

General Aptitude (GA)

Q.1 – Q.5 Carry ONE mark Each

Q.1	If '→' denotes increasing order of intensity, then the meaning of the words [simmer → seethe → smolder] is analogous to [break → raze → _____]. Which one of the given options is appropriate to fill the blank?
(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)	${}^p\sqrt{q} = {}^q\sqrt{p}$

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

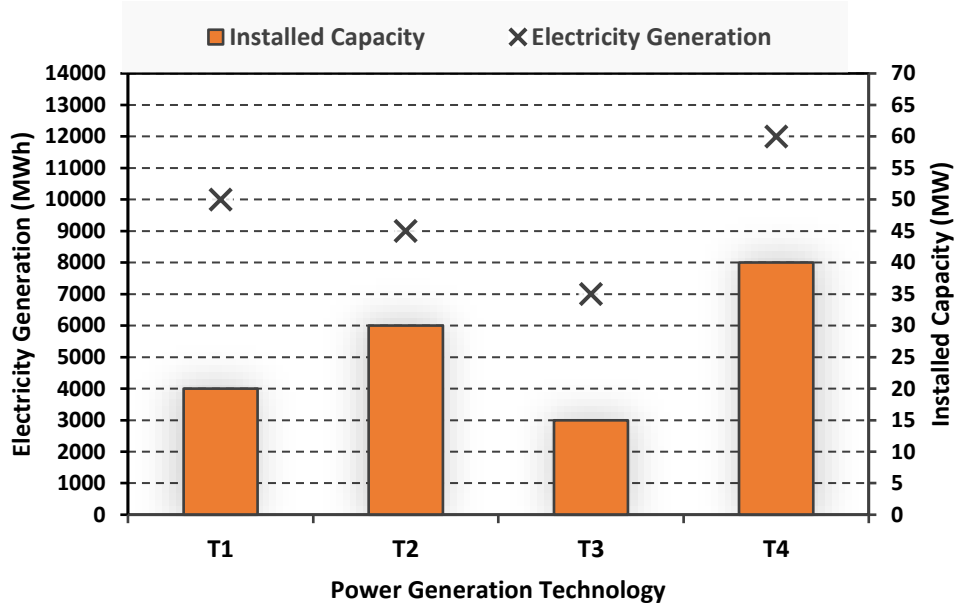
Q.6 – Q.10 Carry TWO marks Each

<p>Q.6</p>	<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

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.

1	1	2	
2	X	3	
2	X	4	
1	2	X	

Rule: The number in a cell represents the count of crosses around its immediate neighboring cells (left, right, top, bottom, diagonals).

As per this rule, the **maximum** number of crosses possible in the empty column is

(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:
	<p>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’.</p>
(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 – Q26 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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<p>Q.20</p>	<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

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.		
	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
(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	<p>Match the following.</p> <table border="1" data-bbox="416 1099 1238 1290"> <thead> <tr> <th colspan="2">Theory of Learning</th> <th colspan="2">Psychologist</th> </tr> </thead> <tbody> <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> </tbody> </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 border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Psychologist</th> <th colspan="2">Theory of Intelligence</th> </tr> </thead> <tbody> <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> </tbody> </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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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)