are 0 and 1, respectively. Which one of the following is a *subgame perfect Nash equilibrium* (SPNE) under perfect information?

- (A) enter; accommodate
- (B) enter; fight
- (C) not enter; accommodate
- (D) not enter; fight

Q.53 For the function $F: \mathbb{R}^2 \rightarrow \mathbb{R}$ specified as $F(x, y) = x^3 - y^3 + 9xy$, which of the following options is/are correct

- (A) one saddle point
- (B) one strict local minimum
- (C) one strict local maximum
- (D) one global maximum

Q.54 A decrease in the income tax rate has a _____ effect on the labour supply if the _____ effect dominates.

- (A) negative; income
- (B) positive; substitution
- (C) positive; income
- (D) negative; substitution

Q. 55 Which of the following statements is/are FALSE?

- (A) The arbitrage pricing theory says that the prices which producers in different countries set for a particular product will be the same if the prices are expressed in the same currency using the current exchange rate
- (B) The interest rate parity theory says that the interest rates on similar assets in two countries will always be the same
- (C) The Purchasing Power Parity theory says that the total prices of any basket of products which apply in two different countries will be the same, if the prices are expressed in the same currency using the current exchange rate
- (D) The real exchange rate between two countries is the rate at which a particular basket of products produced in one country can be traded with a similar basket produced in another country

Q.56 Consider the Solow growth model in which output (Y) is determined by the production function $Y_t = 0.2K_t + 0.8L_t$, where K and L denote capital and labour used in the production process, and t depicts time. The depreciation is given by δK_t , where $\delta = 0.2$. Saving is given by sY_t , where $s = 0.5$. Assume that the population does not grow with time. The steady state capital per unit of labour is _____ (in integer).

Q.57 Suppose XYZ Corp. is totally financed by equity; it is earning Rs. 2.50 per share; its capitalization rate is 20%. There are 10,000 shares outstanding, and the replacement cost of the firm's real assets is Rs. 1,25,000. XYZ Corp.'s value of Tobin's q is _____ (in integer).

- Q.58 An industry comprising only two firms produces a homogenous product where the market demand function is given by $P = 200 - 2(q_1 + q_2)$ where q_1 and q_2 are the output levels of firm 1 and firm 2, respectively. The individual firm's cost functions are $TC_1 = 4q_1$ and $TC_2 = 4q_2$, where TC_1 and TC_2 are total costs of firm 1 and 2, respectively. If firm 2 is a Stackelberg Leader, and firm 1 is a Follower, then the profit of the Stackelberg Leader will be _____ (rounded off to two decimal places).

- Q.59 Let x and y be two dummy variables that take the values of either 0 or 1, and follow the bivariate frequency distribution as given below. If a *logit regression* is estimated with y as the dependent variable and x as the independent variable, then the estimated coefficient of x is _____ (rounded off to two decimal places).

$x \backslash y$	0	1	Total
0	6	11	17
1	6	7	13
Total	12	18	30

- Q.60 Based on the table given below, the current account deficit in nominal terms as a percentage of GDP during 2012-13 will be _____ (rounded off to three decimal places).

Expenditure on Gross Domestic Product (Rupees in Crores)					
At Current Prices		2009-10	2010-11	2011-12	2012-13
1.	Final Consumption Expenditures	448	525	617	696
2.	Gross Fixed Capital Formation	206	241	286	307
3.	Change in Inventory Stocks	18	27	17	17
4.	Export of Goods & Services	130	171	215	243
5.	Import of Goods & Services	165	205	272	311
At Constant 2004-05 Prices		2009-10	2010-11	2011-12	2012-13
1.	Final Consumption Expenditures	340	368	400	421
2.	Gross Fixed Capital Formation	159	117	199	200
3.	Change in Inventory Stocks	14	21	12	11
4.	Export of Goods & Services	100	120	138	145
5.	Import of Goods & Services	133	154	187	199

- Q.61 In an economy, the effort level of a worker in firm i is denoted by e_i and depends on the wage W_i received by the worker from the firm, and the minimum wage W_0 is set by the government. The effort function is given by

$$e_i(W_i, W_0) = \sqrt{W_i - W_0}$$

If the firm employs N_i unit of workers, then the efficiency unit of labour employed by the firm is $e_i N_i$. The production is based on only the efficiency unit of labour, and the production function is given by

$$F(e_i N_i) = \log_e(e_i N_i)$$

If the minimum wage set by the government is 10, and the profit maximizing firms sell the good in a competitive market at price P by choosing W_i and N_i , then the profit maximizing wage set by the firm will be _____ (rounded off to one decimal place).

- Q.62 In a perfectly competitive market, suppose the market demand curve is given by $P = 10 + W - Q$, where P is the market price, W is the average wealth of the consumers in the market, and Q is the industry output. The total cost function for a representative firm is given by $C(q) = q^3 - 2q^2 + 5q$, where q is the output of a firm. If $W = 80$, then the total number of firms in this industry in the long-run will be _____ (in integer).

- Q.63 The estimated results of a Probit model is given in the table below, where Y is a binary variable taking the value either 0 or 1, and X is an integer. The probability that $Y = 1$ when $X = 30$ is _____ (rounded off to two decimal places).

Variable	Coefficient	Standard Error	Z-Statistic	Probability
Constant	-0.064	0.399	-0.161	0.871
X	0.029	0.010	2.916	0.003

- Q.64 Consider an industry with six firms. An analyst collated the data for this industry as given below. The Herfindahl-Hirschman Index (HHI) for this industry will be _____ (in integer).

Firm	Market Share
F1	30%
F2	20%
F3	15%
F4	15%
F5	10%
F6	10%

- Q.65 Consider a duopoly market where Firm 1 and Firm 2 produce differentiated products such that the demand function of each firm is given by:
 $q_1(p_1, p_2) = 18 - p_1 + p_2$
 $q_2(p_1, p_2) = 18 + p_1 - p_2$
 Here, q_1 and q_2 are the outputs produced by Firm 1 and Firm 2, respectively, and p_1 and p_2 are the corresponding per unit prices.
 Cost of production for the i^{th} firm is given by $C_i(q_i) = 2q_i \forall i = 1, 2$
 The firms compete in prices. The price set by Firm 2 such that the market is in Nash equilibrium will be _____ (in integer).

General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	<p>If ‘→’ denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____].</p> <p>Which one of the given options is appropriate to fill the blank?</p>
(A)	obfuscate
(B)	obliterate
(C)	fracture
(D)	fissure

Q.2	<p>In a locality, the houses are numbered in the following way:</p> <p>The house-numbers on one side of a road are consecutive odd integers starting from 301, while the house-numbers on the other side of the road are consecutive even numbers starting from 302. The total number of houses is the same on both sides of the road.</p> <p>If the difference of the sum of the house-numbers between the two sides of the road is 27, then the number of houses on each side of the road is</p>
(A)	27
(B)	52
(C)	54
(D)	26
Q.3	<p>For positive integers p and q, with $\frac{p}{q} \neq 1$, $\left(\frac{p}{q}\right)^{\frac{p}{q}} = p^{\left(\frac{p}{q}-1\right)}$. Then,</p>
(A)	$q^p = p^q$
(B)	$q^p = p^{2q}$
(C)	$\sqrt{q} = \sqrt{p}$
(D)	$\sqrt[p]{q} = \sqrt[q]{p}$

Q.4	Which one of the given options is a possible value of x in the following sequence? 3, 7, 15, x , 63, 127, 255
(A)	35
(B)	40
(C)	45
(D)	31
Q.5	On a given day, how many times will the second-hand and the minute-hand of a clock cross each other during the clock time 12:05:00 hours to 12:55:00 hours?
(A)	51
(B)	49
(C)	50
(D)	55

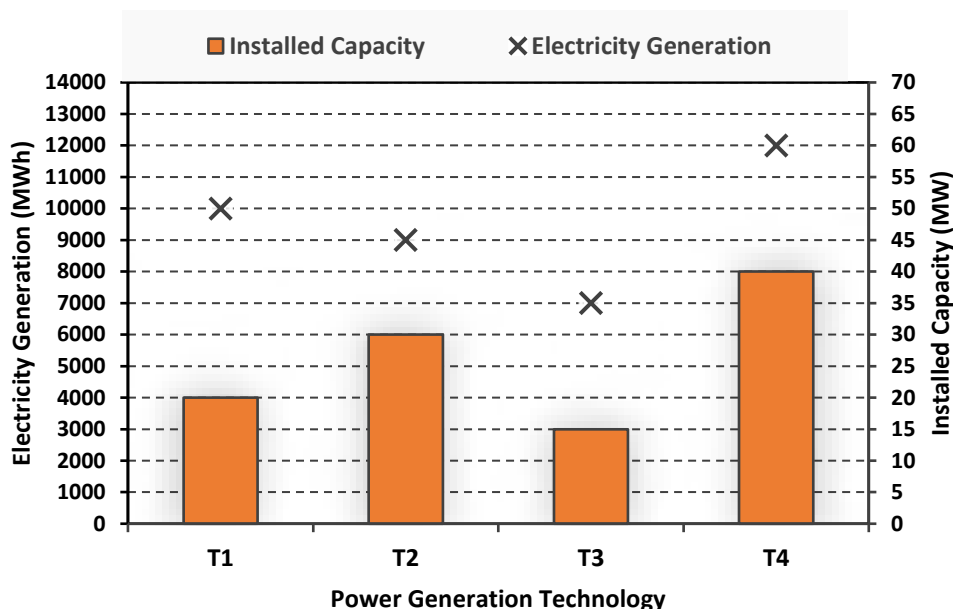
Q.6 – Q.10 Carry TWO marks Each

Q.6	<p>In the given text, the blanks are numbered (i)–(iv). Select the best match for all the blanks.</p> <p>From the ancient Athenian arena to the modern Olympic stadiums, athletics _____ (i) _____ the potential for a spectacle. The crowd _____ (ii) _____ with bated breath as the Olympian artist twists his body, stretching the javelin behind him. Twelve strides in, he begins to cross-step. Six cross-steps _____ (iii) _____ in an abrupt stop on his left foot. As his body _____ (iv) _____ like a door turning on a hinge, the javelin is launched skyward at a precise angle.</p>
(A)	(i) hold (ii) waits (iii) culminates (iv) pivot
(B)	(i) holds (ii) wait (iii) culminates (iv) pivot
(C)	(i) hold (ii) wait (iii) culminate (iv) pivots
(D)	(i) holds (ii) waits (iii) culminate (iv) pivots

Q.7	<p>Three distinct sets of indistinguishable twins are to be seated at a circular table that has 8 identical chairs. Unique seating arrangements are defined by the relative positions of the people.</p> <p>How many unique seating arrangements are possible such that each person is sitting next to their twin?</p>
(A)	12
(B)	14
(C)	10
(D)	28

Q.8

The chart given below compares the Installed Capacity (MW) of four power generation technologies, T1, T2, T3, and T4, and their Electricity Generation (MWh) in a time of 1000 hours (h).



The Capacity Factor of a power generation technology is:

$$\text{Capacity Factor} = \frac{\text{Electricity Generation (MWh)}}{\text{Installed Capacity (MW)} \times 1000 \text{ (h)}}$$

Which one of the given technologies has the highest Capacity Factor?

(A) T1

(B) T2

(C) T3

(D) T4

Q.9	<p>In the 4×4 array shown below, each cell of the first three columns has either a cross (X) or a number, as per the given rule.</p> <table><tr><td>1</td><td>1</td><td>2</td><td></td></tr><tr><td>2</td><td>X</td><td>3</td><td></td></tr><tr><td>2</td><td>X</td><td>4</td><td></td></tr><tr><td>1</td><td>2</td><td>X</td><td></td></tr></table> <p>Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).</p> <p>As per this rule, the maximum number of crosses possible in the empty column is</p>	1	1	2		2	X	3		2	X	4		1	2	X	
1	1	2															
2	X	3															
2	X	4															
1	2	X															
(A)	0																
(B)	1																
(C)	2																
(D)	3																

Q.10	During a half-moon phase, the Earth-Moon-Sun form a right triangle. If the Moon-Earth-Sun angle at this half-moon phase is measured to be 89.85° , the ratio of the Earth-Sun and Earth-Moon distances is closest to
(A)	328
(B)	382
(C)	238
(D)	283

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11– Q.17 Carry ONE mark Each

Q.11	Amma's tone in the context of the given passage is that of:
	For Amma, the difference between men and women was a kind of discrimination and inequality; she felt strongly about women's rights but was not familiar with concepts like gender and patriarchy. She would have dismissed Betty Friedan because she was predominantly dealing with the problems of white middle-class women in the United States. Amma, and women of her generation, could de-link the oppression of women from the wider struggle for the liberation of human beings from class exploitation and imperialism. So Amma continued to play her role as mother and wife, but would often complain: 'I am a doormat on which everyone wipes their emotional dirt off'.
(A)	Compromise
(B)	Protest
(C)	Contentment
(D)	Resignation

Q.12	Fill in the blanks by choosing the correct sequence for the following passage:
	I am wearing for the first time some (i)_____ that I have never been able to wear for long at a time, as they are horribly tight. I usually put them on just before giving a lecture. The painful pressure they exert on my feet goads my oratorical capacities to their utmost. This sharp and overwhelming pain makes me sing like a nightingale or like one of those Neapolitan singers who also wear (ii)_____ that are too tight. The visceral physical longing, the overwhelming torture provoked by my (iii)_____, forces me to extract from words distilled and sublime truths, generalized by the supreme inquisition of the pain my (iv)_____ suffer.
(A)	(i) patent-leather belt (ii) belts (iii) patent-leather belt (iv) waist
(B)	(i) patent-leather shoes (ii) bands (iii) patent-leather bands (iv) wrist
(C)	(i) patent-leather shoes (ii) shoes (iii) patent-leather shoes (iv) feet
(D)	(i) patent-leather jacket (ii) jacket (iii) patent-leather jacket (iv) body

Q.13	The appropriate synonym for the word 'ignite' in the following passage will be:
	Spirituality must be integrated with education. Self-realization is the focus. Each one of us must become aware of our higher self. We are links of a great past to a grand future. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavor will bring peace, prosperity and bliss to this nation.
(A)	Encourage
(B)	Simulate
(C)	Dissipate
(D)	Engross

Q.14	Which of the following sentences is punctuated correctly?
(A)	One day, I'll write a book, 'I said'. Not just a thriller but a real book, about real people.
(B)	'One day I'll write a book', I said, 'not just a thriller, but a real book, about real people.'
(C)	'One day I'll write a book', I said. 'Not just a thriller but, a real book, about real people'.
(D)	'One day I'll write a book', I said, not just a thriller, but a real book, about real people.'

Q.15	Fill in the blanks with the correct combination of tenses for the given sentence:
	Darwin's work (i)_____ a related effect that (ii)_____ influenced the development of environmental politics – a 'decentering' of the human being.
(A)	(i) have (ii) had
(B)	(i) had (ii) have
(C)	(i) had (ii) has
(D)	(i) has (ii) have

Q.16	Which of the following options holds similar relationship as the words, ‘Music: Notes’?
(A)	Water: Cold drink
(B)	Paper: Class Notes
(C)	House: Bricks
(D)	Graphite: Charcoal

Q.17	In a particular code, if “RAMAN” is written as 52 and “MAP” is written as 33, then how will you code “CLICK”?
(A)	37
(B)	43
(C)	51
(D)	38

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

Q.18	On the basis of the statements given below, which valid assumption(s) can be made?
	<p>Statements:</p> <ul style="list-style-type: none"> • Life has suffering • Desire is the cause of suffering • The end of desire is the end of suffering • Desire can be reduced by following the noble eightfold path <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Suffering is because of wants 2. Life is not always full of suffering 3. The eightfold path can reduce suffering 4. Suffering is caused by life
(A)	Only 1, 3 and 4
(B)	Only 1, 2 and 3
(C)	Only 1 and 4
(D)	Only 2 and 3

Q.19	If 'KARAMCHAND' is coded as 'ICPCKEFCLF' what should be the code of 'CREATION'?
(A)	ATCCRKMP
(B)	ETGCVKQP
(C)	APCCRJMP
(D)	ETCGKRPM

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Q.20	<p>Given an input line of numbers and words, a machine rearranges them following a particular rule in each step. Here is an illustration of an input and rearrangement sequence (Step 1 to Step 5):</p> <p>Input: 61 wb ob 48 45 29 34 sb pb lb</p> <p>Step 1: lb wb ob 48 45 29 34 sb pb 61</p> <p>Step 2: lb ob wb 45 29 34 sb pb 61 48</p> <p>Step 3: lb ob pb wb 29 34 sb 61 48 45</p> <p>Step 4: lb ob pb sb wb 29 61 48 45 34</p> <p>Step 5: lb ob pb sb wb 61 48 45 34 29</p> <p>Step 5 is the last step of the above arrangement.</p> <p>Based on the rules followed in the above steps, answer the following question:</p> <p>Input: cb kb eb 58 49 23 38 jb nb gb 69 82</p> <p>Which of the following represents the position of 58 in the fourth step? (Step-5 is the last step of the arrangement.)</p>
(A)	Second from the left
(B)	Fourth from the right
(C)	Third from the right
(D)	Seventh from the left

Q.21	<p>In a certain type of code, ‘they play cricket together’ is written as ‘mv kb lb iv’; ‘they score maximum points’ is written as ‘gb lb mb kv’; ‘cricket score earned points’ is written as ‘mb gv kb kv’ and ‘points are earned together’ is written as ‘kv mv ob gv.’</p> <p>What is the code for ‘earned maximum points’?</p>
(A)	gv gb kv
(B)	mv kb mb
(C)	lb iv ob
(D)	ob mb iv

Q.22	Which of the statement(s) about the passage weaken(s) the argument presented?
	Scientists associate large brains with greater intelligence. However, in the evolutionary context it has also been identified that beyond a point, the size of the brain has not increased and yet after a particular period, in spite of no significant change in brain size humans have made significant progress. Certain researchers propose that this is because, while the overall brain size may not have changed, marked structural changes can be noticed in specific structures that run parallel to increase in human intelligence.
(A)	Recent studies refute the hypothesis that region-specific brain development is necessarily associated with rapid human progress
(B)	Neanderthal people's extinction was probably because of their brain size
(C)	Homo Sapiens and its destruction in the future may happen because of its rapid brain development
(D)	Recent studies show that Neanderthal people, with relatively smaller brains, were capable of complex language and social activities

Q. 23	The narrator's use of 'I' in the given passage is/are:
	I have never been any good at the more lurid sort of writing. Psychopathic killers, impotent war-heroes, self-tortured film stars, and seedy espionage agents must exist in the world, but strangely enough I do not come across them, and I prefer to write about the people and places I have known and the lives of those whose paths I have crossed. This crossing of paths makes for stories rather than novels, and although I have worked in both mediums, I am happier being a short-story writer than a novelist.
(A)	Self-conscious
(B)	Apologetic and regretful
(C)	Confessional and communicating
(D)	Egotistical and vain

Q.24	Which of the following recommended action(s) seem to be appropriate with the stated problem?
	Stated problem : Many students at educational institutes do not attend classes in the post-pandemic scenario.
(A)	Disciplinary action against all students should be taken as a warning.
(B)	Counselling sessions should be organized to address the issues such students face.
(C)	Surveys should be conducted to identify the reasons for their absence.
(D)	Course content should immediately be changed.

