Goa Staff Selection Commission

6th Floor,3rd Lift,SPACES Building,Patto Plaza, Panaji-Goa - 403001

Computer Based Test

Post Name : Technical Assistant (Civil)

1	Question Description *	Spot the error in the underlined parts of the sentenece, if any. Many of the dozens (1)of miniature portraits of Akbar by (2) the artist Basawan were painted (3) on the backs of a playing card (4).
	A *	1
	B *	2
	C *	3
	D *	4
	E *	None of the above
	Marks *	1
	Answer *	d

2

Question Description *	Spot the error in the underlined parts of the sentenece, if any: Even though (1) he had some doubts (2) about democracy, Thomas Jefferson did have (3)faith with (4) representative government.
A *	1
B *	2
C *	3
D *	4
E *	None of the above
Marks *	1
Answer *	d

3

Question Description *	Choose the correct option from those given below.
A *	Thinking that she had not done well, in the exams she avoided her friends.
B *	Thinking, that she had not done well in the exams she avoided her friends.
C *	Thinking that she had not done well in the exams she avoided her friends.
D *	Thinking that she had not done well in the exams, she avoided her friends.
E *	None of the above
Marks *	1
Answer *	d

4

Question Description *	Given below are four parts of a sentence. Rearrange the parts to form a meaningful sentence. P) for future generations Q) must work together R) to protect the environment S) governments and organisations.
A *	PQSR
B *	QRSP
C *	SQRP
D *	SQPR
E *	None of the above
Marks *	1
Answer *	c

5

Question Description *	*Identify the part of the sentence that contains an error:* The book along with the illustrations were left on the table.
A *	The book
B *	along with the illustrations
C *	were left
D *	on the table
E *	None of the above
Marks *	1
Answer *	c

6

Question Description *	His *prudent* investments helped him weather the financial crisis. Identify the antonym of 'prudent'.
A *	wise
B *	reckless
C *	judgemental
D *	thoughtful
E *	None of the above
Marks *	1
Answer *	b

7

Question Description *	Read the following: “Speech can be a great gift but it can also be a consistent curse. If it is used carelessly, one's attitude can be completely misunderstood .” Select the option that matches with the writer's view.
A *	Being able to speak is a blessing
B *	Being able to speak is never a curse
C *	A speaker may be misunderstood
D *	Speech is uttering a curse at regular intervals
E *	None of the above
Marks *	1
Answer *	c

8

Question Description *	Replace the underlined words in the sentence below with the correct option from those given below. Although the weather was perfect, she was not in the mood to go cycling.
A *	Despite the weather being perfect
B *	On account of the weather being perfect
C *	In the light of the weather being perfect
D *	Since the weather was perfect
E *	None of the above
Marks *	1
Answer *	a

9

Question Description *	Identify the meaning of the phrase in italics from the sentence : Under the circumstances, such *pejorative* comments should have been avoided
A *	Soothing
B *	Disparaging
C *	Appreciative
D *	Sporting
E *	None of the above
Marks *	1
Answer *	b

10

Question Description *	He's always ready to help *at the drop of a hat.* What does 'at the drop of a hat' mean?
A *	immediately
B *	when he is called
C *	hesitantly
D *	when something breaks
E *	None of the above
Marks *	1
Answer *	a

11

Question Description *	Fill in the blank with the most suitable option: Despite her _____behaviour in the face of danger, she helped others remain calm.
A *	cowardly
B *	fearless
C *	bold
D *	brave
E *	None of the above
Marks *	1
Answer *	a

12

Question Description *	*Identify the part of the sentence that contains an error:* He is the most smartest person in the room.
A *	He is
B *	the most smartest
C *	person
D *	in the room
E *	None of the above
Marks *	1
Answer *	b

13

Question Description *	Fill in the blank with the correct option: His _____actions were clearly in contrast with his usual kind demeanour.
A *	generous
B *	benevolent
C *	malicious
D *	caring
E *	None of the above
Marks *	1
Answer *	c

14

Question Description *	After months of isolation during Covid, we finally *saw a light at the end of the tunnel*. What does the idiom 'light at the end of the tunnel' mean?
A *	A difficult situation becoming easier
B *	An upcoming celebration
C *	A sign of danger
D *	A fantastic time
E *	None of the above
Marks *	1
Answer *	a

15

Question Description *	

	Arrange the following words in a logical sequence. 1. Country, 2. State, 3. District, 4.Village, 5.Continent
A *	1,2,3,4,5
B *	3,5,2,1,4
C *	4,3,2,1,5
D *	4,2,1,3,5
E *	None of the above
Marks *	1
Answer *	c

16

Question Description *	*Identify the part of the sentence that contains an error:* Neither of the girls is absent.
A *	Neither
B *	of the girls
C *	is
D *	absent
E *	None of the above
Marks *	1
Answer *	e

17

Question Description *	Despite their initial *hostility*, the countries managed to build a good relationship. Pick the antonym for 'hostility'.
A *	friendliness
B *	aggression
C *	harshness
D *	loving
E *	None of the above
Marks *	1
Answer *	a

18

Question Description *	Xenophobia means
A *	Fear of foreigners
B *	Fear of trains
C *	Fear of sea
D *	Fear of dark
E *	None of the above
Marks *	1
Answer *	a

19

Question Description *	His actions were deemed *reckless* by the committee, leading to serious consequences. Select the antonym of 'reckless'.
A *	carefree
B *	bold
C *	thoughtful
D *	cautious
E *	None of the above
Marks *	1
Answer *	d

20

Question Description *	Read the following: “ The media should take a balanced view about issues that are usually responsible for dividing the audience. Such a balance is needed so that people can form a healthy public opinion .” Select the option that matches with the writer's view.
A *	The media always projects a balanced view
B *	People are unhealthy because of the media
C *	The media is not responsible for dividing people’s opinion
D *	The media can influence healthy balanced views
E *	None of the above
Marks *	1
Answer *	d

21

Question Description *	The Beta function is $\beta(m,n)=\int_0^1 x^{m-1}(1-x)^{n-1}dx$ then $\beta(m,1)$ is .
A *	$\frac{1}{m+1}$
B *	$\frac{1}{m-1}$
C *	$\frac{1}{m^2}$
D *	$\frac{1}{m}$
E *	None of the above
Marks *	1
Answer *	d

22

Question Description *	The function $f(x)=\frac{1-cos\,2x}{3x^2}$ at x = 0 has value
A *	2/3
B *	1/3
C *	½
D *	1
E *	None of the above
Marks *	1
Answer *	a

23

Question Description *	The function $f(x,y)= x^2+y^2-4x+2y+7$ has minimum value at
A *	(2,2).
B *	(-2,-1).
C *	(2,1).
D *	(2,-1).
E *	None of the above
Marks *	1
Answer *	d

24

Question Description *	The length of the curve x = 2t+1, y = 3t from t =1 to t =2 is
A *	$\sqrt{13}$
B *	13
C *	9
D *	7
E *	None of the above
Marks *	1
Answer *	a

25

Question Description *	The radius of convergence of $\frac{\sum_{k=1}^{\infty} x^{2k}}{4^k}$ is
A *	1
B *	0
C *	4
D *	2
E *	None of the above
Marks *	1
Answer *	d

26

Question Description *	The function $f(x) = \frac{e^{2x} - e^{x}}{x}$ at x = 0 has value
A *	-1
B *	2
C *	1
D *	0
E *	None of the above
Marks *	1
Answer *	c

27

Question Description *	If the power series expansion of cos2x is $a_0 + a_1 x + a_2 x^2 + a_3 x^3 \ldots\ldots$ then
A *	$a_0 = 1, a_1 = 0$, $a_2 = 2$
B *	$a_0 = 1, a_1 = 1$, $a_2 = 2$
C *	$a_0 = -1, a_1 = 0$, $a_2 = 2$
D *	$a_0 = 1, a_1 = 0$, $a_2 = -2$
E *	None of the above
Marks *	1
Answer *	d