Q.25	Read the passage and identify the statement(s) which follow(s) from it:
	The purpose of this work is to inform educators about the brain science related to emotion and learning, and, more important, to offer strategies to apply these understandings to their own teaching. Although many of the approaches I describe will be familiar, integrating the lens of emotion and the brain may be a new concept. As an educator I had been trained in how to deliver content and organize my lessons, but I had not been taught how to design learning experiences that support emotions for learning.
(A)	The author wishes, through his work, to inform us about brain science and learning.
(B)	The author, through his work, wishes to offer strategies to apply our learnings to our teaching.
(C)	The author feels that the newness of his approach lies in linking emotion oriented approach to brain.
(D)	The author wants to use emotions as a strategy for learning.

Q.26	If A says that his mother is the daughter of B's mother, then how is B related to A?
(A)	Uncle
(B)	Aunt
(C)	Father
(D)	Brother

English (XH-C2)

XH-C2: Q.27– Q.44 Carry ONE mark Each

Q.27 “The Love Song of J. Alfred Prufrock” is a/an _____ .

- (A) ode
- (B) dramatic monologue
- (C) haiku
- (D) Villanelle

Q.28 Match the following pairs of fictional characters with the author who created them:

a	Phileas Fogg and Jean Passepartout	i	William Shakespeare
b	Don Quixote and Sancho Panza	ii	Jules Verne
c	Candide and Pangloss	iii	Miguel de Cervantes
d	Dogberry and Verges	iv	Voltaire

- (A) a-iv, b-iii, c-i, d-ii
- (B) a-i, b-iii, c-iv, d-ii
- (C) a-iii, b-i, c-ii, d-iv
- (D) a-ii, b-iii, c-iv, d-i

Q.29 Which one of the following is a famous detective character created by Edgar Allan Poe?

- (A) Maigret
- (B) Miss Marple
- (C) Auguste Dupin
- (D) Arsene Lupin

Q.30 “The horror! The horror!” - these are the last words of _____ .

- (A) Lady Macbeth in *Macbeth*
- (B) Captain Ahab in *Moby Dick*
- (C) Jonathan Harker in *Dracula*
- (D) Kurtz in *Heart of Darkness*

Q.31 Eric Arthur Blair was born in Motihari, Bihar. He went on to become famous as an author of a dystopian work which introduced the terms ‘Newspeak’, ‘Thoughtcrime’, and ‘Doublespeak’. He wrote under the pseudonym _____.

- (A) Ruskin Bond
- (B) George Orwell
- (C) Rudyard Kipling
- (D) E. M. Forster

Q. 32 “I started writing in Gikuyu language in 1977 after seventeen years of involvement in Afro-European literature, in my case Afro-English literature ... wherever I have gone, particularly in Europe, I have been confronted with the question: why are you now writing in Gikuyu? Why do you now write in an African language?”

Identify the author of this passage.

- (A) Nadine Gordimer
- (B) Wole Soyinka
- (C) Ngugi wa Thiong’o
- (D) Chimamanda Ngozi Adichie

Q. 33 On the basis of genre, which of the following does **NOT** belong in this group?

- (A) *Harvest* by Manjula Padmanabhan
- (B) *Tara* by Mahesh Dattani
- (C) *Sakharam Binder* by Vijay Tendulkar
- (D) *Ravan and Eddie* by Kiran Nagarkar

Q. 34 *The Madwoman in the Attic*, the title of Sandra Gilbert and Susan Gubar's iconic feminist examination of Victorian literature, alludes to which classic novel?

- (A) *Jane Eyre*
- (B) *Middlemarch*
- (C) *Diary of a Madman*
- (D) *Wuthering Heights*

Q. 35 Agatha Christie broke a fundamental rule of detective fiction in _____.

- (A) *Murder on the Orient Express*
- (B) *The Murder of Roger Ackroyd*
- (C) *Death on the Nile*
- (D) *Three Act Tragedy*

Q. 36 Dorothea Brooke, Edward Casaubon, Hetty Sorel, Stephen Guest are all characters created by _____.

- (A) George Eliot
- (B) Charlotte Bronte
- (C) Jane Austen
- (D) Walter Scott

Q. 37 *Charulata* is an adaptation of which work by Rabindranath Tagore?

- (A) *Gora*
- (B) *The Broken Nest*
- (C) *Four Chapters*
- (D) *The Home and the World*

Q. 38 Which of the following is **NOT** part of the Theban trilogy?

- (A) *Oedipus Rex*
- (B) *Oedipus at Colonus*
- (C) *Medea*
- (D) *Antigone*

Q. 39 The literary term ‘apostrophe’ denotes:

- (A) A comparison of an abstract idea with its opposite.
- (B) An address to a person, or a personified idea or power.
- (C) A break within an iambic pentameter.
- (D) The possession of a character by a spirit.

Q. 40 In the line, “What’s Hecuba to him, or he to Hecuba?” “he” refers to _____ .

- (A) Virgil, the author of the *Aeneid*
- (B) An actor performing a scene from the Trojan War in *Hamlet*
- (C) Helen’s husband Priam who left her for Hecuba
- (D) A fairy king who abandoned his daughter Hecuba at birth

Q. 41 Which of the following is/are **NOT** based on a play by William Shakespeare?

- (A) George Bernard Shaw's *Pygmalion*
- (B) Ian McEwan's *Nutshell*
- (C) Girish Karnad's *The Fire and the Rain*
- (D) Akira Kurosawa's *Throne of Blood*

Q. 42 Which of the following is/are **NOT** composed by Kalidasa?

- (A) *Mrcchakatika*
- (B) *Abhijnanashakuntalam*
- (C) *Meghaduta*
- (D) *Natyashastra*

Q. 43 Which of these writers is/are associated with the Progressive Writers Association?

- (A) Bankim Chandra Chatterjee
- (B) Ismat Chughtai
- (C) Premchand
- (D) Rajinder Singh Bedi

Q. 44 Which of the following novels is/are written by African-American women?

- (A) *The Color Purple*
- (B) *The Ink Black Heart*
- (C) *My Name is Red*
- (D) *The Bluest Eye*

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

Q.45 Which of the following options is **NOT** the title of a play?

- (A) *The Spanish Tragedy*
- (B) *A Doll's House*
- (C) *Mother Courage and her Children*
- (D) *Scenes from Clerical Life*

Q.46 Match each fictional character with the author who created him:

a	Uriah Heep	i	James Joyce
b	Stephen Dedalus	ii	Ivan Turgenev
c	Bazarov	iii	Fyodor Dostoevsky
d	Raskolnikov	iv	Charles Dickens

- (A) a-iii, b-i, c-ii, d-iv
- (B) a-iv, b-i, c-ii, d-iii
- (C) a-i, b-iv, c-ii, d-iii
- (D) a-iv, b-ii, c-i, d-iii

Q. 47 What do the following works have in common?

Andha Yug, The Second Turn, Parva, Sarpa Satra

- (A) All of them are plays.
- (B) All are based on the *Mahabharata*.
- (C) All have women as primary protagonists.
- (D) All are 19th century works.

Q. 48 Match the texts with the language they were originally written in:

a	<i>Waiting for a Visa</i>	i	Hindi
b	<i>The Prisons we Broke</i>	ii	English
c	<i>The Revenue Stamp: An Autobiography</i>	iii	Marathi
d	<i>Joothan: A Dalit's Life</i>	iv	Punjabi

- (A) a-ii, b-iii, c-i, d-iv
- (B) a-i, b-ii, c-iv, d-iii
- (C) a-ii, b-iii, c-iv, d-i
- (D) a-iii, b-iv, c-ii, d-i

Q. 49 Match the excerpts with the texts they have been taken from:

a	“A son who will never be older than his motherland – neither older nor younger. There shall be two heads – but you will only see one – there will be knees and a nose, a nose and knees.”	i	<i>A Suitable Boy</i>
b	“That it really began in the days when the Love Laws were made. The laws that lay down who should be loved, and how. And how much.”	ii	<i>Midnight’s Children</i>
c	“She had dispersed. She was the garden at Prem Niwas (soon to be entered into the annual Flower Show), she was Veena’s love of music, Pran’s asthma, Maan’s generosity, [...] the temperament of Bhaskar’s great-grandchildren. Indeed, for all the Minister of Revenue’s impatience with her, she was his regret.”	iii	<i>The God of Small Things</i>
d	“Two or three years after the 1947 Partition, it occurred to the governments of India and Pakistan to exchange their lunatics in the same manner as they had exchanged their criminals. The Muslim lunatics in India were to be sent over to Pakistan and the Hindu and Sikh lunatics in Pakistan asylums were to be handed over to India.”	iv	“Toba Tek Singh”

(A) a-ii, b-iii, c-i, d-iv

(B) a-i, b-ii, c-iv, d-iii

(C) a-ii, b-i, c-iii, d-iv

(D) a-i, b-iv, c-iii, d-ii

Q. 50 A widely used narrative technique, it allows narrators to temporarily inhabit the consciousness of any of their characters. It is called _____ .

- (A) Localized Speech
- (B) Free Indirect Speech
- (C) Mimicked Speech
- (D) Empathetic Speech

Q. 51 Which of the following statements is true of Magic Realism?

- (A) It has its origins in the speech of the Oracle of Delphi.
- (B) It was created by J R R Tolkien.
- (C) It reveals the extraordinary in the heart of the ordinary.
- (D) It is a subset of Socialist Realism.

Q. 52 _____ wrote ‘Adonais: An Elegy on the Death of _____.’

Fill in the blanks with the correct pair:

- (A) William Wordsworth; Samuel Taylor Coleridge
- (B) William Blake; Lord Byron
- (C) Percy Bysshe Shelley; John Keats
- (D) John Keats; Percy Bysshe Shelley

Q. 53 Which of the following statements about *The Scarlet Letter* is/are correct?

- (A) It was written by Nadine Gordimer.
- (B) The “scarlet letter” of the title refers to the letter ‘A’.
- (C) It is an epistolary romance.
- (D) It was written in the 19th century.

- Q. 54 “[...] I mean *negative capability*, that is when a man is capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason [...].”

Based on this statement, which of the following options is/are correct?

Negative capability is the ability to _____ .

- (A) be receptive to ambiguities
- (B) be focused on precise resolutions
- (C) not get irritated by people’s incompetence
- (D) find value in partial knowledge

Q. 55 Virginia Woolf wrote in “Professions for Women”:

“You have won rooms of your own in the house hitherto exclusively owned by men. You are able, though not without great labour and effort, to pay the rent. You are earning your five hundred pounds a year. But this freedom is only a beginning; the room is your own, but it is still bare. It has to be furnished; it has to be decorated; it has to be shared. How are you going to furnish it, how are you going to decorate it? With whom are you going to share it, and upon what terms?”

Based on this passage, which of the following inferences is/are correct?

- (A) Women may have attained rooms of their own but they still have a long way to go.
- (B) The ‘room’ women now own is a sign of minimal economic independence.
- (C) Woolf insists that women live only with other women in order to maintain their independence.
- (D) The freedom that women now enjoy was attained after centuries of struggle.

Q. 56 Which of the following statements is/are correct?

- (A) Rasa is a form of categorizing a text by its genre.
- (B) According to Abhinavagupta, Rasa is best experienced collectively and in unison with others.
- (C) Rasa is purely an aesthetic emotion, not to be confused with real-life emotions.
- (D) Rasa is evoked only by performances like drama and dance.

- Q. 57 “Lear cries out ‘you are men of stones’
as Cordelia hangs from a broken wall.

I step out into Chandni Chowk, a street once
strewn with jasmine flowers
for the Empress and the royal women
who bought perfumes from Isfahan,
fabrics from Dacca, essence from Kabul,
glass bangles from Agra.

Beggars now live here in tombs
of unknown nobles and forgotten saints
while hawkers sell combs and mirrors
outside a Sikh temple. Across the street,
a theater is showing a Bombay spectacular.

I think of Zafar, poet and Emperor,
being led through this street
by British soldiers, his feet in chains,
to watch his sons hanged.

In exile he wrote:
‘Unfortunate Zafar
spent half his life in hope,
the other half waiting.
He begs for two yards of Delhi for burial.’

He was exiled to Burma, buried in Rangoon.”

Which of the following ideas is/are conveyed by this poem?

- (A) Delhi is a modern and progressive city despite its imperial past.
- (B) Even Kings may be punished when they commit crimes against their children.
- (C) An exile’s sense of loss, and longing for their homeland.
- (D) History is a constant presence all around us.

Q. 58 Which of the following statements is/are true of these novels:

Anna Karenina, Dead Souls, Crime and Punishment, Fathers and Sons.

- (A) They are all written by Russian authors.
- (B) They all have women as central protagonists.
- (C) They were all written in the 19th century.
- (D) They all highlight socially transgressive romantic relationships.

Q. 59 “[...] in so far as the academic discourse of history – that is, ‘history’ as a discourse produced at the institutional site of the university – is concerned, ‘Europe’ remains the sovereign, theoretical subject of all histories, including the ones we call ‘Indian,’ ‘Chinese,’ ‘Kenyan,’ and so on. There is a peculiar way in which all these other histories tend to become variations on a master narrative that could be called ‘the history of Europe.’ In this sense, ‘Indian’ history itself is in a position of subalternity; one can only articulate subaltern subject positions in the name of this history.”

Which of the following options is/are implied by the passage above?

- (A) People in postcolonial societies are condemned to endlessly repeat their own histories.
- (B) The histories of India, China, and Kenya are not fundamentally different from one another.
- (C) Within the protocols of history writing, it is impossible to write the history of postcolonial societies without reference to Europe.
- (D) Instead of Europe, India should be the sovereign subject of all histories.

- Q. 60 “What if, in order to save some humans lost in their language, in order to deliver the humans themselves, at the expense of their language, it was better to renounce the language, at least to renounce the best conditions for survival ‘at all costs’ for the idiom? And what if some humans were more worth saving than their language, under circumstances where, alas, one needed to choose between them? For we are living in a period in which the question at times arises. Today, on this earth of humans, certain people must yield to the homo-hegemony of dominant languages. They must learn the language of the masters, of capital and machines; they must lose their idiom in order to survive or live better.”

On the basis of this passage, which of the following options is/are correct?

The writer of this passage is:

- (A) Advocating that all colonized people should renounce their native languages to succeed in a globalized world.
- (B) Lamenting that in our contemporary world, some groups of people are forced to choose between immersion in their own language and economic survival.
- (C) Implicitly expressing despair about the hegemony of dominant languages.
- (D) Suggesting that there should be only one language in the world.

Q.61 Politics
--by William Butler Yeats

‘In our time the destiny of man presents its meanings in political terms.’
--Thomas Mann

“How can I, that girl standing there,
My attention fix
On Roman or on Russian
Or on Spanish politics,
Yet here’s a travelled man that knows
What he talks about,
And there’s a politician
That has both read and thought,
And maybe what they say is true
Of war and war’s alarms,
But O that I were young again
And held her in my arms.”

Which of the following options is/are implied by this poem?

- (A) Politics is the most absorbing concern of human existence.
- (B) Desire has never distracted the speaker from politics.
- (C) Sensual desire can be in conflict with cerebral concerns.
- (D) Physical desire does not die with age.

- Q. 62 “Although feminist philosophers have traditionally sought to show how the body is figured as feminine, or how women have been associated with materiality (whether inert – always already dead – or fecund – ever-living and procreative) where men have been associated with the principle of rational mastery, Irigaray wants to argue that in fact the feminine is precisely what is excluded in and by such a binary opposition. In this sense, when and where women are represented within this economy is precisely the site of their erasure.”

Which of the following options is/are implied by this passage?

- (A) Irigaray’s work does not replicate the stance of traditional feminist philosophy.
- (B) Irigaray radically questions the mind/body distinction from a feminist perspective.
- (C) For Irigaray, the place assigned to women, even by some feminist philosophers, may in fact serve to erase them.
- (D) Irigaray is not crucially concerned about the feminine.

- Q. 63 “I like a look of Agony,
Because I know it’s true –
Men do not sham Convulsion,
Nor simulate, a Throe –

The eyes glaze once – and that is Death –
Impossible to feign
The Beads upon the Forehead
By homely Anguish strung.”

Which of the following options is/are implied by this poem?

- (A) Agony is not easily disguised.
- (B) The speaker likes to watch people suffer because it reminds her of her own well-being.
- (C) Strong people never suffer a painful death.
- (D) Anguish can produce physical effects.

- Q. 64 “We dwell with satisfaction upon the poet’s difference from his predecessors, especially his immediate predecessors; [...]. Whereas if we approach a poet without this prejudice we shall often find that not only the best, but the most individual parts of his works may be those in which the dead poets, his ancestors, assert their immortality most vigorously.”

Which of the following options is/are implied by this excerpt?

- (A) Being different from one’s predecessors need not be the defining characteristic of a good poet.
- (B) What we consider original in a poem, may be deeply rooted in tradition.
- (C) There is no difference between old and new poems.
- (D) The past is often a living presence in good contemporary poetry.

- Q. 65 Which factor(s) led to the rise and popularity of the novel in England?

- (A) The rise of literacy.
- (B) The spread of printing presses throughout England.
- (C) The migration of large numbers of writers and intellectuals from Italy.
- (D) The rise of the bourgeoisie.