28

Question Description *	A square board measuring 35 sq.m is to be polished. If Ravi polishes 7000 sq.cm each day, in how many days will he polish the whole board?
A *	5 days
B *	20 days
C *	25 days
D *	50 days
E *	None of the above
Marks *	1
Answer *	d

29

Question Description *	The ratio of present ages of Mayur and his wife Lata is 7 : 6. After 6 years the ratio will be 8 : 7. During their marriage, the ratio of their ages was 4 : 3. How long ago did they get married?
A *	16 years
B *	17 years
C *	18 years
D *	19 years
E *	None of the above
Marks *	1
Answer *	c

30

Question Description *	Seven mason workers working for 5 hours a day can complete one fifth of the work. In how many days will the total task be completed - if the mason workers work at the same rate?
A *	4 days
B *	5 days
C *	6 days
D *	7 days
E *	None of the above
Marks *	1
Answer *	b

31

Question Description *	Arrange the words given below in a meaningful sequence. 1. Open a Demat and Trading Account 2. Analyze stocks 3. Place Buy Order 4. Order Execution 5. Shares Credited to Demat Account
A *	1 – 2 – 3 – 4 – 5
B *	1 – 5 – 2 – 4 – 3
C *	1 – 3 – 4 – 2 – 5
D *	1 – 2 – 4 – 5 – 3
E *	None of the above
Marks *	1
Answer *	a

32

Question Description *	Arjun walks 8 km north from point Q to reach point H. He takes a left turn and walks 7 km to reach point S. On the other side, Bhavna walks 3 km north from point Y to reach point J. Point Y is 7 km east from point Q. Next, Bhavna turns to her right, moves 2 km, and reaches point D. Also, Arjun turned left from point S and reached point M after walking 5 km. **What is the difference between points M and D. (Distance between Arjun and Bhavna) ?**
A *	18 km
B *	12 km
C *	14 km
D *	16 km
E *	None of the above
Marks *	1
Answer *	d

33

Question Description *	You are given two statements, followed by two conclusions (numbered 1 and 2). Assume the statements are true, even if they don't seem to match real-life facts. Read the conclusions and decide which one(s) logically follow from the given statements. **Statements:** 1. Some professors are researchers. 2. All researchers are scholars. 3. No scholar is a politician. **Conclusions:** 1. Some professors are not politicians. 2. No professor is a politician.
A *	Only conclusion 1 follows
B *	Only conclusion 2 follows
C *	Both conclusions follow
D *	Neither conclusion 1 nor 2 follows
E *	None of the above
Marks *	1
Answer *	a

34

Question Description *	At 5:00 PM, Ajay was facing a person whose shadow was falling to his right. Ajay could see that the person was walking directly towards him. Ajay turns 90° to his right and walks 50 meters. Then he turns left and walks 30 meters. From Ajay's original position, in which direction is he now?
A *	North East
B *	South West
C *	North West
D *	South East
E *	None of the above
Marks *	1
Answer *	b

35

Question Description *	It is 7:00 AM. Ravi is standing in a garden such that his shadow falls to his left. He starts walking 100 meters forward, turns right, walks 50 meters, then again turns right and walks 100 meters. He then turns left and walks 70 meters. In which direction is Ravi finally facing and how far is he from the starting point?
A *	North 120 m
B *	East 120 m
C *	West 100 m
D *	South 120 m
E *	None of the above
Marks *	1
Answer *	b

36

Question Description *	A container contains 54 liters of a mixture of milk and water in the ratio 2:1. 18 liters of this mixture is removed and replaced with pure water. What is the new ratio of milk to water in the container?
A *	4:5
B *	2:3
C *	1:2
D *	1:3
E *	None of the above
Marks *	1
Answer *	a

37

Question Description *	Select the correct option that continues the pattern and replaces the question mark in the following series 0, 2, 6, 14, 30, 62, ?
A *	126
B *	146
C *	120
D *	84
E *	None of the above
Marks *	1
Answer *	a

38

Question Description *	Eight people A, B, C, D, E, F, G and H live in a building with one person on each floor from 1 to 8 but not necessarily in the same order. The ground floor is numbered 1, floor above that is numbered 2 and so on. A lives on an odd-numbered floor above C. Only one person lives above B who lives immediately above D. F lives on the 8th floor. G lives on the 3rd floor and is not adjacent to E. H lives immediately below A. Who lives on the 1st floor?
A *	A
B *	C
C *	D
D *	H
E *	None of the above
Marks *	1
Answer *	e

39

Question Description *	A cuboid has dimensions 10 cm (length) × 8 cm (width) × 6 cm (height). All six faces of the cuboid are painted, with each pair of opposite faces painted in a different color: The top and bottom faces (faces measuring 10 cm × 8 cm) are painted red. The front and back faces (faces measuring 10 cm × 6 cm) are painted blue. The left and right faces (faces measuring 8 cm × 6 cm) are painted green. A cuboid is then sliced into smaller cubes of side 2cm. How many of these smaller cubes have exactly one face painted red?
A *	48
B *	12
C *	24
D *	6
E *	None of the above
Marks *	1
Answer *	e

40

Question Description *	Six employees — Raj, Simran, Kabir, Ayesha, Vikram, and Neha — were promoted in six different months of the same year. The months (in no particular order) are: January, March, May, July, September, and November No two employees were promoted in the same month. Use the clues below to determine who got promoted in which month. Clues: 1. Kabir was promoted after Raj but before Ayesha. 2. Neha was not promoted in March or July. 3. Exactly one employee was promoted between Simran and Kabir. 4. Vikram was promoted immediately after Kabir (i.e., in the next listed month). 5. Raj was not promoted in January or March. 6. The person promoted in May was not Neha or Simran. **Which among the following employees was the first to receive promotion?**
A *	Simran
B *	Raj
C *	Ayesha
D *	Neha
E *	None of the above
Marks *	1
Answer *	d

41

Question Description *	For over-consolidated soils, the recompression index is…….. than the compression index
A *	less
B *	much less
C *	more
D *	much more
E *	None of the above
Marks *	1
Answer *	b

42

Question Description *	Dupuit’s theory is used to find out
A *	liquid limit of the soil
B *	coefficient of permeability of the soil
C *	shear strength of the soil
D *	settlement of the soil
E *	None of the above
Marks *	1
Answer *	b

43

Question Description *	Which of the following measures an earthquake's intensity based on the observed effects on people and structures?
A *	Richter scale
B *	Modified Mercalli scale
C *	Centigrade scale
D *	moment magnitude scale
E *	None of the above
Marks *	1
Answer *	b

44

Question Description *	The horizontal distance between two consecutive contour lines is known as:
A *	horizontal interval
B *	horizontal equivalent
C *	horizontal scale
D *	contour interval
E *	None of the above
Marks *	1
Answer *	b

45

Question Description *	Centre of gravity of solid cone lies on the axis at the height of --------- above the base.
A *	0.25h
B *	0.33h
C *	0.5h
D *	0.375h
E *	None of the above
Marks *	1
Answer *	a

46

Question Description *	The length of a summit curve is based on:
A *	Sight distance
B *	Comfort
C *	Deviation angle
D *	Convexity
E *	None of the above
Marks *	1
Answer *	a

47

Question Description *	The double integration method used for calculating the slope of a deflected beam is applicable only when:
A *	Slope is very large
B *	Slope is very small
C *	Slope is negative
D *	Slope is positive
E *	None of the above
Marks *	1
Answer *	b

48

Question Description *	An example of a non-recording type rain gauge is:
A *	Weighing bucket rain gauge
B *	Tipping bucket rain gauge
C *	Floating type rain gauge
D *	Symon’s rain gauge
E *	None of the above
Marks *	1
Answer *	d