General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	<p>If '→' denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____].</p> <p>Which one of the given options is appropriate to fill the blank?</p>
(A)	obfuscate
(B)	obliterate
(C)	fracture
(D)	fissure

Q.2	<p>In a locality, the houses are numbered in the following way:</p> <p>The house-numbers on one side of a road are consecutive odd integers starting from 301, while the house-numbers on the other side of the road are consecutive even numbers starting from 302. The total number of houses is the same on both sides of the road.</p> <p>If the difference of the sum of the house-numbers between the two sides of the road is 27, then the number of houses on each side of the road is</p>
(A)	27
(B)	52
(C)	54
(D)	26
Q.3	<p>For positive integers p and q, with $\frac{p}{q} \neq 1$, $\left(\frac{p}{q}\right)^{\frac{p}{q}} = p^{\left(\frac{p}{q}-1\right)}$. Then,</p>
(A)	$q^p = p^q$
(B)	$q^p = p^{2q}$
(C)	$\sqrt{q} = \sqrt{p}$
(D)	$\sqrt[p]{q} = \sqrt[q]{p}$

Q.4	Which one of the given options is a possible value of x in the following sequence? 3, 7, 15, x , 63, 127, 255
(A)	35
(B)	40
(C)	45
(D)	31
Q.5	On a given day, how many times will the second-hand and the minute-hand of a clock cross each other during the clock time 12:05:00 hours to 12:55:00 hours?
(A)	51
(B)	49
(C)	50
(D)	55

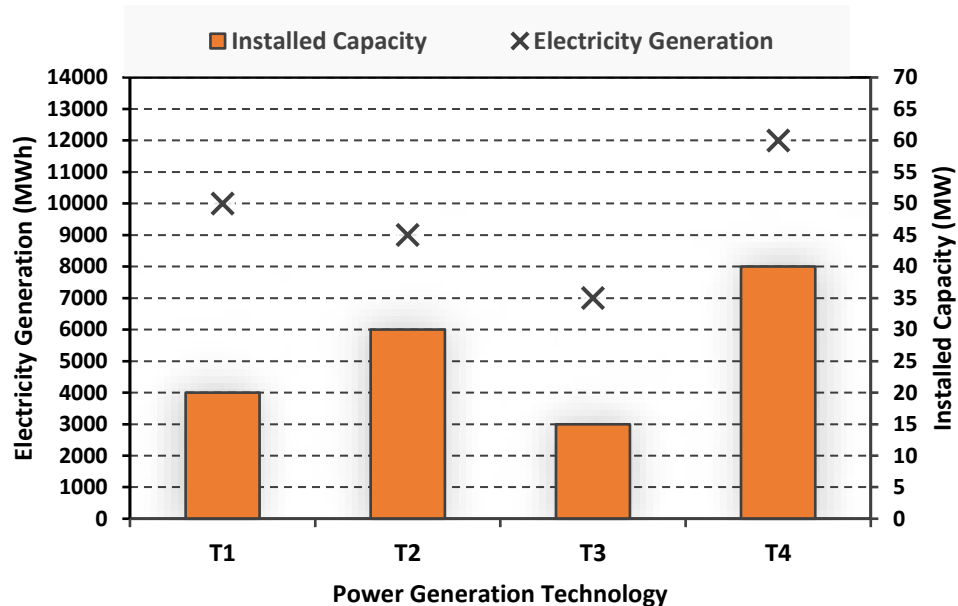
Q.6 – Q.10 Carry TWO marks Each

Q.6	<p>In the given text, the blanks are numbered (i)–(iv). Select the best match for all the blanks.</p> <p>From the ancient Athenian arena to the modern Olympic stadiums, athletics _____ (i) _____ the potential for a spectacle. The crowd _____ (ii) _____ with bated breath as the Olympian artist twists his body, stretching the javelin behind him. Twelve strides in, he begins to cross-step. Six cross-steps _____ (iii) _____ in an abrupt stop on his left foot. As his body _____ (iv) _____ like a door turning on a hinge, the javelin is launched skyward at a precise angle.</p>
(A)	(i) hold (ii) waits (iii) culminates (iv) pivot
(B)	(i) holds (ii) wait (iii) culminates (iv) pivot
(C)	(i) hold (ii) wait (iii) culminate (iv) pivots
(D)	(i) holds (ii) waits (iii) culminate (iv) pivots

Q.7	<p>Three distinct sets of indistinguishable twins are to be seated at a circular table that has 8 identical chairs. Unique seating arrangements are defined by the relative positions of the people.</p> <p>How many unique seating arrangements are possible such that each person is sitting next to their twin?</p>
(A)	12
(B)	14
(C)	10
(D)	28

Q.8

The chart given below compares the Installed Capacity (MW) of four power generation technologies, T1, T2, T3, and T4, and their Electricity Generation (MWh) in a time of 1000 hours (h).



The Capacity Factor of a power generation technology is:

$$\text{Capacity Factor} = \frac{\text{Electricity Generation (MWh)}}{\text{Installed Capacity (MW)} \times 1000 \text{ (h)}}$$

Which one of the given technologies has the highest Capacity Factor?

(A) T1

(B) T2

(C) T3

(D) T4

Q.9	<p>In the 4×4 array shown below, each cell of the first three columns has either a cross (X) or a number, as per the given rule.</p> <table><tr><td>1</td><td>1</td><td>2</td><td></td></tr><tr><td>2</td><td>X</td><td>3</td><td></td></tr><tr><td>2</td><td>X</td><td>4</td><td></td></tr><tr><td>1</td><td>2</td><td>X</td><td></td></tr></table> <p>Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).</p> <p>As per this rule, the maximum number of crosses possible in the empty column is</p>	1	1	2		2	X	3		2	X	4		1	2	X	
1	1	2															
2	X	3															
2	X	4															
1	2	X															
(A)	0																
(B)	1																
(C)	2																
(D)	3																

Q.10	During a half-moon phase, the Earth-Moon-Sun form a right triangle. If the Moon-Earth-Sun angle at this half-moon phase is measured to be 89.85° , the ratio of the Earth-Sun and Earth-Moon distances is closest to
(A)	328
(B)	382
(C)	238
(D)	283

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11– Q.17 Carry ONE mark Each

Q.11	Amma's tone in the context of the given passage is that of:
	For Amma, the difference between men and women was a kind of discrimination and inequality; she felt strongly about women's rights but was not familiar with concepts like gender and patriarchy. She would have dismissed Betty Friedan because she was predominantly dealing with the problems of white middle-class women in the United States. Amma, and women of her generation, could de-link the oppression of women from the wider struggle for the liberation of human beings from class exploitation and imperialism. So Amma continued to play her role as mother and wife, but would often complain: 'I am a doormat on which everyone wipes their emotional dirt off'.
(A)	Compromise
(B)	Protest
(C)	Contentment
(D)	Resignation

Q.12	Fill in the blanks by choosing the correct sequence for the following passage:
	I am wearing for the first time some (i)_____ that I have never been able to wear for long at a time, as they are horribly tight. I usually put them on just before giving a lecture. The painful pressure they exert on my feet goads my oratorical capacities to their utmost. This sharp and overwhelming pain makes me sing like a nightingale or like one of those Neapolitan singers who also wear (ii)_____ that are too tight. The visceral physical longing, the overwhelming torture provoked by my (iii)_____, forces me to extract from words distilled and sublime truths, generalized by the supreme inquisition of the pain my (iv)_____ suffer.
(A)	(i) patent-leather belt (ii) belts (iii) patent-leather belt (iv) waist
(B)	(i) patent-leather shoes (ii) bands (iii) patent-leather bands (iv) wrist
(C)	(i) patent-leather shoes (ii) shoes (iii) patent-leather shoes (iv) feet
(D)	(i) patent-leather jacket (ii) jacket (iii) patent-leather jacket (iv) body

Q.13	The appropriate synonym for the word 'ignite' in the following passage will be:
	Spirituality must be integrated with education. Self-realization is the focus. Each one of us must become aware of our higher self. We are links of a great past to a grand future. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavor will bring peace, prosperity and bliss to this nation.
(A)	Encourage
(B)	Simulate
(C)	Dissipate
(D)	Engross

Q.14	Which of the following sentences is punctuated correctly?
(A)	One day, I'll write a book, 'I said'. Not just a thriller but a real book, about real people.
(B)	'One day I'll write a book', I said, 'not just a thriller, but a real book, about real people.'
(C)	'One day I'll write a book', I said. 'Not just a thriller but, a real book, about real people'.
(D)	'One day I'll write a book', I said, not just a thriller, but a real book, about real people.'

Q.15	Fill in the blanks with the correct combination of tenses for the given sentence:
	Darwin's work (i)_____ a related effect that (ii)_____ influenced the development of environmental politics – a 'decentering' of the human being.
(A)	(i) have (ii) had
(B)	(i) had (ii) have
(C)	(i) had (ii) has
(D)	(i) has (ii) have

Q.16	Which of the following options holds similar relationship as the words, ‘Music: Notes’?
(A)	Water: Cold drink
(B)	Paper: Class Notes
(C)	House: Bricks
(D)	Graphite: Charcoal

Q.17	In a particular code, if “RAMAN” is written as 52 and “MAP” is written as 33, then how will you code “CLICK”?
(A)	37
(B)	43
(C)	51
(D)	38

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

Q.18	On the basis of the statements given below, which valid assumption(s) can be made?
	<p>Statements:</p> <ul style="list-style-type: none"> • Life has suffering • Desire is the cause of suffering • The end of desire is the end of suffering • Desire can be reduced by following the noble eightfold path <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Suffering is because of wants 2. Life is not always full of suffering 3. The eightfold path can reduce suffering 4. Suffering is caused by life
(A)	Only 1, 3 and 4
(B)	Only 1, 2 and 3
(C)	Only 1 and 4
(D)	Only 2 and 3

Q.19	If 'KARAMCHAND' is coded as 'ICPCKEFCLF' what should be the code of 'CREATION'?
(A)	ATCCRKMP
(B)	ETGCVKQP
(C)	APCCRJMP
(D)	ETCGKRPM

Q.20	<p>Given an input line of numbers and words, a machine rearranges them following a particular rule in each step. Here is an illustration of an input and rearrangement sequence (Step 1 to Step 5):</p> <p>Input: 61 wb ob 48 45 29 34 sb pb lb</p> <p>Step 1: lb wb ob 48 45 29 34 sb pb 61</p> <p>Step 2: lb ob wb 45 29 34 sb pb 61 48</p> <p>Step 3: lb ob pb wb 29 34 sb 61 48 45</p> <p>Step 4: lb ob pb sb wb 29 61 48 45 34</p> <p>Step 5: lb ob pb sb wb 61 48 45 34 29</p> <p>Step 5 is the last step of the above arrangement.</p> <p>Based on the rules followed in the above steps, answer the following question:</p> <p>Input: cb kb eb 58 49 23 38 jb nb gb 69 82</p> <p>Which of the following represents the position of 58 in the fourth step? (Step-5 is the last step of the arrangement.)</p>
(A)	Second from the left
(B)	Fourth from the right
(C)	Third from the right
(D)	Seventh from the left

Q.21	<p>In a certain type of code, ‘they play cricket together’ is written as ‘mv kb lb iv’; ‘they score maximum points’ is written as ‘gb lb mb kv’; ‘cricket score earned points’ is written as ‘mb gv kb kv’ and ‘points are earned together’ is written as ‘kv mv ob gv.’</p> <p>What is the code for ‘earned maximum points’?</p>
(A)	gv gb kv
(B)	mv kb mb
(C)	lb iv ob
(D)	ob mb iv

Q.22	Which of the statement(s) about the passage weaken(s) the argument presented?
	Scientists associate large brains with greater intelligence. However, in the evolutionary context it has also been identified that beyond a point, the size of the brain has not increased and yet after a particular period, in spite of no significant change in brain size humans have made significant progress. Certain researchers propose that this is because, while the overall brain size may not have changed, marked structural changes can be noticed in specific structures that run parallel to increase in human intelligence.
(A)	Recent studies refute the hypothesis that region-specific brain development is necessarily associated with rapid human progress
(B)	Neanderthal people's extinction was probably because of their brain size
(C)	Homo Sapiens and its destruction in the future may happen because of its rapid brain development
(D)	Recent studies show that Neanderthal people, with relatively smaller brains, were capable of complex language and social activities

Q. 23	The narrator's use of 'I' in the given passage is/are:
	I have never been any good at the more lurid sort of writing. Psychopathic killers, impotent war-heroes, self-tortured film stars, and seedy espionage agents must exist in the world, but strangely enough I do not come across them, and I prefer to write about the people and places I have known and the lives of those whose paths I have crossed. This crossing of paths makes for stories rather than novels, and although I have worked in both mediums, I am happier being a short-story writer than a novelist.
(A)	Self-conscious
(B)	Apologetic and regretful
(C)	Confessional and communicating
(D)	Egotistical and vain

Q.24	Which of the following recommended action(s) seem to be appropriate with the stated problem?
	Stated problem : Many students at educational institutes do not attend classes in the post-pandemic scenario.
(A)	Disciplinary action against all students should be taken as a warning.
(B)	Counselling sessions should be organized to address the issues such students face.
(C)	Surveys should be conducted to identify the reasons for their absence.
(D)	Course content should immediately be changed.

Q.25	Read the passage and identify the statement(s) which follow(s) from it:
	The purpose of this work is to inform educators about the brain science related to emotion and learning, and, more important, to offer strategies to apply these understandings to their own teaching. Although many of the approaches I describe will be familiar, integrating the lens of emotion and the brain may be a new concept. As an educator I had been trained in how to deliver content and organize my lessons, but I had not been taught how to design learning experiences that support emotions for learning.
(A)	The author wishes, through his work, to inform us about brain science and learning.
(B)	The author, through his work, wishes to offer strategies to apply our learnings to our teaching.
(C)	The author feels that the newness of his approach lies in linking emotion oriented approach to brain.
(D)	The author wants to use emotions as a strategy for learning.

Q.26	If A says that his mother is the daughter of B's mother, then how is B related to A?
(A)	Uncle
(B)	Aunt
(C)	Father
(D)	Brother

Linguistics (XH-C3)

XH-C3: Q.27– Q.44 Carry ONE mark Each

Q.27	Which one of the following is an error of <i>grammatical competence</i> ?
(A)	Colourful white flags waved the wind.
(B)	The snake walked down the stairs.
(C)	I gave them a piece of my mind.
(D)	The purple sollies were gordly lombing.
Q.28	Which one of the sentences below does NOT have <i>syntactic recursion</i> in it?
(A)	The wolves ran on steadily.
(B)	The wolves ran in the night.
(C)	The deer avoided the wolves.
(D)	The deer quietly stood nearby.

Q.29	<p>The following sentences are examples of Hinglish. What term is used to describe such productions?</p> <ul style="list-style-type: none"> i. Yaar, if you don't come now, ticket nahin milega. ii. Sahi direction mein utha har kadam...after all life is all about the next step. iii. Pepsi- Yeh Dil Maange More!
(A)	Code mixing
(B)	Code transference
(C)	Code violation
(D)	Code breaking
Q.30	<p>Human beings can talk about their present, past and future. This property of language is called:</p>
(A)	Displacement
(B)	Arbitrariness
(C)	Duality
(D)	Productivity

Q.31	Which one of the following statements is CORRECT in the context of child language acquisition?
(A)	Young children demonstrate linguistic creativity and productivity by producing grammatical errors which are not found in parental productions.
(B)	Young children demonstrate linguistic creativity and productivity by producing grammatical errors which they find in parental productions.
(C)	Young children demonstrate linguistic creativity and productivity by deleting all the inflectional morphemes that are needed in complete productions.
(D)	Young children demonstrate linguistic creativity and productivity by reproducing nursery rhymes, stories and songs learnt from their caregivers.
Q.32	<p>Identify the type of 'linguistic deficit' that the patient displays in the interaction shown below:</p> <p>Doctor: "Can you tell me about this picture? What is there or what is happening?"</p> <p>Patient: "I can't say what... I know what it is... But I don't know where it is and I don't know what it is under. This one here, I can't say and that one, also."</p>
(A)	Anomia
(B)	Agrammatism
(C)	Auditory aphasia
(D)	Asphyxia

Q.33	Identify the sentence where the verb is in the third person plural in the simple present tense.
(A)	Are they here in school now?
(B)	They have walked to school.
(C)	Are you not in school yet?
(D)	He is here in school now.
Q.34	In the following conversation, the violation of which Gricean maxim of conversation gives rise to humour? Ram: I got a new car for my son. Shyam: That is a great exchange!
(A)	Maxim of Relation
(B)	Maxim of Quality
(C)	Maxim of Quantity
(D)	Maxim of Manner

Q.35	<p>Examine the following statements and choose the right option.</p> <p>Statement (I): A spectrogram shows the frequency components in a frequency over time display.</p> <p>Statement (II): In a spectrogram, high vowels can be identified by a low F1, while a back vowel can be identified by a low F2.</p>
(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.36	Which one of the following is NOT a correct statement about pidgins and creoles?
(A)	Pidginisation expands grammatical rules and creolisation reduces them.
(B)	Pidgins have little or no grammar.
(C)	A stabilised pidgin can lead to the formation of a creole.
(D)	Creoles are standardised pidgins.

Q.37	Which word in the options below would be affected by the following phonological rule?
	[+alveolar, +nasal] → [+dental] / _____ [+dental, +fricative]
(A)	panther
(B)	length
(C)	warmth
(D)	another
Q.38	The label 'Compound Verb' applies to
(A)	two verbs with one composite meaning
(B)	two verbs used for two different events
(C)	one main verb and a modal auxiliary
(D)	one noun or an adjective with a verb

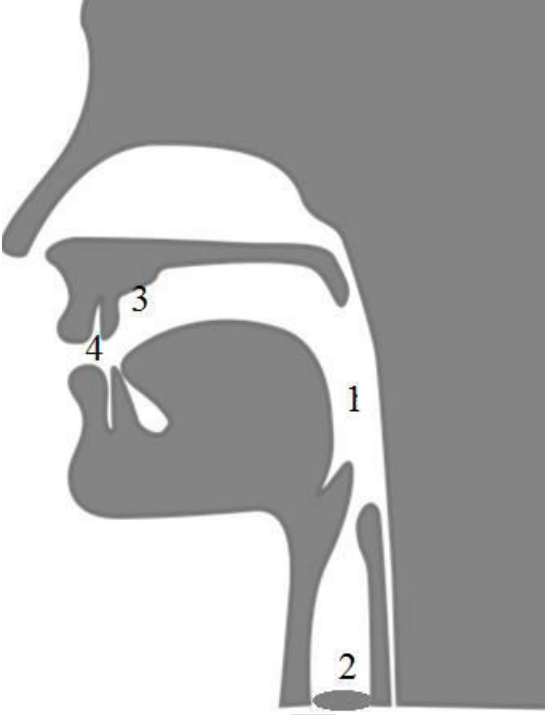
Q.39	Consider the idiom 'Time flies like an arrow'. Which idiom below is closest in meaning to this one?
(A)	Time and tide wait for no man.
(B)	Time is money.
(C)	Time is a great healer.
(D)	God made time, man made haste.
Q.40	Which of the following are myths about language?
(A)	There are primitive languages that cannot express complex ideas effectively.
(B)	Swearing, texting, slang and colloquialisms degrade a language and its grammar.
(C)	There is no difference between languages with and without scripts.
(D)	Grammar textbooks prescribe rules and norms of usage in a language.

Q.41	In which of the following frame or frames would it be appropriate to use a <i>noun</i> ?
(A)	in _____ of
(B)	terrible _____
(C)	have not _____ yet
(D)	was slowly _____
Q.42	Which of the sentences in the options given are NOT an <i>entailment</i> of the sentence below? Simba was a lion in the movie ‘The Lion King’.
(A)	Simba is a big cat.
(B)	Simba is a male.
(C)	Simba is a king.
(D)	Simba is an African name.

Q.43	<p>A United States House member used malapropisms (inappropriate words used in place of the appropriate ones) as in the following:</p> <p>‘peach tree dish’ instead of <i>petri</i> dish</p> <p>‘gazpacho police’ instead of <i>gestapo</i></p> <p>‘fragantly violated’ instead of <i>flagrantly</i> violated</p> <p>Such malapropisms show which of the following?</p>
(A)	Lexical access uses sound similarity.
(B)	Mental lexicon is arranged by sound.
(C)	Words are arbitrary pairings of sound and meaning.
(D)	Borrowed words are not part of the lexicon.
Q. 44	Which of the following sets of languages are part of the 8 th Schedule of the Constitution of India?
(A)	Assamese, Konkani, Nepali, Sindhi
(B)	Malayalam, Maithili, Manipuri, Marathi
(C)	Hindi, Sanskrit, English, Awadhi
(D)	Tamil, Toda, Telugu, Bhojpur

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

Q.45	<p>Consider the following sentence:</p> <p>The historian will put the paintings in his house on the wall in the museum.</p> <p>Which interpretation is NOT possible among the following?</p>
(A)	The paintings were on the museum wall.
(B)	The wall was in the museum.
(C)	The paintings were in his house.
(D)	The historian will put the paintings on the wall.

Q.46	Match the numbered parts of the vocal tract (in the diagram given below) with the correct label from those given in the box and choose the appropriate option.
	 <div style="border: 1px solid black; padding: 10px; margin-left: 20px;"> <p>LABELS</p> <p>a. Labial cavity b. Pharyngeal cavity c. Alveolar ridge d. Laryngeal cavity</p> </div>
(A)	1-b; 2-d; 3-c; 4-a
(B)	1-d; 2-b; 3-a; 4-c
(C)	1-d; 2-c; 3-b; 4-a
(D)	1-b; 2-d; 3-a; 4-c

Q.47	Consider the predicate calculus expression, $\forall xP(x) \rightarrow \exists xP(x)$. Which of the following English sentences with respect to a club called Sunshine is/are equivalent to this predicate calculus expression?												
(A)	If somebody in Sunshine plays cricket, then everybody in Sunshine plays cricket.												
(B)	Even though nobody plays billiards in Sunshine, somebody in Sunshine sometimes plays billiards.												
(C)	If everybody plays hockey in Sunshine, then somebody plays hockey in Sunshine.												
(D)	Nobody plays football in Sunshine, while all play cricket in Sunshine.												
Q.48	Match each of the word formation processes given in Column X with an example that is given in Column Y and select the correctly matched sequence.												
	<table border="1"> <thead> <tr> <th>Column X</th><th>Column Y</th></tr> </thead> <tbody> <tr> <td>P. calque</td><td>i. braille</td></tr> <tr> <td>Q. eponym</td><td>ii. instagram</td></tr> <tr> <td>R. blend</td><td>iii. karaoke</td></tr> <tr> <td>S. coinage</td><td>iv. worldview</td></tr> <tr> <td>T. borrowing</td><td>v. google</td></tr> </tbody> </table>	Column X	Column Y	P. calque	i. braille	Q. eponym	ii. instagram	R. blend	iii. karaoke	S. coinage	iv. worldview	T. borrowing	v. google
Column X	Column Y												
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R. blend	iii. karaoke												
S. coinage	iv. worldview												
T. borrowing	v. google												
(A)	P-iv; Q-i; R-ii; S-v; T-iii												
(B)	P-iii; Q-v; R-iv; S-i; T-ii												
(C)	P-v; Q-iv; R-iii; S-ii; T-i												
(D)	P-i; Q-ii; R-iii; S-v; T-iv												

Q.49	<p>Two sentences are given below:</p> <p>I. I was in Boston last winter, and I found it really cold <u>there</u>.</p> <p>II. <u>Here</u>, have some tea!</p> <p>Pick the CORRECT option with respect to the underlined <u>adverbs</u>.</p>
(A)	In sentence I, the adverb has an endophoric reference, while in sentence II the adverb has an exophoric reference.
(B)	In both sentences I and II, the adverbs have endophoric references.
(C)	In sentence I, the adverb has exophoric reference, while in sentence II the adverb has an endophoric reference.
(D)	In both sentences I and II, the adverbs have exophoric references.
Q.50	<p>Which of the following observations can be accounted for by B.F. Skinner's theory of language development?</p>
(A)	Children produce errors that adults around them never produce.
(B)	Children acquire language without negative evidence.
(C)	Children acquire grammatical features not present in the input.
(D)	Children learn language by imitating the adults around them.

Q.51	<p>Many English words at one time had meanings that were quite different from their current ones. Match each of the semantic changes in Column X to an example given in Column Y and select the appropriate sequence.</p> <p>Note: The <i>older</i> meanings of the words of Column Y are provided in the corresponding row in Column Z.</p>															
	<table><tr><th>Column X</th><th>Column Y</th><th>Column Z</th></tr><tr><td>P. narrowing</td><td>i. silly</td><td>‘happy, prosperous’</td></tr><tr><td>Q. broadening</td><td>ii. pretty</td><td>‘tricky, sly, cunning’</td></tr><tr><td>R. amelioration</td><td>iii. bead</td><td>‘prayer’</td></tr><tr><td>S. pejoration</td><td>iv. aunt</td><td>‘father’s sister’</td></tr></table>	Column X	Column Y	Column Z	P. narrowing	i. silly	‘happy, prosperous’	Q. broadening	ii. pretty	‘tricky, sly, cunning’	R. amelioration	iii. bead	‘prayer’	S. pejoration	iv. aunt	‘father’s sister’
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(A)	P-iii; Q-iv; R-ii; S-i															
(B)	P-iv; Q-ii; R-i; S-iii															
(C)	P-ii; Q-iv; R-iii; S-i															
(D)	P-i; Q-iii; R-iv; S-ii															

Q.52	<p>Choose from the options given, the word(s) that give rise to (or trigger) <i>presuppositions</i> when reading the following lines:</p> <p>A Jewish physicist, Robert Oppenheimer, directed the development of a new kind of bomb in a project called Trinity. He regretted the building of the bomb because of the cost to mankind. After the war, he was suspected of having communist sympathies and he quickly lost popular support.</p>
(A)	regretted
(B)	Oppenheimer
(C)	after
(D)	directed
Q.53	<p>One, a sign language user with Broca's aphasia has difficulty producing signs. But the same signer has no difficulty in drawing pictures or picking up an object.</p> <p>Two, a hearing person becomes paralysed in an accident and loses all motor ability, but is able to speak fluently.</p> <p>What conclusions can we draw from these two cases about how language is represented in the brain?</p>
(A)	The motor control required for language is independent of general motor skills.
(B)	Broca's aphasia causes loss of fluency for signers.
(C)	Language localisation in the brain is different for signers and speakers.
(D)	The pathways for vocal tract movement and gesturing are the same.

Q.54	With reference to the tree diagram given below for the sentence ‘John wants him to be a doctor’, which of the following statements are CORRECT?
(A)	T of TP ¹ assigns case to NP ¹ in the Specifier position of TP ¹
(B)	T of TP ² assigns case to NP ² in the Specifier position of TP ²
(C)	V of VP ¹ assigns case to NP ² in the Specifier position of TP ²
(D)	V of VP ² assigns case to NP ² in the Specifier position of TP ²

Q.55	<p>A study on the use of the sounds in a language L was carried out in three geographical regions across both adult speakers and children below the age of 6 years. The palatal glide [j] and the retroflex lateral [ɭ] are variants (or allophones) of the standard sound [ɹ], a retroflex glide. The table below describes usage of the <i>three</i> sounds across the three regions and the two populations. Which of the following conclusions are valid given the results of the study?</p>																																							
	<table border="1"> <thead> <tr> <th rowspan="2">Sounds in L</th><th colspan="2">Region 1</th><th colspan="2">Region 2</th><th colspan="2">Region 3</th></tr> <tr> <th>Adults</th><th>Children</th><th>Adults</th><th>Children</th><th>Adults</th><th>Children</th></tr> </thead> <tbody> <tr> <td>[j]</td><td>1 %</td><td>75 %</td><td>28 %</td><td>80 %</td><td>25 %</td><td>78 %</td></tr> <tr> <td>[ɭ]</td><td>11 %</td><td>23 %</td><td>45 %</td><td>18 %</td><td>74 %</td><td>22 %</td></tr> <tr> <td>[ɹ]</td><td>88 %</td><td>2 %</td><td>27 %</td><td>2 %</td><td>1 %</td><td>0 %</td></tr> </tbody> </table>						Sounds in L	Region 1		Region 2		Region 3		Adults	Children	Adults	Children	Adults	Children	[j]	1 %	75 %	28 %	80 %	25 %	78 %	[ɭ]	11 %	23 %	45 %	18 %	74 %	22 %	[ɹ]	88 %	2 %	27 %	2 %	1 %	0 %
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(A)	Children across all three regions prefer to substitute [j] and [ɭ] for [ɹ].																																							
(B)	As we move from Region 1 to Region 2 to Region 3, there is a dialect shift with a progressive loss of [ɹ].																																							
(C)	Children diverge from the adult patterns in all three regions and choose [j] preferentially.																																							
(D)	Children's choice of a variant can be directly correlated to the dominant variant that the adults of each dialect use.																																							

Q.56	The following data from Sinhala contains TWO pairs of sentences, 1 and 2. Each member of the pair is marked A and B and they differ in specific ways from each other. Identify the changes that are observed across each pair.							
	<table border="1"> <tr> <td>1.</td><td>A: lamea kataawə ahanəwa child story hear (The) child listens (actively) to the story.</td><td>B: lameaʔə kataawə æhenəwa child story hear (The) child hears the story (despite himself).</td></tr> <tr> <td>2.</td><td>A: malli nitərəmə aṇḍənəwa brother always cries Brother always cries.</td><td>B: malliʔə nitərəmə æṇḍənəwa brother always cries Brother always bursts into tears (despite himself).</td></tr> </table>		1.	A: lamea kataawə ahanəwa child story hear (The) child listens (actively) to the story.	B: lameaʔə kataawə æhenəwa child story hear (The) child hears the story (despite himself).	2.	A: malli nitərəmə aṇḍənəwa brother always cries Brother always cries.	B: malliʔə nitərəmə æṇḍənəwa brother always cries Brother always bursts into tears (despite himself).
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(A)	The grammatical form of the subject NP changes from A to B.							
(B)	The thematic grid of the verb changes from A to B.							
(C)	The verb exhibits change in phonological shape from A to B.							
(D)	The valency of the verb changes from A to B.							

Q.58	<p>Consider the <u>underlined</u> NPs in the following three sentences.</p> <p>i. <u>John</u> broke the window</p> <p>ii. <u>The window</u> broke</p> <p>iii. <u>The stone</u> broke the window</p> <p>Choose the correct values for the grammatical roles (X_{1-3}) and for the semantic roles (Y_{1-3}) of these NPs from the options given below.</p>												
	<table><tr><th>Sentence No.</th><th>Syntactic Roles</th><th>Semantic Roles</th></tr><tr><td>i.</td><td>X_1</td><td>Y_1</td></tr><tr><td>ii.</td><td>X_2</td><td>Y_2</td></tr><tr><td>iii.</td><td>X_3</td><td>Y_3</td></tr></table>	Sentence No.	Syntactic Roles	Semantic Roles	i.	X_1	Y_1	ii.	X_2	Y_2	iii.	X_3	Y_3
Sentence No.	Syntactic Roles	Semantic Roles											
i.	X_1	Y_1											
ii.	X_2	Y_2											
iii.	X_3	Y_3											
(A)	X_1 : subject, Y_1 : agent												
(B)	X_2 : subject, Y_2 : object												
(C)	X_3 : subject, Y_3 : instrument												
(D)	X_2 : object, Y_2 : agent												

Q.59	<p>Consider the following sentence:</p> <p>King Puru of the Pauravas, the lion, fought Alexander the emperor in the battlefield of Jhelum (Hydaspes).</p> <p>Identify all the CORRECT lexico-semantic relations that appear in the given sentence from the options provided.</p>
(A)	Metonymy: King Puru - Lion
(B)	Hypernymy: Emperor - Alexander
(C)	Meronymy: Battlefield - Jhelum
(D)	Holonymy: Lion - King Puru
Q.60	<p>A logician proves that $(P \wedge Q) \rightarrow (P \vee Q)$ is a tautology in the following steps:</p> <ol style="list-style-type: none"> $(P \wedge Q) \rightarrow (P \vee Q)$ $\langle X \rangle \langle OP \rangle (P \vee Q)$ $(\sim P \vee P \vee Q \vee \sim Q)$ T <p>where the last expression T stands for TRUE.</p> <p>Other symbols are standard logic operators: \sim stands for NEGATION; \wedge for AND; \vee for OR; and \rightarrow for IMPLIES</p> <p>Which of the following is/are the set of correct values of X and OP?</p>
(A)	$\sim P \vee \sim Q$ and \vee
(B)	$\sim(P \wedge Q)$ and \vee
(C)	$\sim(P \wedge Q)$ and \wedge
(D)	$\sim P \vee \sim Q$ and \wedge

Q.61	Examine the following data from Swahili, a Bantu language, and choose the correct statements.																
	<table border="1"> <thead> <tr> <th>Swahili</th><th>Meaning</th></tr> </thead> <tbody> <tr> <td>ni-na-soma</td><td>I am reading</td></tr> <tr> <td>a-na-soma</td><td>She/he is reading</td></tr> <tr> <td>tu-na-soma</td><td>We are reading</td></tr> <tr> <td>ni-li-soma</td><td>I read [past]</td></tr> <tr> <td>a-li-soma</td><td>She/he read [past]</td></tr> <tr> <td>ni-ta-soma</td><td>I will read</td></tr> <tr> <td>tu-ta-soma</td><td>We will read</td></tr> </tbody> </table>	Swahili	Meaning	ni-na-soma	I am reading	a-na-soma	She/he is reading	tu-na-soma	We are reading	ni-li-soma	I read [past]	a-li-soma	She/he read [past]	ni-ta-soma	I will read	tu-ta-soma	We will read
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ni-li-soma	I read [past]																
a-li-soma	She/he read [past]																
ni-ta-soma	I will read																
tu-ta-soma	We will read																
(A)	The Swahili third person pronoun is gender neutral.																
(B)	Swahili has different markers for past, present and future.																
(C)	Swahili pronouns are not marked for number (singular/plural).																
(D)	In Swahili, <i>tu-li-soma</i> would mean ‘We read [past]’.																

Q.62	The structures below represent two interpretations of the compound noun ‘Greek history teacher’. Which of the following statements is/are CORRECT?
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <pre> N1 / \ N2 N3 / \ N4 N5 Greek history teacher </pre> <p>DIAGRAM I</p> </div> <div style="text-align: center;"> <pre> N1 / \ N2 N3 / \ N4 N5 teacher Greek history </pre> <p>DIAGRAM II</p> </div> </div>
(A)	In diagram (I), ‘teacher’ is the head of both N ₁ and N ₃ .
(B)	In diagram (II), ‘history’ is the head of N ₂ , and ‘teacher’ is the head of N ₁ .
(C)	In diagram (I), ‘Greek’ is the head of N ₁ , and ‘teacher’ is the head of N ₃ .
(D)	In diagram (II), ‘teacher’ is the head of both N ₁ and N ₂ .
Q.63	<p>Consider the following sentence:</p> <p>Guna found Jiya in the park with the children from her neighbourhood.</p> <p>Identify the descriptions that apply to this sentence.</p>
(A)	This sentence has 1 determiner.
(B)	This sentence has 1 VP and 5 NPs.
(C)	This sentence has 1 subject, 1 object, and 3 adjuncts.
(D)	This sentence has 3 PPs used as 3 adjuncts.

Q.64	<p>Consider the following four ungrammatical sentences. Pay attention to the co-indexation.</p> <ul style="list-style-type: none"> i. *Gopal_i gifted him_i a piano. ii. *Himself_i likes Gopal_i. iii. *Gopal_i thinks that Radha will marry himself_i. iv. *Radha_i's mother_i loves herself_i. <p>Which of the following statements are CORRECT with reference to Principles A, B and C of the Binding Theory?</p>
(A)	The sentence in (i) violates Principle-B of the Binding Theory.
(B)	The sentence in (ii) violates Principle-A of the Binding Theory.
(C)	The sentences in (iii) and (iv) violate the requirement that the antecedent and the anaphor must be contained in the same binding domain.
(D)	The sentences in (i) and (iii) both violate Principle-C of the Binding Theory.
Q. 65	<p>A linguist was asked to develop a syllabic writing system for a toy language <i>Hadada</i> with ONLY the following words (given in phonetic transcription).</p> <p>[hɑ], [hə], [dɑ], [hrɔ], [dru], [hu], [dru.hu], [hə.dɑ], [duk], [hɑ.dɑ.dɑ], [ɑ.dɑ]</p> <p>The number of separate symbols that the linguist needs to create in order to write all the words of this toy language is _____.</p>

General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	<p>If '→' denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____].</p> <p>Which one of the given options is appropriate to fill the blank?</p>
(A)	obfuscate
(B)	obliterate
(C)	fracture
(D)	fissure

Q.2	<p>In a locality, the houses are numbered in the following way:</p> <p>The house-numbers on one side of a road are consecutive odd integers starting from 301, while the house-numbers on the other side of the road are consecutive even numbers starting from 302. The total number of houses is the same on both sides of the road.</p> <p>If the difference of the sum of the house-numbers between the two sides of the road is 27, then the number of houses on each side of the road is</p>
(A)	27
(B)	52
(C)	54
(D)	26
Q.3	<p>For positive integers p and q, with $\frac{p}{q} \neq 1$, $\left(\frac{p}{q}\right)^{\frac{p}{q}} = p^{\left(\frac{p}{q}-1\right)}$. Then,</p>
(A)	$q^p = p^q$
(B)	$q^p = p^{2q}$
(C)	$\sqrt{q} = \sqrt{p}$
(D)	$\sqrt[p]{q} = \sqrt[q]{p}$

Q.4	Which one of the given options is a possible value of x in the following sequence? 3, 7, 15, x , 63, 127, 255
(A)	35
(B)	40
(C)	45
(D)	31
Q.5	On a given day, how many times will the second-hand and the minute-hand of a clock cross each other during the clock time 12:05:00 hours to 12:55:00 hours?
(A)	51
(B)	49
(C)	50
(D)	55

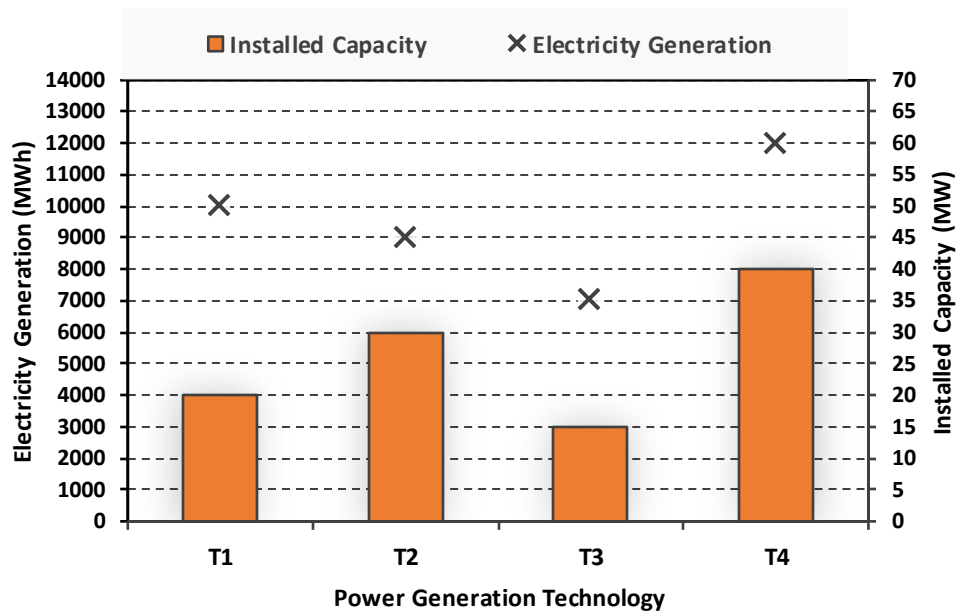
Q.6 – Q.10 Carry TWO marks Each

Q.6	<p>In the given text, the blanks are numbered (i)–(iv). Select the best match for all the blanks.</p> <p>From the ancient Athenian arena to the modern Olympic stadiums, athletics _____ (i) _____ the potential for a spectacle. The crowd _____ (ii) _____ with bated breath as the Olympian artist twists his body, stretching the javelin behind him. Twelve strides in, he begins to cross-step. Six cross-steps _____ (iii) _____ in an abrupt stop on his left foot. As his body _____ (iv) _____ like a door turning on a hinge, the javelin is launched skyward at a precise angle.</p>
(A)	(i) hold (ii) waits (iii) culminates (iv) pivot
(B)	(i) holds (ii) wait (iii) culminates (iv) pivot
(C)	(i) hold (ii) wait (iii) culminate (iv) pivots
(D)	(i) holds (ii) waits (iii) culminate (iv) pivots

Q.7	<p>Three distinct sets of indistinguishable twins are to be seated at a circular table that has 8 identical chairs. Unique seating arrangements are defined by the relative positions of the people.</p> <p>How many unique seating arrangements are possible such that each person is sitting next to their twin?</p>
(A)	12
(B)	14
(C)	10
(D)	28

Q.8

The chart given below compares the Installed Capacity (MW) of four power generation technologies, T1, T2, T3, and T4, and their Electricity Generation (MWh) in a time of 1000 hours (h).



The Capacity Factor of a power generation technology is:

$$\text{Capacity Factor} = \frac{\text{Electricity Generation (MWh)}}{\text{Installed Capacity (MW)} \times 1000 \text{ (h)}}$$

Which one of the given technologies has the highest Capacity Factor?

(A) T1

(B) T2

(C) T3

(D) T4

Q.9	<p>In the 4×4 array shown below, each cell of the first three columns has either a cross (X) or a number, as per the given rule.</p> <table><tr><td>1</td><td>1</td><td>2</td><td></td></tr><tr><td>2</td><td>X</td><td>3</td><td></td></tr><tr><td>2</td><td>X</td><td>4</td><td></td></tr><tr><td>1</td><td>2</td><td>X</td><td></td></tr></table> <p>Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).</p> <p>As per this rule, the maximum number of crosses possible in the empty column is</p>	1	1	2		2	X	3		2	X	4		1	2	X	
1	1	2															
2	X	3															
2	X	4															
1	2	X															
(A)	0																
(B)	1																
(C)	2																
(D)	3																

Q.10	During a half-moon phase, the Earth-Moon-Sun form a right triangle. If the Moon-Earth-Sun angle at this half-moon phase is measured to be 89.85° , the ratio of the Earth-Sun and Earth-Moon distances is closest to
(A)	328
(B)	382
(C)	238
(D)	283

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11– Q.17 Carry ONE mark Each

Q.11	Amma's tone in the context of the given passage is that of:
	For Amma, the difference between men and women was a kind of discrimination and inequality; she felt strongly about women's rights but was not familiar with concepts like gender and patriarchy. She would have dismissed Betty Friedan because she was predominantly dealing with the problems of white middle-class women in the United States. Amma, and women of her generation, could de-link the oppression of women from the wider struggle for the liberation of human beings from class exploitation and imperialism. So Amma continued to play her role as mother and wife, but would often complain: 'I am a doormat on which everyone wipes their emotional dirt off'.
(A)	Compromise
(B)	Protest
(C)	Contentment
(D)	Resignation

Q.12	Fill in the blanks by choosing the correct sequence for the following passage:
	I am wearing for the first time some (i)_____ that I have never been able to wear for long at a time, as they are horribly tight. I usually put them on just before giving a lecture. The painful pressure they exert on my feet goads my oratorical capacities to their utmost. This sharp and overwhelming pain makes me sing like a nightingale or like one of those Neapolitan singers who also wear (ii)_____ that are too tight. The visceral physical longing, the overwhelming torture provoked by my (iii)_____, forces me to extract from words distilled and sublime truths, generalized by the supreme inquisition of the pain my (iv)_____ suffer.
(A)	(i) patent-leather belt (ii) belts (iii) patent-leather belt (iv) waist
(B)	(i) patent-leather shoes (ii) bands (iii) patent-leather bands (iv) wrist
(C)	(i) patent-leather shoes (ii) shoes (iii) patent-leather shoes (iv) feet
(D)	(i) patent-leather jacket (ii) jacket (iii) patent-leather jacket (iv) body

Q.13	The appropriate synonym for the word 'ignite' in the following passage will be:
	Spirituality must be integrated with education. Self-realization is the focus. Each one of us must become aware of our higher self. We are links of a great past to a grand future. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavor will bring peace, prosperity and bliss to this nation.
(A)	Encourage
(B)	Simulate
(C)	Dissipate
(D)	Engross

Q.14	Which of the following sentences is punctuated correctly?
(A)	One day, I'll write a book, 'I said'. Not just a thriller but a real book, about real people.
(B)	'One day I'll write a book', I said, 'not just a thriller, but a real book, about real people.'
(C)	'One day I'll write a book', I said. 'Not just a thriller but, a real book, about real people'.
(D)	'One day I'll write a book', I said, not just a thriller, but a real book, about real people.'

Q.15	Fill in the blanks with the correct combination of tenses for the given sentence:
	Darwin's work (i)_____ a related effect that (ii)_____ influenced the development of environmental politics – a 'decentering' of the human being.
(A)	(i) have (ii) had
(B)	(i) had (ii) have
(C)	(i) had (ii) has
(D)	(i) has (ii) have

Q.16	Which of the following options holds similar relationship as the words, 'Music: Notes'?
(A)	Water: Cold drink
(B)	Paper: Class Notes
(C)	House: Bricks
(D)	Graphite: Charcoal

Q.17	In a particular code, if "RAMAN" is written as 52 and "MAP" is written as 33, then how will you code "CLICK"?
(A)	37
(B)	43
(C)	51
(D)	38

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

Q.18	On the basis of the statements given below, which valid assumption(s) can be made?
	<p>Statements:</p> <ul style="list-style-type: none"> • Life has suffering • Desire is the cause of suffering • The end of desire is the end of suffering • Desire can be reduced by following the noble eightfold path <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Suffering is because of wants 2. Life is not always full of suffering 3. The eightfold path can reduce suffering 4. Suffering is caused by life
(A)	Only 1, 3 and 4
(B)	Only 1, 2 and 3
(C)	Only 1 and 4
(D)	Only 2 and 3

Q.19	If 'KARAMCHAND' is coded as 'ICPCKEFCLF' what should be the code of 'CREATION'?
(A)	ATCCRKMP
(B)	ETGCVKQP
(C)	APCCRJMP
(D)	ETCGKRPM

Q.20	<p>Given an input line of numbers and words, a machine rearranges them following a particular rule in each step. Here is an illustration of an input and rearrangement sequence (Step 1 to Step 5):</p> <p>Input: 61 wb ob 48 45 29 34 sb pb lb</p> <p>Step 1: lb wb ob 48 45 29 34 sb pb 61</p> <p>Step 2: lb ob wb 45 29 34 sb pb 61 48</p> <p>Step 3: lb ob pb wb 29 34 sb 61 48 45</p> <p>Step 4: lb ob pb sb wb 29 61 48 45 34</p> <p>Step 5: lb ob pb sb wb 61 48 45 34 29</p> <p>Step 5 is the last step of the above arrangement.</p> <p>Based on the rules followed in the above steps, answer the following question:</p> <p>Input: cb kb eb 58 49 23 38 jb nb gb 69 82</p> <p>Which of the following represents the position of 58 in the fourth step? (Step-5 is the last step of the arrangement.)</p>
(A)	Second from the left
(B)	Fourth from the right
(C)	Third from the right
(D)	Seventh from the left

Q.21	<p>In a certain type of code, 'they play cricket together' is written as 'mv kb lb iv'; 'they score maximum points' is written as 'gb lb mb kv'; 'cricket score earned points' is written as 'mb gv kb kv' and 'points are earned together' is written as 'kv mv ob gv.'</p> <p>What is the code for 'earned maximum points'?</p>
(A)	gv gb kv
(B)	mv kb mb
(C)	lb iv ob
(D)	ob mb iv

Q.22	Which of the statement(s) about the passage weaken(s) the argument presented?
	<p>Scientists associate large brains with greater intelligence. However, in the evolutionary context it has also been identified that beyond a point, the size of the brain has not increased and yet after a particular period, in spite of no significant change in brain size humans have made significant progress. Certain researchers propose that this is because, while the overall brain size may not have changed, marked structural changes can be noticed in specific structures that run parallel to increase in human intelligence.</p>
(A)	Recent studies refute the hypothesis that region-specific brain development is necessarily associated with rapid human progress
(B)	Neanderthal people's extinction was probably because of their brain size
(C)	Homo Sapiens and its destruction in the future may happen because of its rapid brain development
(D)	Recent studies show that Neanderthal people, with relatively smaller brains, were capable of complex language and social activities

Q. 23	The narrator's use of 'I' in the given passage is/are:
	I have never been any good at the more lurid sort of writing. Psychopathic killers, impotent war-heroes, self-tortured film stars, and seedy espionage agents must exist in the world, but strangely enough I do not come across them, and I prefer to write about the people and places I have known and the lives of those whose paths I have crossed. This crossing of paths makes for stories rather than novels, and although I have worked in both mediums, I am happier being a short-story writer than a novelist.
(A)	Self-conscious
(B)	Apologetic and regretful
(C)	Confessional and communicating
(D)	Egotistical and vain

Q.24	Which of the following recommended action(s) seem to be appropriate with the stated problem?
	Stated problem : Many students at educational institutes do not attend classes in the post-pandemic scenario.
(A)	Disciplinary action against all students should be taken as a warning.
(B)	Counselling sessions should be organized to address the issues such students face.
(C)	Surveys should be conducted to identify the reasons for their absence.
(D)	Course content should immediately be changed.

Q.25	Read the passage and identify the statement(s) which follow(s) from it:
	The purpose of this work is to inform educators about the brain science related to emotion and learning, and, more important, to offer strategies to apply these understandings to their own teaching. Although many of the approaches I describe will be familiar, integrating the lens of emotion and the brain may be a new concept. As an educator I had been trained in how to deliver content and organize my lessons, but I had not been taught how to design learning experiences that support emotions for learning.
(A)	The author wishes, through his work, to inform us about brain science and learning.
(B)	The author, through his work, wishes to offer strategies to apply our learnings to our teaching.
(C)	The author feels that the newness of his approach lies in linking emotion oriented approach to brain.
(D)	The author wants to use emotions as a strategy for learning.

Q.26	If A says that his mother is the daughter of B's mother, then how is B related to A?
(A)	Uncle
(B)	Aunt
(C)	Father
(D)	Brother

Philosophy (XH-C4)

XH-C4: Q.27– Q.44 Carry ONE mark Each

Q.27 According to Cārvāka philosophy, what is liberation (*apavargah*)?

- (A) Death (*maraṇa*)
- (B) Pleasure (*sukha*)
- (C) Freedom or Release (*mukti*)
- (D) Wealth (*artha*)

Q.28 On the theories of causation, there is disagreement among the schools of Indian thought whether the *effect* pre-exists in its material *cause*. Which one of the following theorists (*vādins*) answer this question in the affirmative?

- (A) Satkārayavādins
- (B) Asatkārayavādins
- (C) Ajātivādins
- (D) Vivartavādins

Q.29 According to Advaita Vedānta of Śāṅkara, the Absolute (*parabrahman*) is unconditioned (*nirupādhi*), indeterminate (*nirviśeṣa*) and without any attribute (*nirguṇa*). The Vedāntic texts also speak of empirical and phenomenal Brahman (*aparabrahman*) that is conditioned (*sopādhi*), determinate (*saviśeṣa*) and with attributes (*saguṇa*). This determinate Brahman is

- (A) *Īśvara* (God)
- (B) *Jīva* (Individual self)
- (C) *Ātman* (Self)
- (D) *Jagat* (World)

Q.30 The concept of *Pudgala* in Jaina philosophy stands for

- (A) Self or soul
- (B) Space
- (C) Motion
- (D) Matter

Q.31 Which one of the following philosophers is associated with Navya Nyāya (new school of Indian logic)?

- (A) Udayana
- (B) Jayanta Bhaṭṭa
- (C) Gaṅgeśa
- (D) Gautama (Gotama)

Q.32 According to the *Bhagavadgītā* (2: 54-72), a “person of steady wisdom” is called

- (A) *Karmayogi*
- (B) *Sthitaprajña*
- (C) *Jñāni*
- (D) *Lokasamgraha*

Q.33 According to which of the following theories of punishment, can capital punishment be justified?

- (i) Deterrent theory of Punishment
- (ii) Reformatory theory of Punishment
- (iii) Retributive theory of Punishment

- (A) (i) and (ii)
- (B) (i) and (iii)
- (C) (ii) and (iii)
- (D) (i), (ii) and (iii)

Q.34 “‘The true’, to put it very briefly, is only the expedient in the way of our thinking, just as ‘the right’ is only the expedient in the way of our behaving. Expedient in almost any fashion; and expedient in the long run and on the whole, of course.”

Which one of the following philosophers claims this?

- (A) William James
- (B) John Dewey
- (C) Richard Rorty
- (D) C. S. Peirce

Q.35 Aristotle uses *phronesis* (practical wisdom) as a special function of reason for which one of the following?

- (A) The study of ethics
- (B) Developing metaphysics
- (C) Establishing the nature of Being *qua* Being
- (D) The proof of syllogism

Q.36 How does Pythagoras theorize 'numbers' in order to be treated as substance?

- (A) As a material entity
- (B) As constituting the formal or relational structure
- (C) As a principle of change and permanence
- (D) As abstract entities existing in the world

Q.37 Which one of the following terms does Plato use to define the conceptual relation between 'Forms' and 'Particulars' ?

- (A) Conjunction
- (B) Implication
- (C) Exclusion
- (D) Participation

Q.38 Following is an argument from Aristotelian syllogism:

All moneylenders are misers.
Some capitalists are misers.
Therefore, some capitalists are moneylenders.

Which one of the following fallacies does the argument commit?

- (A) Fallacy of illicit major
- (B) Fallacy of illicit minor
- (C) Fallacy of undistributed middle
- (D) Fallacy of exclusive premises

Q.39 How does the 'natural attitude' towards the experience of the world get modified to the 'phenomenological attitude' in Edmund Husserl's Phenomenology?

Choose the CORRECT option.

- (A) Through the application of intentionality
- (B) By the use of bracketing or *epoche*
- (C) With the application of categories
- (D) By using the concepts of Space and Time

Q.40 Which among the following are chief entities in the Śaiva-siddhānta ?

- (A) *Prāṇa* (life principle)
- (B) *Pāśa* (bonds or bondage)
- (C) *Paśu* (bound individual self or soul)
- (D) *Pati* (Śiva or God)

Q.41 Rabindranath Tagore, in his essay, “Man’s Nature”, conceptualizes that a ‘man’ can have a vision of the ‘Supreme Man’ or the ‘Spirit’ if s/he

- (A) engages oneself in imagination
- (B) acts with great purpose
- (C) finds joy through suffering and sacrifice
- (D) creates it in one’s own mind only

Q.42 According to Ludwig Wittgenstein, which among the following does a proposition involve in order to be a representation of the reality?

- (A) Logico-Pictorial Form
- (B) The totality of facts
- (C) The totality of things in the world
- (D) The concatenation of objects

Q.43 According to Simone de Beauvoir's *The Ethics of Ambiguity*, which among the following will NOT hold regarding the notion of 'subjectivity' ?

- (A) It is pure interiority
- (B) It is pure exteriority
- (C) It presupposes radical freedom
- (D) It is both for-oneself and given for others

Q. 44 Which among the following propositions will be the 'sub-contrary' of 'Some celestial bodies are not shining entities'?

- (A) All celestial bodies are not shining entities
- (B) No celestial bodies are shining entities
- (C) Some celestial bodies are shining entities
- (D) Some shining entities are celestial bodies

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

Q.45 Rāmānuja was a staunch critic of the notion of *Māyā* in Advaita Vedānta. In one of his seven charges against *Māyāvāda*, Rāmānuja questions as to where/what is the locus of *Māyā/Avidyā* – it cannot reside on Brahman, for Brahman is pure consciousness and knowledge, and *Avidyā* means ignorance. It cannot be on *Jīva*, because it is the creation of *Avidyā*. This charge against Advaita by Rāmānuja on the locus of *Māyā/Avidyā* is called

- (A) *Svarūpanupapatti*
- (B) *Āsrayānupapatti*
- (C) *Pramāṇānupapatti*
- (D) *Tirodhānānupapatti*

Q.46 Which among the following is NOT an epistemological tenet of Logical Positivism?

- (A) Empirical experience is the only source of knowledge
- (B) Synthetic a priori does not exist
- (C) Scientific theories are genuine hypotheses that go beyond the limits of finite human experience
- (D) A statement has a meaning if and only if the fact that it is true makes a verifiable difference

Q.47 Which one of the following is INCORRECT about Jiddu Krishnamurti's notion of education?

- (A) The education system is more important than the individual
- (B) The point of education is to see the significance of life as a whole
- (C) Technique is secondary in education
- (D) Ideals in education prevent the comprehension of the present

Q.48 In the context of John Locke's distinction between 'qualities' and 'ideas', which among the following assertions is INCORRECT?

- (A) Our ideas are exact images of something in the bodies that cause them
- (B) The powers to produce ideas in us are called 'Qualities'
- (C) 'Primary qualities' are perceptible by more than one sense
- (D) Qualities perceptible only by a single sense are 'secondary qualities'

Q.49 Match the ethical frameworks in **Group I** with their corresponding ethical theories in **Group II**.

Group I	Group II
(a) Ethical Cognitivism	(i) Emotivism
(b) Ethical Non-cognitivism	(ii) Prescriptivism
	(iii) Descriptivism

The CORRECT match is

- (A) (a) and (iii), (b) and (i), (b) and (ii)
- (B) (a) and (i), (a) and (iii), (b) and (ii)
- (C) (a) and (ii), (b) and (i), (b) and (iii)
- (D) (a) and (i), (a) and (ii), (b) and (iii)

Q.50 In the schema of Aristotelian categories, the assertion of a proposition in the form of 'X is a Y' shows that the statement is about

- (A) Substance
- (B) Relation
- (C) Quality
- (D) Quantity

Q.51 The following is a logical explanation of a weather condition

For last 10 years, the farmers of Vidharbha have noticed that whenever there is good rainfall in the Konkan region in the month of July, they receive some rain in the month of September. This year Konkan received very little rain. Hence, it may hardly rain in Vidharbha.

Which method of J.S. Mill is used here?

- (A) Method of Residues
- (B) Method of Agreement
- (C) Method of Difference
- (D) Method of Concomitant Variation

Q.52 In Indian theories of knowledge, some schools of thought uphold that there is no self-validity of knowledge (*svataḥ-prāmāṇya*), and others accept extrinsic validity of knowledge (*parataḥ-prāmāṇya*).

Which of the following schools of Indian thought accept *parataḥ-prāmāṇya*?

- (A) Mīmāṃsā
- (B) Vedānta
- (C) Nyāya
- (D) Vaiśeṣika

Q.53 Patañjali in his *Yogasūtra* (1:7) gives his theory of valid means of knowledge (*pramāṇa*). Among the following, which are NOT *pramāṇa(s)* according to the *Yogasūtra*?

- (A) Inference (*Anumāna*)
- (B) Perception (*Pratyakṣa*)
- (C) Presumption (*Arthāpatti*)
- (D) Comparison (*Upamāna*)

Q.54 Identify the CORRECT combinations of the Buddhist philosophical schools in **Group I** with their respective thinkers in **Group II**.

Group I	Group II
(a) Mādhyamika	(i) Vasubandhu
(b) Yogācāra	(ii) Nāgārjuna
(c) Sarvāstivāda	(iii) Sariputta (Śāriputra)
(d) Sautrāntika	(iv) Ānanda

- (A) (a) and (ii)
- (B) (b) and (i)
- (C) (c) and (iv)
- (D) (d) and (iii)

Q.55 According to S. Radhakrishnan, in his discourse on “Intellect and Intuition”, intuitive knowledge results in which of the following?

- (A) The integration of mind with reality
- (B) The knowledge of being
- (C) Logical knowledge
- (D) The difference between knowledge of a thing and a being

Q.56 According to Sāṅkhya philosophy, which of the following is/are the external organs/instruments (*bāhyakarana*)?

- (A) Five sensory organs (*Jñānendriyas*)
- (B) Five motor organs (*Karmendriyas*)
- (C) Mind (*Manas*)
- (D) Five sensory organs (*Jñānendriyas*) and Mind (*Manas*)

- Q.57 Sri Aurobindo refers to a 'power' of *Saccidānanda* that creates the world. He writes, "...out of the *Supreme Being* in which *all is all* without barrier of separative consciousness, emerges the *phenomenal being* in which *all is in each* and *each is in all* for the play of existence with existence, consciousness with consciousness, force with force, delight with delight."

– Sri Aurobindo, *The Life Divine*, p.95

Which among the following concepts is/are referred to as 'power' here?

- (A) Māyā
- (B) Involution
- (C) Evolution
- (D) Integral Yoga

Q.58 Read the passage carefully and answer the following question:

“Those who want liberty must therefore have Dhamma. Now what is Dhamma, and why Dhamma is necessary? According to the Buddha, Dhamma consists in Prajna and Karuna. What is Prajna? And why Prajna? Prajna is the understanding. The Buddha made Prajna one of the two corner-stones of His Dhamma because he did not wish to leave any room for superstition. What is Karuna? And why Karuna? Karuna is love. Because, without it Society can neither live nor grow, that is why the Buddha made it the second corner-stone of His Dhamma. Such is the definition of the Buddha’s Dhamma. How different is this definition of Dhamma from that of Religion? So ancient, yet so modern is the definition of Dhamma given by the Buddha. So aboriginal, yet so original. Not borrowed from anyone, yet so true. A unique amalgam of Prajna and Karuna is the Dhamma of the Buddha. Such is the difference between Religion and Dhamma.”

– B.R. Ambedkar, “Religion and Dhamma”, in *The Essential Writings of B. R. Ambedkar*, Valerian Rodrigues (Ed.), OUP, 2013, p. 59.

From the above passage, which among the following accurately represent Dr. B.R. Ambedkar’s view on Religion and Dhamma?

- (A) There are three aspects of Religion: Dhamma, Prajna and Karuna
- (B) Karuna, not Dhamma, is essential for the growth of the society
- (C) Dhamma is necessary for liberty
- (D) Prajna checks superstition

Q.59 In differentiating 'knowledge by description' from 'knowledge by acquaintance', which among the following is/are Bertrand Russell's account of *description*?

- (A) Description is without any process of inference or any knowledge of truths
- (B) Physical objects and other people's minds are not known to us by 'knowledge by description'
- (C) What is known by description is ultimately reducible to knowledge concerning what is known by acquaintance
- (D) Description does not involve the use of concepts

Q.60 Which of the following statements are TRUE with regard to 'Cultural Relativism' as an ethical standpoint?

- (A) There are no absolute moral values
- (B) There can be no absolute moral values
- (C) There is no basis for intercultural moral values
- (D) There are no moral values

Q.61 Which of the following combinations of the idea and thinker is/are CORRECT ?

- (A) Life in the state of nature as nasty, brutish and short: Thomas Hobbes
- (B) Economics is the base structure of all reality: John Locke
- (C) Man is born free but everywhere he is in chains: J.J. Rousseau
- (D) Life in the state of nature is a state of total freedom and equality bounded by the laws of nature: Karl Marx

Q.62 Which among the following statements is/are TRUE of Rene Descartes' conception of 'innate ideas' ?

- (A) They are neither in me nor in accordance with some things existing outside me
- (B) They are not adventitious
- (C) They are produced by myself
- (D) We possess them purely by virtue of our nature

Q.63 Which among the following statements is/are in accordance with David Hume's description of 'ideas' and 'impressions' ?

- (A) Ideas and impressions are one class of perception of the mind
- (B) Ideas and impressions are two classes of perceptions of the mind
- (C) Ideas involve thinking and emotions
- (D) Impressions involve sensations and emotions

Q.64 Immanuel Kant makes an epistemological and a logical distinction between different kinds of propositions. In the light of this distinction, which among the following is/are CORRECT ?

- (A) 'All bodies are extended' is an analytic judgement
- (B) 'All bodies are heavy' is a synthetic judgement
- (C) 'A straight line between two points is the shortest one' is an analytic proposition
- (D) 'The law of conservation of matter' is a synthetic *a priori* principle

Q.65 Which among the following is/are G.W.F. Hegel's argument(s) in claiming that Cosmic history consists in the life story of Spirit (*Geist*)?

- (A) The internal development of Spirit can never manifest itself in concrete reality
- (B) It is a manifestation of the struggles of Spirit to know itself and to find itself
- (C) Spirit proceeds from potentiality to actuality
- (D) Existence of Spirit and history is a manifestation of logic in a special sense

General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	<p>If '→' denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____].</p> <p>Which one of the given options is appropriate to fill the blank?</p>
(A)	obfuscate
(B)	obliterate
(C)	fracture
(D)	fissure

Q.2	<p>In a locality, the houses are numbered in the following way:</p> <p>The house-numbers on one side of a road are consecutive odd integers starting from 301, while the house-numbers on the other side of the road are consecutive even numbers starting from 302. The total number of houses is the same on both sides of the road.</p> <p>If the difference of the sum of the house-numbers between the two sides of the road is 27, then the number of houses on each side of the road is</p>
(A)	27
(B)	52
(C)	54
(D)	26
Q.3	<p>For positive integers p and q, with $\frac{p}{q} \neq 1$, $\left(\frac{p}{q}\right)^{\frac{p}{q}} = p^{\left(\frac{p}{q}-1\right)}$. Then,</p>
(A)	$q^p = p^q$
(B)	$q^p = p^{2q}$
(C)	$\sqrt{q} = \sqrt{p}$
(D)	$\sqrt[p]{q} = \sqrt[q]{p}$

Q.4	Which one of the given options is a possible value of x in the following sequence? 3, 7, 15, x , 63, 127, 255
(A)	35
(B)	40
(C)	45
(D)	31
Q.5	On a given day, how many times will the second-hand and the minute-hand of a clock cross each other during the clock time 12:05:00 hours to 12:55:00 hours?
(A)	51
(B)	49
(C)	50
(D)	55

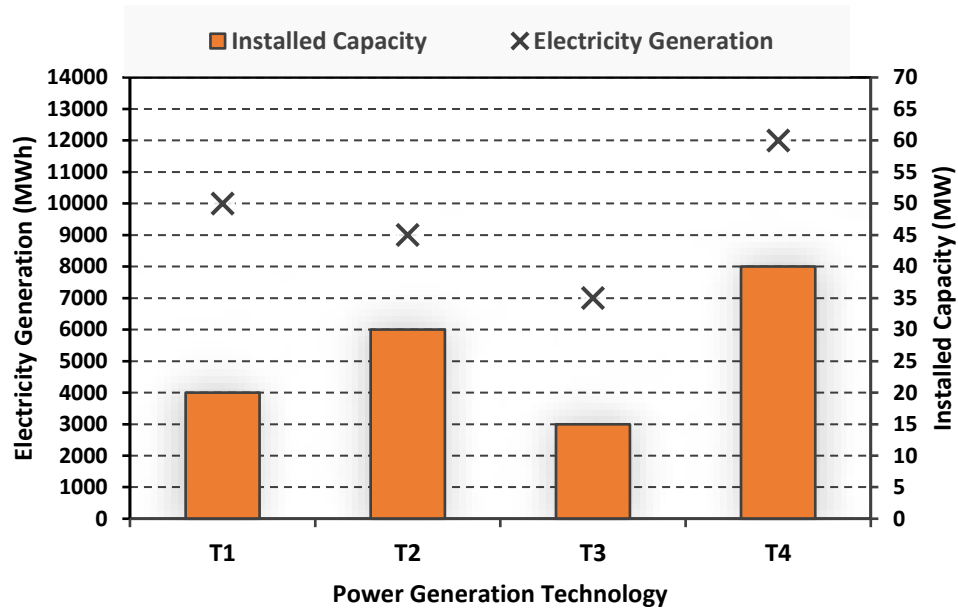
Q.6 – Q.10 Carry TWO marks Each

Q.6	<p>In the given text, the blanks are numbered (i)–(iv). Select the best match for all the blanks.</p> <p>From the ancient Athenian arena to the modern Olympic stadiums, athletics _____ (i) _____ the potential for a spectacle. The crowd _____ (ii) _____ with bated breath as the Olympian artist twists his body, stretching the javelin behind him. Twelve strides in, he begins to cross-step. Six cross-steps _____ (iii) _____ in an abrupt stop on his left foot. As his body _____ (iv) _____ like a door turning on a hinge, the javelin is launched skyward at a precise angle.</p>
(A)	(i) hold (ii) waits (iii) culminates (iv) pivot
(B)	(i) holds (ii) wait (iii) culminates (iv) pivot
(C)	(i) hold (ii) wait (iii) culminate (iv) pivots
(D)	(i) holds (ii) waits (iii) culminate (iv) pivots

Q.7	<p>Three distinct sets of indistinguishable twins are to be seated at a circular table that has 8 identical chairs. Unique seating arrangements are defined by the relative positions of the people.</p> <p>How many unique seating arrangements are possible such that each person is sitting next to their twin?</p>
(A)	12
(B)	14
(C)	10
(D)	28

Q.8

The chart given below compares the Installed Capacity (MW) of four power generation technologies, T1, T2, T3, and T4, and their Electricity Generation (MWh) in a time of 1000 hours (h).



The Capacity Factor of a power generation technology is:

$$\text{Capacity Factor} = \frac{\text{Electricity Generation (MWh)}}{\text{Installed Capacity (MW)} \times 1000 \text{ (h)}}$$

Which one of the given technologies has the highest Capacity Factor?

(A) T1

(B) T2

(C) T3

(D) T4

Q.9	<p>In the 4×4 array shown below, each cell of the first three columns has either a cross (X) or a number, as per the given rule.</p> <table><tr><td>1</td><td>1</td><td>2</td><td></td></tr><tr><td>2</td><td>X</td><td>3</td><td></td></tr><tr><td>2</td><td>X</td><td>4</td><td></td></tr><tr><td>1</td><td>2</td><td>X</td><td></td></tr></table> <p>Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).</p> <p>As per this rule, the maximum number of crosses possible in the empty column is</p>	1	1	2		2	X	3		2	X	4		1	2	X	
1	1	2															
2	X	3															
2	X	4															
1	2	X															
(A)	0																
(B)	1																
(C)	2																
(D)	3																

Q.10	During a half-moon phase, the Earth-Moon-Sun form a right triangle. If the Moon-Earth-Sun angle at this half-moon phase is measured to be 89.85° , the ratio of the Earth-Sun and Earth-Moon distances is closest to
(A)	328
(B)	382
(C)	238
(D)	283

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11– Q.17 Carry ONE mark Each

Q.11	Amma's tone in the context of the given passage is that of:
	For Amma, the difference between men and women was a kind of discrimination and inequality; she felt strongly about women's rights but was not familiar with concepts like gender and patriarchy. She would have dismissed Betty Friedan because she was predominantly dealing with the problems of white middle-class women in the United States. Amma, and women of her generation, could de-link the oppression of women from the wider struggle for the liberation of human beings from class exploitation and imperialism. So Amma continued to play her role as mother and wife, but would often complain: 'I am a doormat on which everyone wipes their emotional dirt off'.
(A)	Compromise
(B)	Protest
(C)	Contentment
(D)	Resignation

Humanities and Social Sciences - Psychology (XH-C5)

Q.12	Fill in the blanks by choosing the correct sequence for the following passage:
	I am wearing for the first time some (i)_____ that I have never been able to wear for long at a time, as they are horribly tight. I usually put them on just before giving a lecture. The painful pressure they exert on my feet goads my oratorical capacities to their utmost. This sharp and overwhelming pain makes me sing like a nightingale or like one of those Neapolitan singers who also wear (ii)_____ that are too tight. The visceral physical longing, the overwhelming torture provoked by my (iii)_____, forces me to extract from words distilled and sublime truths, generalized by the supreme inquisition of the pain my (iv)_____ suffer.
(A)	(i) patent-leather belt (ii) belts (iii) patent-leather belt (iv) waist
(B)	(i) patent-leather shoes (ii) bands (iii) patent-leather bands (iv) wrist
(C)	(i) patent-leather shoes (ii) shoes (iii) patent-leather shoes (iv) feet
(D)	(i) patent-leather jacket (ii) jacket (iii) patent-leather jacket (iv) body

Q.13	The appropriate synonym for the word 'ignite' in the following passage will be:
	Spirituality must be integrated with education. Self-realization is the focus. Each one of us must become aware of our higher self. We are links of a great past to a grand future. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavor will bring peace, prosperity and bliss to this nation.
(A)	Encourage
(B)	Simulate
(C)	Dissipate
(D)	Engross

Q.14	Which of the following sentences is punctuated correctly?
(A)	One day, I'll write a book, 'I said'. Not just a thriller but a real book, about real people.
(B)	'One day I'll write a book', I said, 'not just a thriller, but a real book, about real people.'
(C)	'One day I'll write a book', I said. 'Not just a thriller but, a real book, about real people'.
(D)	'One day I'll write a book', I said, not just a thriller, but a real book, about real people.'

Q.15	Fill in the blanks with the correct combination of tenses for the given sentence:
	Darwin's work (i)_____ a related effect that (ii)_____ influenced the development of environmental politics – a 'decentering' of the human being.
(A)	(i) have (ii) had
(B)	(i) had (ii) have
(C)	(i) had (ii) has
(D)	(i) has (ii) have

Q.16	Which of the following options holds similar relationship as the words, 'Music: Notes'?
(A)	Water: Cold drink
(B)	Paper: Class Notes
(C)	House: Bricks
(D)	Graphite: Charcoal

Q.17	In a particular code, if "RAMAN" is written as 52 and "MAP" is written as 33, then how will you code "CLICK"?
(A)	37
(B)	43
(C)	51
(D)	38

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

Q.18	On the basis of the statements given below, which valid assumption(s) can be made?
	<p>Statements:</p> <ul style="list-style-type: none"> • Life has suffering • Desire is the cause of suffering • The end of desire is the end of suffering • Desire can be reduced by following the noble eightfold path <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Suffering is because of wants 2. Life is not always full of suffering 3. The eightfold path can reduce suffering 4. Suffering is caused by life
(A)	Only 1, 3 and 4
(B)	Only 1, 2 and 3
(C)	Only 1 and 4
(D)	Only 2 and 3

Q.19	If 'KARAMCHAND' is coded as 'ICPCKEFCLF' what should be the code of 'CREATION'?
(A)	ATCCRKMP
(B)	ETGCVKQP
(C)	APCCRJMP
(D)	ETCGKRPM

Q.20	<p>Given an input line of numbers and words, a machine rearranges them following a particular rule in each step. Here is an illustration of an input and rearrangement sequence (Step 1 to Step 5):</p> <p>Input: 61 wb ob 48 45 29 34 sb pb lb</p> <p>Step 1: lb wb ob 48 45 29 34 sb pb 61</p> <p>Step 2: lb ob wb 45 29 34 sb pb 61 48</p> <p>Step 3: lb ob pb wb 29 34 sb 61 48 45</p> <p>Step 4: lb ob pb sb wb 29 61 48 45 34</p> <p>Step 5: lb ob pb sb wb 61 48 45 34 29</p> <p>Step 5 is the last step of the above arrangement.</p> <p>Based on the rules followed in the above steps, answer the following question:</p> <p>Input: cb kb eb 58 49 23 38 jb nb gb 69 82</p> <p>Which of the following represents the position of 58 in the fourth step? (Step-5 is the last step of the arrangement.)</p>
(A)	Second from the left
(B)	Fourth from the right
(C)	Third from the right
(D)	Seventh from the left

Q.21	<p>In a certain type of code, 'they play cricket together' is written as 'mv kb lb iv'; 'they score maximum points' is written as 'gb lb mb kv'; 'cricket score earned points' is written as 'mb gv kb kv' and 'points are earned together' is written as 'kv mv ob gv.'</p> <p>What is the code for 'earned maximum points'?</p>
(A)	gv gb kv
(B)	mv kb mb
(C)	lb iv ob
(D)	ob mb iv

Q.22	Which of the statement(s) about the passage weaken(s) the argument presented?
	Scientists associate large brains with greater intelligence. However, in the evolutionary context it has also been identified that beyond a point, the size of the brain has not increased and yet after a particular period, in spite of no significant change in brain size humans have made significant progress. Certain researchers propose that this is because, while the overall brain size may not have changed, marked structural changes can be noticed in specific structures that run parallel to increase in human intelligence.
(A)	Recent studies refute the hypothesis that region-specific brain development is necessarily associated with rapid human progress
(B)	Neanderthal people's extinction was probably because of their brain size
(C)	Homo Sapiens and its destruction in the future may happen because of its rapid brain development
(D)	Recent studies show that Neanderthal people, with relatively smaller brains, were capable of complex language and social activities

Q. 23	The narrator's use of 'I' in the given passage is/are:
	I have never been any good at the more lurid sort of writing. Psychopathic killers, impotent war-heroes, self-tortured film stars, and seedy espionage agents must exist in the world, but strangely enough I do not come across them, and I prefer to write about the people and places I have known and the lives of those whose paths I have crossed. This crossing of paths makes for stories rather than novels, and although I have worked in both mediums, I am happier being a short-story writer than a novelist.
(A)	Self-conscious
(B)	Apologetic and regretful
(C)	Confessional and communicating
(D)	Egotistical and vain

Q.24	Which of the following recommended action(s) seem to be appropriate with the stated problem?
	Stated problem : Many students at educational institutes do not attend classes in the post-pandemic scenario.
(A)	Disciplinary action against all students should be taken as a warning.
(B)	Counselling sessions should be organized to address the issues such students face.
(C)	Surveys should be conducted to identify the reasons for their absence.
(D)	Course content should immediately be changed.

Q.25	Read the passage and identify the statement(s) which follow(s) from it:
	The purpose of this work is to inform educators about the brain science related to emotion and learning, and, more important, to offer strategies to apply these understandings to their own teaching. Although many of the approaches I describe will be familiar, integrating the lens of emotion and the brain may be a new concept. As an educator I had been trained in how to deliver content and organize my lessons, but I had not been taught how to design learning experiences that support emotions for learning.
(A)	The author wishes, through his work, to inform us about brain science and learning.
(B)	The author, through his work, wishes to offer strategies to apply our learnings to our teaching.
(C)	The author feels that the newness of his approach lies in linking emotion oriented approach to brain.
(D)	The author wants to use emotions as a strategy for learning.

Q.26	If A says that his mother is the daughter of B's mother, then how is B related to A?
(A)	Uncle
(B)	Aunt
(C)	Father
(D)	Brother

Psychology (XH-C5)

XH-C5: Q.27– Q.44 Carry ONE mark Each

Q.27	In a sampling design, where every K^{th} case is selected from a random starting point with the value K kept constant throughout, is an example of _____.
(A)	Convenient sampling
(B)	Systematic sampling
(C)	Stratified sampling
(D)	Cluster sampling
Q.28	Which among the following correlation coefficient values represents the strongest relationship between two variables?
(A)	– 0.86
(B)	+ 0.68
(C)	+ 0.59
(D)	– 0.05

Q.29	A researcher performs an experiment to learn if room temperature affects the amount of aggression displayed by college students under crowded conditions in a simulated prison environment. In this experiment, the independent variable is:
(A)	Aggression
(B)	Crowding
(C)	Room temperature
(D)	Simulated prison
Q.30	If the data distribution is skewed to the left, it means:
(A)	More scores have low values than have high values
(B)	Fewer scores have low values than have high values
(C)	Fewer scores have high values than have low values
(D)	More scores have high values than have low values

Q.31	The theory of psychoanalysis is based on _____ method.
(A)	Survey
(B)	Observation
(C)	Case study
(D)	Introspection
Q.32	If a court acquits the criminal for lack of evidence and sentences the victim for 2 years of rigorous imprisonment in a case, it is an example of:
(A)	Type I error only
(B)	Type II error only
(C)	Type I and Type II error, respectively
(D)	Type II and Type I error, respectively

Q.33	In the Darwinian sense, _____ refers to the ability of an organism to survive and produce a large number of fertile offspring.
(A)	Selection
(B)	Intersexual competition
(C)	Evolution
(D)	Fitness
Q.34	Which theory states that people try to regulate their emotions to minimize the distress caused by a situation?
(A)	Problem-focused coping
(B)	General Adaptation Syndrome
(C)	Cognitive appraisal
(D)	Emotion-focused coping

Q.35	Which of the following is a suitable description of “grounded theory”?
(A)	Theoretical ideas and concepts should emerge from the data.
(B)	Theory precedes the data.
(C)	Integration of data with researchers’ interpretations.
(D)	Conducting in-depth interviews and focus groups.
Q.36	Percentage of scores between the mean and ± 1 standard deviation in a normal distribution is closest to
(A)	68%
(B)	34%
(C)	95%
(D)	99%

Q.37	Which of the following is a binocular cue for depth perception?																				
(A)	Motion parallax																				
(B)	Texture gradient																				
(C)	Linear perception																				
(D)	Convergence																				
Q.38	Match the following schedule of reinforcement with their description. <table><tr><th colspan="2">Schedule of reinforcement</th><th colspan="2">Description</th></tr><tr><td>I</td><td>Fixed ratio</td><td>a</td><td>Where a reinforcement is provided after an unpredictable number of responses</td></tr><tr><td>II</td><td>Fixed interval</td><td>b</td><td>Varying amount of time passes between two reinforcements</td></tr><tr><td>III</td><td>Variable ratio</td><td>c</td><td>Number of responses required for reinforcement is always the same</td></tr><tr><td>IV</td><td>Variable interval</td><td>d</td><td>The interval of time that must pass before reinforcement is always the same</td></tr></table>	Schedule of reinforcement		Description		I	Fixed ratio	a	Where a reinforcement is provided after an unpredictable number of responses	II	Fixed interval	b	Varying amount of time passes between two reinforcements	III	Variable ratio	c	Number of responses required for reinforcement is always the same	IV	Variable interval	d	The interval of time that must pass before reinforcement is always the same
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(A)	I-c, II-d, III-a, IV-b																				
(B)	I-b, II-c, III-d, IV-a																				
(C)	I-a, II-b, III-c, IV-d																				
(D)	I-d, II-c, III-b, IV-a																				

Q.39	While retrieving a long-term memory, bits and pieces of information are gathered from various sources and put back together in a process called
(A)	Consolidation
(B)	Reintegration
(C)	Constructive processing
(D)	Automatic processing
Q.40	Which model of decision making relies on simplifying strategies or rules of thumb based on past experiences, fairness, past events and aversion to loss?
(A)	Bounded rationality model
(B)	Judgment heuristics and biases model
(C)	Social model
(D)	Economic rationality model

Q.41	When Monkey-A sees Monkey-B touching four pictures in a certain order to gain a banana on a screen, Monkey-A learns to imitate that order even when shown a different configuration. This process is known as _____.																				
(A)	Social imitation																				
(B)	Classical imitation																				
(C)	Cognitive arousal																				
(D)	Cognitive imitation																				
Q.42	Match the following. <table><tr><th colspan="2">Theory of Learning</th><th colspan="2">Psychologist</th></tr><tr><td>I</td><td>Classical conditioning</td><td>a</td><td>E. L. Thorndike</td></tr><tr><td>II</td><td>Instrumental conditioning</td><td>b</td><td>Ivan Pavlov</td></tr><tr><td>III</td><td>Insightful learning</td><td>c</td><td>B. F. Skinner</td></tr><tr><td>IV</td><td>Trial & Error learning</td><td>d</td><td>W. Kohler</td></tr></table>	Theory of Learning		Psychologist		I	Classical conditioning	a	E. L. Thorndike	II	Instrumental conditioning	b	Ivan Pavlov	III	Insightful learning	c	B. F. Skinner	IV	Trial & Error learning	d	W. Kohler
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Q.43	Match the following. <table><tr><th colspan="2">Psychologist</th><th colspan="2">Theory of Intelligence</th></tr><tr><td>I</td><td>Charles Spearman</td><td>a</td><td>Level-I & Level-II abilities</td></tr><tr><td>II</td><td>Arthur Jensen</td><td>b</td><td>Triarchic theory of intelligence</td></tr><tr><td>III</td><td>L. L. Thurstone</td><td>c</td><td>Structure of intelligence</td></tr><tr><td>IV</td><td>Robert Sternberg</td><td>d</td><td>Two factor theory of intelligence</td></tr><tr><td>V</td><td>J.P. Guilford</td><td>e</td><td>Primary mental abilities</td></tr></table>	Psychologist		Theory of Intelligence		I	Charles Spearman	a	Level-I & Level-II abilities	II	Arthur Jensen	b	Triarchic theory of intelligence	III	L. L. Thurstone	c	Structure of intelligence	IV	Robert Sternberg	d	Two factor theory of intelligence	V	J.P. Guilford	e	Primary mental abilities
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(C)	I-e, II-d, III-c, IV-b, V-a																								
(D)	I-c, II-d, III-a, IV-e, V-b																								
Q.44	Which theory emphasizes individual’s subjective frame of reference?																								
(A)	Behaviouristic																								
(B)	Dispositional																								
(C)	Phenomenological																								
(D)	Psychoanalytic																								

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

Q.45	Tentative answer(s) to a simple research problem that is/are expressed in the form of a clearly stated relationship between independent and dependent variables is/are called:
(A)	Alternate Hypothesis
(B)	Null Hypothesis
(C)	Phi-Hypothesis
(D)	Nil Hypothesis
Q.46	Independent variable(s) is/are also known as:
(A)	Explanatory variable
(B)	Explainable variable
(C)	Exogenous variable
(D)	Explicit variable

Q.47	Which of the following is/are not considered as unethical research practice(s)?
(A)	Data fabrication
(B)	Salami slicing
(C)	Data collection
(D)	Statistical analysis
Q.48	In which of the following methods are variables not actively manipulated?
(A)	Observational
(B)	Experimental
(C)	Correlational
(D)	Descriptive

Q.49	Which of the following is/are distribution free test(s)?
(A)	Pearson correlation
(B)	Spearman's ρ
(C)	Kruskal-Wallis H test
(D)	Analysis of variance
Q.50	Which of the following hormones do/does not increase hunger?
(A)	Leptin
(B)	Insulin
(C)	Ghrelin
(D)	Melanocortin

Q.51	Component(s) of Peripheral Nervous System is/are
(A)	Somatic Nervous System
(B)	Central Nervous System
(C)	Automatic Nervous System
(D)	Autonomic Nervous System
Q.52	Which of the following tests are <i>post hoc</i> ?
(A)	Neuman-Keuls test
(B)	<i>t</i> -test
(C)	Duncan Multiple Range test
(D)	Tukey test

Q.53	The component(s) of a vertebrate motor neuron is/are:
(A)	Axon
(B)	Myelin sheath
(C)	Soma
(D)	Cortisol
Q.54	Which of the following is/are measure(s) of dispersion?
(A)	Variance
(B)	ANOVA
(C)	Correlation
(D)	Range

Q.55	Jagruti's mother was upset to find that Jagruti used her crayons to draw the picture of an animal on the wall of the drawing room. Her mother took away the crayons from her and made Jagruti wash the drawings off the wall. Which of the following statements is/are true?
(A)	Having her crayons taken away was a form of punishment by removal.
(B)	Having her crayons taken away was a form of negative reinforcement.
(C)	Being made to wash off the drawing was a form of punishment by application.
(D)	Being made to wash off the drawing was a form of punishment by removal.
Q.56	Which of the following statements is/are correct regarding memory?
(A)	Visual sensory memory last for a fraction of a second.
(B)	Selective attention moves the information from short-term memory to long-term memory.
(C)	In short-term memory, the information is held for a brief period of time while being used.
(D)	Echoic memory capacity is limited to two seconds but smaller than the capacity of iconic memory.

Q.57	Which of the following is/are correct regarding the pre-operational stage (2-7 years) of the cognitive development theory of Piaget?
(A)	Infants develop a sense of object permanence.
(B)	Tendency of a child to focus only on one feature of an object, while ignoring other relevant features.
(C)	The inability of the young child to mentally reverse an action.
(D)	The child can conserve, reverse their thinking and classifying objects in terms of various characteristics.
Q.58	Which of the following statements is/are correct about “ <i>item-response theory</i> ”?
(A)	It talks about how items should function based on the knowledge of an ability or trait.
(B)	It compares responses to items to determine how well the items function.
(C)	It is based on the assumption that many latent traits underlie test performance.
(D)	It is a logistic function having, one, two or three parameters.

Q.59	Which of the following is/are characteristic(s) of groupthink?
(A)	There is excessive optimism and risk taking.
(B)	Silence is interpreted as consent.
(C)	Members reduce their efforts and performance levels while acting as a part of the group.
(D)	People do not know what they are supposed to be doing.
Q.60	Which of the following dimensions is/are related to Fiedler's Contingency Model of Leadership Effectiveness?
(A)	Leader-member relationship
(B)	Leader's position power
(C)	Leader's personal power
(D)	Individual consideration

Q.61	Which of the following is/are not culture-fair test(s)?
(A)	Ravens Progressive Matrices
(B)	Dynamic Progressive Matrices
(C)	Advanced Progressive Matrices
(D)	Millennium Progressive Matrices
Q.62	Which of the following is/are related to reliability?
(A)	A test is administered to same set of people in two different occasions.
(B)	A test administered once is scored by two or more than two evaluators.
(C)	A test administered once is scored by splitting it into two equal-halves.
(D)	A test measures what it intends to measure.

Q.63	Which of the following is/are not defense mechanism(s)?
(A)	Projection
(B)	Frustration
(C)	Introspection
(D)	Rationalization
Q.64	On a standard test, the population is known to have a mean of 500 and a standard deviation of 100. Those receiving an experimental treatment have a mean of 540. The effect size is _____. (rounded off to two decimal places)
Q.65	The standard deviation for the following scores: 8, 6, 6, 9, 6, 5, 6, 2 is _____ (rounded off to two decimal places)

General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	<p>If '→' denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____].</p> <p>Which one of the given options is appropriate to fill the blank?</p>
(A)	obfuscate
(B)	obliterate
(C)	fracture
(D)	fissure

Q.2	<p>In a locality, the houses are numbered in the following way:</p> <p>The house-numbers on one side of a road are consecutive odd integers starting from 301, while the house-numbers on the other side of the road are consecutive even numbers starting from 302. The total number of houses is the same on both sides of the road.</p> <p>If the difference of the sum of the house-numbers between the two sides of the road is 27, then the number of houses on each side of the road is</p>
(A)	27
(B)	52
(C)	54
(D)	26
Q.3	<p>For positive integers p and q, with $\frac{p}{q} \neq 1$, $\left(\frac{p}{q}\right)^{\frac{p}{q}} = p^{\left(\frac{p}{q}-1\right)}$. Then,</p>
(A)	$q^p = p^q$
(B)	$q^p = p^{2q}$
(C)	$\sqrt{q} = \sqrt{p}$
(D)	$\sqrt[p]{q} = \sqrt[q]{p}$

Q.4	Which one of the given options is a possible value of x in the following sequence? 3, 7, 15, x , 63, 127, 255
(A)	35
(B)	40
(C)	45
(D)	31
Q.5	On a given day, how many times will the second-hand and the minute-hand of a clock cross each other during the clock time 12:05:00 hours to 12:55:00 hours?
(A)	51
(B)	49
(C)	50
(D)	55

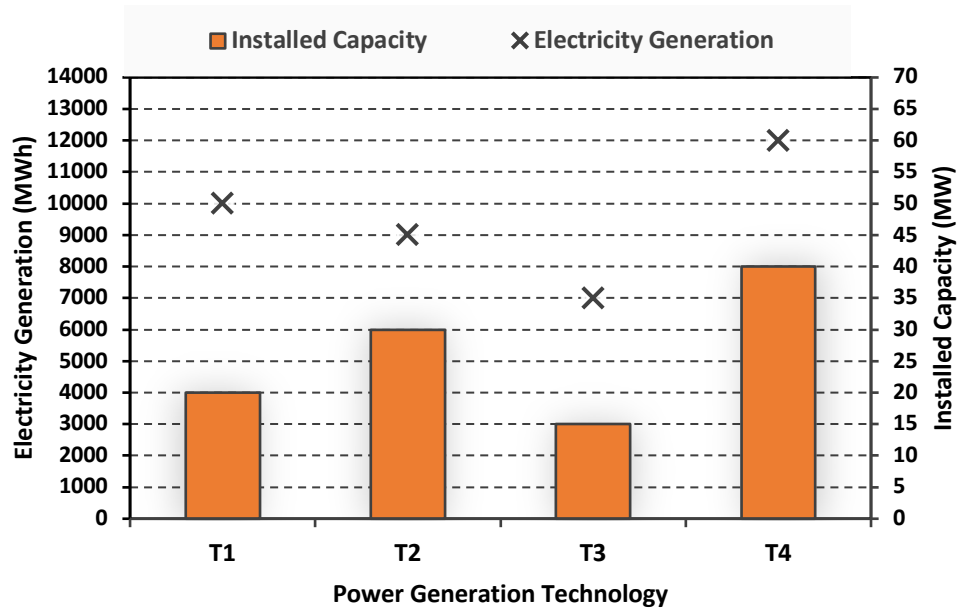
Q.6 – Q.10 Carry TWO marks Each

Q.6	<p>In the given text, the blanks are numbered (i)–(iv). Select the best match for all the blanks.</p> <p>From the ancient Athenian arena to the modern Olympic stadiums, athletics _____ (i) _____ the potential for a spectacle. The crowd _____ (ii) _____ with bated breath as the Olympian artist twists his body, stretching the javelin behind him. Twelve strides in, he begins to cross-step. Six cross-steps _____ (iii) _____ in an abrupt stop on his left foot. As his body _____ (iv) _____ like a door turning on a hinge, the javelin is launched skyward at a precise angle.</p>
(A)	(i) hold (ii) waits (iii) culminates (iv) pivot
(B)	(i) holds (ii) wait (iii) culminates (iv) pivot
(C)	(i) hold (ii) wait (iii) culminate (iv) pivots
(D)	(i) holds (ii) waits (iii) culminate (iv) pivots

Q.7	<p>Three distinct sets of indistinguishable twins are to be seated at a circular table that has 8 identical chairs. Unique seating arrangements are defined by the relative positions of the people.</p> <p>How many unique seating arrangements are possible such that each person is sitting next to their twin?</p>
(A)	12
(B)	14
(C)	10
(D)	28

Q.8

The chart given below compares the Installed Capacity (MW) of four power generation technologies, T1, T2, T3, and T4, and their Electricity Generation (MWh) in a time of 1000 hours (h).



The Capacity Factor of a power generation technology is:

$$\text{Capacity Factor} = \frac{\text{Electricity Generation (MWh)}}{\text{Installed Capacity (MW)} \times 1000 \text{ (h)}}$$

Which one of the given technologies has the highest Capacity Factor?

(A)

T1

(B)

T2

(C)

T3

(D)

T4

Q.9	<p>In the 4×4 array shown below, each cell of the first three columns has either a cross (X) or a number, as per the given rule.</p> <div><table><tr><td>1</td><td>1</td><td>2</td><td></td></tr><tr><td>2</td><td>X</td><td>3</td><td></td></tr><tr><td>2</td><td>X</td><td>4</td><td></td></tr><tr><td>1</td><td>2</td><td>X</td><td></td></tr></table></div> <p>Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).</p> <p>As per this rule, the maximum number of crosses possible in the empty column is</p>	1	1	2		2	X	3		2	X	4		1	2	X	
1	1	2															
2	X	3															
2	X	4															
1	2	X															
(A)	0																
(B)	1																
(C)	2																
(D)	3																

Q.10	During a half-moon phase, the Earth-Moon-Sun form a right triangle. If the Moon-Earth-Sun angle at this half-moon phase is measured to be 89.85° , the ratio of the Earth-Sun and Earth-Moon distances is closest to
(A)	328
(B)	382
(C)	238
(D)	283

Reasoning and Comprehension (XH-B1)

XH-B1: Q.11– Q.17 Carry ONE mark Each

Q.11	Amma's tone in the context of the given passage is that of:
	For Amma, the difference between men and women was a kind of discrimination and inequality; she felt strongly about women's rights but was not familiar with concepts like gender and patriarchy. She would have dismissed Betty Friedan because she was predominantly dealing with the problems of white middle-class women in the United States. Amma, and women of her generation, could de-link the oppression of women from the wider struggle for the liberation of human beings from class exploitation and imperialism. So Amma continued to play her role as mother and wife, but would often complain: 'I am a doormat on which everyone wipes their emotional dirt off'.
(A)	Compromise
(B)	Protest
(C)	Contentment
(D)	Resignation

Q.12	Fill in the blanks by choosing the correct sequence for the following passage:
	I am wearing for the first time some (i)_____ that I have never been able to wear for long at a time, as they are horribly tight. I usually put them on just before giving a lecture. The painful pressure they exert on my feet goads my oratorical capacities to their utmost. This sharp and overwhelming pain makes me sing like a nightingale or like one of those Neapolitan singers who also wear (ii)_____ that are too tight. The visceral physical longing, the overwhelming torture provoked by my (iii)_____, forces me to extract from words distilled and sublime truths, generalized by the supreme inquisition of the pain my (iv)_____ suffer.
(A)	(i) patent-leather belt (ii) belts (iii) patent-leather belt (iv) waist
(B)	(i) patent-leather shoes (ii) bands (iii) patent-leather bands (iv) wrist
(C)	(i) patent-leather shoes (ii) shoes (iii) patent-leather shoes (iv) feet
(D)	(i) patent-leather jacket (ii) jacket (iii) patent-leather jacket (iv) body

Q.13	The appropriate synonym for the word 'ignite' in the following passage will be:
	Spirituality must be integrated with education. Self-realization is the focus. Each one of us must become aware of our higher self. We are links of a great past to a grand future. We should ignite our dormant inner energy and let it guide our lives. The radiance of such minds embarked on constructive endeavor will bring peace, prosperity and bliss to this nation.
(A)	Encourage
(B)	Simulate
(C)	Dissipate
(D)	Engross

Q.14	Which of the following sentences is punctuated correctly?
(A)	One day, I'll write a book, 'I said'. Not just a thriller but a real book, about real people.
(B)	'One day I'll write a book', I said, 'not just a thriller, but a real book, about real people.'
(C)	'One day I'll write a book', I said. 'Not just a thriller but, a real book, about real people'.
(D)	'One day I'll write a book', I said, not just a thriller, but a real book, about real people.'

Q.15	Fill in the blanks with the correct combination of tenses for the given sentence:
	Darwin's work (i)_____ a related effect that (ii)_____ influenced the development of environmental politics – a 'decentering' of the human being.
(A)	(i) have (ii) had
(B)	(i) had (ii) have
(C)	(i) had (ii) has
(D)	(i) has (ii) have

Q.16	Which of the following options holds similar relationship as the words, 'Music: Notes'?
(A)	Water: Cold drink
(B)	Paper: Class Notes
(C)	House: Bricks
(D)	Graphite: Charcoal

Q.17	In a particular code, if "RAMAN" is written as 52 and "MAP" is written as 33, then how will you code "CLICK"?
(A)	37
(B)	43
(C)	51
(D)	38

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

Q.18	On the basis of the statements given below, which valid assumption(s) can be made?
	<p>Statements:</p> <ul style="list-style-type: none"> • Life has suffering • Desire is the cause of suffering • The end of desire is the end of suffering • Desire can be reduced by following the noble eightfold path <p>Assumptions:</p> <ol style="list-style-type: none"> 1. Suffering is because of wants 2. Life is not always full of suffering 3. The eightfold path can reduce suffering 4. Suffering is caused by life
(A)	Only 1, 3 and 4
(B)	Only 1, 2 and 3
(C)	Only 1 and 4
(D)	Only 2 and 3

Q.19	If 'KARAMCHAND' is coded as 'ICPCKEFCLF' what should be the code of 'CREATION'?
(A)	ATCCRKMP
(B)	ETGCVKQP
(C)	APCCRJMP
(D)	ETCGKRPM

Q.20	<p>Given an input line of numbers and words, a machine rearranges them following a particular rule in each step. Here is an illustration of an input and rearrangement sequence (Step 1 to Step 5):</p> <p>Input: 61 wb ob 48 45 29 34 sb pb lb</p> <p>Step 1: lb wb ob 48 45 29 34 sb pb 61</p> <p>Step 2: lb ob wb 45 29 34 sb pb 61 48</p> <p>Step 3: lb ob pb wb 29 34 sb 61 48 45</p> <p>Step 4: lb ob pb sb wb 29 61 48 45 34</p> <p>Step 5: lb ob pb sb wb 61 48 45 34 29</p> <p>Step 5 is the last step of the above arrangement.</p> <p>Based on the rules followed in the above steps, answer the following question:</p> <p>Input: cb kb eb 58 49 23 38 jb nb gb 69 82</p> <p>Which of the following represents the position of 58 in the fourth step? (Step-5 is the last step of the arrangement.)</p>
(A)	Second from the left
(B)	Fourth from the right
(C)	Third from the right
(D)	Seventh from the left

Q.21	<p>In a certain type of code, 'they play cricket together' is written as 'mv kb lb iv'; 'they score maximum points' is written as 'gb lb mb kv'; 'cricket score earned points' is written as 'mb gv kb kv' and 'points are earned together' is written as 'kv mv ob gv.'</p> <p>What is the code for 'earned maximum points'?</p>
(A)	gv gb kv
(B)	mv kb mb
(C)	lb iv ob
(D)	ob mb iv

Q.22	Which of the statement(s) about the passage weaken(s) the argument presented?
	Scientists associate large brains with greater intelligence. However, in the evolutionary context it has also been identified that beyond a point, the size of the brain has not increased and yet after a particular period, in spite of no significant change in brain size humans have made significant progress. Certain researchers propose that this is because, while the overall brain size may not have changed, marked structural changes can be noticed in specific structures that run parallel to increase in human intelligence.
(A)	Recent studies refute the hypothesis that region-specific brain development is necessarily associated with rapid human progress
(B)	Neanderthal people's extinction was probably because of their brain size
(C)	Homo Sapiens and its destruction in the future may happen because of its rapid brain development
(D)	Recent studies show that Neanderthal people, with relatively smaller brains, were capable of complex language and social activities

Q. 23	The narrator's use of 'I' in the given passage is/are:
	I have never been any good at the more lurid sort of writing. Psychopathic killers, impotent war-heroes, self-tortured film stars, and seedy espionage agents must exist in the world, but strangely enough I do not come across them, and I prefer to write about the people and places I have known and the lives of those whose paths I have crossed. This crossing of paths makes for stories rather than novels, and although I have worked in both mediums, I am happier being a short-story writer than a novelist.
(A)	Self-conscious
(B)	Apologetic and regretful
(C)	Confessional and communicating
(D)	Egotistical and vain

Q.24	Which of the following recommended action(s) seem to be appropriate with the stated problem?
	Stated problem : Many students at educational institutes do not attend classes in the post-pandemic scenario.
(A)	Disciplinary action against all students should be taken as a warning.
(B)	Counselling sessions should be organized to address the issues such students face.
(C)	Surveys should be conducted to identify the reasons for their absence.
(D)	Course content should immediately be changed.

Q.25	Read the passage and identify the statement(s) which follow(s) from it:
	The purpose of this work is to inform educators about the brain science related to emotion and learning, and, more important, to offer strategies to apply these understandings to their own teaching. Although many of the approaches I describe will be familiar, integrating the lens of emotion and the brain may be a new concept. As an educator I had been trained in how to deliver content and organize my lessons, but I had not been taught how to design learning experiences that support emotions for learning.
(A)	The author wishes, through his work, to inform us about brain science and learning.
(B)	The author, through his work, wishes to offer strategies to apply our learnings to our teaching.
(C)	The author feels that the newness of his approach lies in linking emotion oriented approach to brain.
(D)	The author wants to use emotions as a strategy for learning.

Q.26	If A says that his mother is the daughter of B's mother, then how is B related to A?
(A)	Uncle
(B)	Aunt
(C)	Father
(D)	Brother

Sociology (XH-C6)

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

Q.27 Fill in the blank with the correct option.

According to Thomas Kuhn, activities of normal science are like puzzle solving, since they seek to reach _____ that include solving instrumental, conceptual and methodological problems within the confines of certain rules.

- (A) new conclusions in existing ways
- (B) existing conclusions in new ways
- (C) new publishers
- (D) new junior researchers

Q.28 'We are constantly doing gender without realizing it.'

Select one of the given options that best explains the above statement.

- (A) We socially construct our behaviours to perform our gender roles.
- (B) Biological sex determines our gender identities.
- (C) Gender is not a performance; it is an identity.
- (D) Gender performance is about individual determinism.

Q.29 Normal distribution is widely used in quantitative analysis in social sciences. Which of the given statements is **NOT** correct about the normal distribution?

- (A) Most of the observed data is clustered near the mean.
- (B) 70.2% of the cases fall under \pm of one standard deviation.
- (C) Values of mean, media and mode shall be same.
- (D) Distribution is symmetrical in nature.

Q.30 Which one of the given statements is **NOT** correct?

- (A) Factor analysis is used to group the attributes of the respondents.
- (B) Logistic regression is used to predict values of dependent variable using independent variables.
- (C) Sociologists do undertake quantitative analysis.
- (D) Cluster analysis is used to group the respondents using the attributes.

Q.31 Fill in the blank with the correct option.

According to Ray Oldenberg, _____ are social surroundings different from home and workplaces which are important for civil society, democracy and civic engagement.

- (A) Instagram and YouTube
- (B) Villages
- (C) Third places
- (D) Districts

Q.32 Fill in the blank with the correct option.

Paul Lazarfield and Robert Merton coined the term _____ to explain the phenomenon wherein media provides massive amount of coverage that the audience becomes numb and fails to act on the information, regardless of how compelling the issue.

- (A) dysfunctional media
- (B) narcotizing dysfunction
- (C) manufacturing consent
- (D) echo chamber

Q.33 Fill in the blank with the correct option.

According to Max Weber, social stratification is a function of _____.

- (A) economic factors only
- (B) economic and social factors
- (C) honour and status only
- (D) political power and status only

Q.34 Fill in the blank with the correct option.

According to Durkheim, collective consciousness and division of labour in a given society would be _____ to each other.

- (A) directly related
- (B) inversely related
- (C) not related
- (D) dialectically related

Q.35 Fill in the blank with the correct option.

_____ argued for a shift in social movements post-1968 towards questions of self-management and technologies of rule as central driving concerns, analyzing these movements as struggles over the self-production of society.

- (A) Eric Hobsbawm
- (B) Alain Touraine
- (C) Henri Lefebvre
- (D) Michel Foucault

Q.36 The recognition that social identities are multi-layered, often overlapping, and non-discrete, comes from which of the following conceptual frameworks?

- (A) Multiple sovereignties
- (B) Sanskritization
- (C) Intersectionality
- (D) Social Diffusion

Q.37 Fill in the blank with the correct option.

The movement against _____ dam in India has contributed significantly to the formation of the World Commission on Dams.

- (A) Koel Karo
- (B) Tehri
- (C) Sardar Sarovar
- (D) Subansiri

Q.38 Which thinker is associated with the concept of participatory development?

- (A) André Béteille
- (B) Robert Chambers
- (C) Andre Gunder Frank
- (D) Robert Putnam

Q.39 Select the option that best describes 'petty commodity producers' in the context of the agrarian economy in India.

- (A) They are family-based operations that occasionally hire in /hire out some labour.
- (B) They do not own land and work as reverse tenants.
- (C) They produce only for fulfilling their subsistence needs.
- (D) Their presence is restricted to adivasi-dominated areas.

Q.40 Despite the constitutional provision of equality of all citizens before the law, in practice, Dalits are often excluded from access to common property resources and public spaces (e.g., pastures, water resources etc.)

Which theorist's conceptualization of power best explains this scenario?

- (A) Emile Durkheim
- (B) Talcott Parsons
- (C) Ralph Dahrendorf
- (D) Edmund Leach

Q.41 Governmentality, as defined by Michel Foucault, refers to which one of the following conceptual ideas?

- (A) Strategic essentialism
- (B) Substantial equivalence
- (C) Technologies of the self
- (D) Individualization of risk

Q.42 Fill in the blank with the correct option.

‘Theoretical Brahmins and empirical Shudras’ is a phrase used by _____ to castigate the Indian social sciences.

- (A) Sharmila Rege
- (B) Gail Omvedt
- (C) Gopal Guru
- (D) Kancha Ilaiah

Q.43 Which of the following statement(s) is / are correct?

- (A) 'Book view' refers to an understanding of rural India through a study of texts.
- (B) 'Field view' refers to a perspective of rural India obtained through Indologists and historians.
- (C) Indologists have described the village as 'sink of localism'.
- (D) The term 'village republic' was used to describe the thriving, interconnected traditional rural economy with strong linkages with the city.

Q.44 Select the option(s) that best describe(s) the term 'gentrification.'

- (A) The transformation of an urban neighbourhood when affluent people move to poor and working-class areas of the city.
- (B) The process of ghettoization of working-class neighbourhoods.
- (C) The process of feminization of the neighbourhood.
- (D) The process of urban gentry migrating to rural areas.

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

Q.45 Fill in the blanks with the correct option.

Hochschild's book, 'The Managed Heart' on _____ is based on a study of _____ and _____.

- (A) emotional labour; flight attendants; receptionists
- (B) emotional labour; receptionists; bill collectors
- (C) emotional labour; flight attendants; bill collectors
- (D) emotions; actors; lyricists

Q.46 Fill in the blanks with the correct option.

According to Granovetter, strong ties are important for _____, and weak ties are valuable for gaining access to _____.

- (A) emotional support; new information and opportunities
- (B) monetary support; new information and opportunities
- (C) social support; economic support
- (D) monetary support; marital alliances

Q.47 Fill in the blanks with the correct option.

A researcher wants to study college students' usage of dating applications in their mobile phones. She had contacted the first 100 students in front of the library. 20 of them did not have a mobile phone. Out of the rest, 20 refused to fill the survey questionnaire. The incidence rate and response rate for the study are _____ and _____ respectively.

- (A) 75% & 80%
- (B) 80% & 60%
- (C) 80% & 75%
- (D) 60% & 80%

Q.48 Select the option that has the correct pairing of person and contribution.

Person		Contribution	
Laud Humphreys	M	Italian American Community	X
William Foote-Whyte	N	Tearoom Trade	Y
Elton Mayo	O	Worker Productivity	Z

- (A) MY; NZ; OX
- (B) MZ; NX; OY
- (C) MX; NY; OZ
- (D) MY; NX; OZ

Q.49 Select the option that has the correct pairing of author and concept.

Author		Concept	
Bronislaw Malinowski	L	Sociological imagination	Q
Erving Goffman	M	Imponderabilia of everyday life	R
Claude Levi-Strauss	N	Matrimonial strategies	S
Pierre Bourdieu	O	Generalized exchange	T
		Social performance	U

- (A) LT; MU; NS; OR
- (B) LR; MU; NT; OS
- (C) LU; MQ; NT; OS
- (D) LR; MU; NS; OT

Q.50 Fill in the blank with the correct option.

According to Victor Turner, 'rites of passage' are defined as rituals of _____.

- (A) revelation
- (B) transition
- (C) subversion
- (D) communication

Q.51 When Hurricane Katrina hit the United States in 2005, affluent and poor people alike became its victims. However, those who did not own automobiles were less able than others to evacuate in advance of the storm.

Which conclusion can be inferred from the above paragraph?

- (A) Class position affects people's vulnerability to natural disasters.
- (B) Automobile ownership is a hindrance to evacuation.
- (C) Affluent people were more affected by Hurricane Katrina because they had to return to their homes filled with debris.
- (D) Evacuation processes did not take into account the gendered dimensions of class.

Q.52 Select the option that has the correct pairing of book title and key contribution.

Book Title		Key Contribution	
Elementary Aspects of Peasant Insurgency in Colonial India	L	Distinction between social and political movements	Q
The Non-Party Political Process	M	Critique of nationalist and Marxist historiography	R
Reinventing Revolution: New Social Movements and the Socialist Tradition in India	N	New arenas of counter-action in the wake of diminishing legitimacy of the state in the project of social transformation	S
Nine Theses on Social Movements	O	Emergence of movements based in identities other than social class	T

- (A) LT; MQ; NR; OS
- (B) LR; MS; NT; OQ
- (C) LT; MS; NQ; OR
- (D) LR; MQ; NT; OS

Q.53 According to Homans, the more often in the recent past a person has received a particular reward, the less valuable any further unit of that reward becomes for that person.

Select the option(s) that do(es) **NOT** reflect the above.

- (A) Deprivation / satiation proposition
- (B) Stimulus proposition
- (C) Rationality proposition
- (D) Value proposition

Q.54 Which of the following is / are associated with scientific management?

- (A) Non separation of mental and manual labour
- (B) Subdivision of tasks
- (C) Close managerial control of work effort
- (D) Deskilling

Q.55 As a sociological concept, 'pizza effect' is **NOT** related to which of the following option(s)?

- (A) conformity
- (B) fast thinking process
- (C) ethnocentrism
- (D) re-acculturation

Q.56 Which of the following author(s) highlighted the connection between kinship terminology and kinship structure in India?

- (A) Irawati Karve
- (B) Lewis Henry Morgan
- (C) T.N Madan
- (D) Leela Dube

Q.57 What is/are the strategy/strategies proposed by B. R Ambedkar for Dalits to overcome caste oppression?

- (A) Endogamy
- (B) Electoral mobilization
- (C) Reform of Hinduism
- (D) Civil disobedience

Q.58 Which of the following is /are **NOT** author(s) of the essay, 'Can the Subaltern Speak?'

- (A) Dipesh Chakrabarty
- (B) Partha Chatterjee
- (C) Ranajit Guha
- (D) Gayatri Chakravorty Spivak

Q.59 In his critique of modernization theory, Raúl Prebisch posits which of the following option(s) as central to his liberal theory of dependency?

- (A) A breakdown of the chain of dependency between core and periphery.
- (B) Decoupling from the world systems theory.
- (C) Strengthening of domestic markets of production and consumption.
- (D) A heterogeneous movement from tradition to modernity.

Q.60 The Mathura Rape Case that took place in 1972 is considered to be a watershed moment for women's rights. From the following options, select which legal change(s) was/were introduced in the aftermath of the mobilizations following this case?

- (A) Declaration of the 2-finger test as unconstitutional.
- (B) Change in the reading of consent under the law dealing with rape.
- (C) Declaration of custodial rape as a criminal offence.
- (D) Placing the burden of proof on the accused rather than the victim.

Q.61 Which of the following is / are associated with liberalization of the world economy?

- (A) Withdrawal of the state from provision of welfare measures
- (B) Planned economy
- (C) Capital's search for the cheapest resource
- (D) The presence of tariff barriers

Q.62 Reena and Sheena are Hindi-speaking neighbours who grew up together. Reena refers to Sheena's mother as *mausi* (mother's sister). This is an example of which of the following kinship type(s)?

- (A) Telescoping
- (B) Fictive kinship
- (C) Surrogate kinship
- (D) Matrilineal kinship

Q.63 A.R Radcliffe-Brown is associated with fieldwork in which of the following region(s)?

- (A) Papua New Guinea
- (B) The Trobriand Islands
- (C) The Andaman Islands
- (D) Highland Burma

Q.64 Which of the following option(s) is/are feature(s) of the protests against the farm laws of 2020?

- (A) They called for guaranteed procurement in all 23 crops for which the government had declared a Minimum Support Price.
- (B) They challenged the growing entry of corporate capital in agriculture.
- (C) They brought media attention to India's increasing carbon emissions.
- (D) They championed the cause of pesticide victims of Kasargod.

Q.65 Which of the following option(s) is / are a feature of the Marxist method?

- (A) Ideological determinism
- (B) Historical materialism
- (C) Dialectical materialism
- (D) Materialist pessimism

GATE 2024