49

Question Description *	The curvature formed along the length of timber, due to defects is called:
A *	Bow
B *	Split
C *	Shake
D *	Cup
E *	None of the above
Marks *	1
Answer *	a

50

Question Description *	Water present in soil that cannot be removed by ordinary heating is called:
A *	Gravity water
B *	Capillary water
C *	Hygroscopic water
D *	Free water
E *	None of the above
Marks *	1
Answer *	c

51

Question Description *	The percentage of gypsum added in cement is
A *	0.25%
B *	1%
C *	2%
D *	8%
E *	None of the above
Marks *	1
Answer *	c

52

Question Description *	Darcy’s law gives
A *	Consolidation in clays
B *	Storage capacity of dam
C *	flow of fluid through porous medium
D *	compaction of soils
E *	None of the above
Marks *	1
Answer *	c

53

Question Description *	The approximate ratio of strength of concrete at 7days and 28 days is
A *	¾
B *	1/3
C *	½
D *	2/3
E *	None of the above
Marks *	1
Answer *	d

54

Question Description *	A curve consisting of two arcs of equal or different radii bending in opposite direction is called:
A *	Simple curve
B *	Compound curve
C *	Reverse curve
D *	Transition curve
E *	None of the above
Marks *	1
Answer *	c

55

Question Description *	The slump value recommended for concrete used in mass concreting is:
A *	75 to 125 mm
B *	50 to 100 mm
C *	30 to 120 mm
D *	25 to 50 mm
E *	None of the above
Marks *	1
Answer *	d

56

Question Description *	The cross-drainage work in which the drainage is over the canal is known as:
A *	Syphon aqueduct
B *	Reservoir
C *	Super passage
D *	Aqueduct
E *	None of the above
Marks *	1
Answer *	c

57

Question Description *	Along the neutral axis of a simply supported beam, the fibres:
A *	Do not undergo stress
B *	Undergo minimum stress
C *	Undergo maximum stress
D *	May undergo maximum or minimum stress depending on the type of loading
E *	None of the above
Marks *	1
Answer *	a

58

Question Description *	Body waves consists of
A *	P waves
B *	Surface waves
C *	P and S waves
D *	S waves
E *	None of the above
Marks *	1
Answer *	c

59

Question Description *	Which of the following observations may indicate a forthcoming destructive earthquake?
A *	An increase in the frequency of smaller earthquakes in the region
B *	rapid tilting of the ground
C *	rapid changes in water levels in wells
D *	all of these
E *	None of the above
Marks *	1
Answer *	d

60

Question Description *	Efflorescence is observed on bricks containing excess of:
A *	Iron oxide
B *	Magnesia
C *	Alkali
D *	Lime
E *	None of the above
Marks *	1
Answer *	c

61

Question Description *	The minimum shoulder width recommended by the IRC is:
A *	1 m
B *	1.5 m
C *	2 m
D *	2.5 m
E *	None of the above
Marks *	1
Answer *	d

62

Question Description *	Ground water is generally free from ---------- impurities.
A *	Dissolved
B *	Suspended
C *	both suspended and dissolved
D *	chlorides
E *	None of the above
Marks *	1
Answer *	b

63

Question Description *	Which one of the following binders is recommended for wet and cold climate
A *	80/100 penetration asphalt
B *	Tar
C *	cutback
D *	emulsion
E *	None of the above
Marks *	1
Answer *	c (Question marked Invalid)

64

Question Description *	Stiffness coefficients are used in:
A *	Force method
B *	Displacement method
C *	Both force and displacement methods
D *	Virtual work method
E *	None of the above
Marks *	1
Answer *	b

65

Question Description *	Di-calcium silicate (C_2S)
A *	Hydrates rapidly
B *	generates less heat of hydration
C *	Hardens rapidly
D *	provides less ultimate strength to cement
E *	None of the above
Marks *	1
Answer *	b

66

Question Description *	Arterial roads fall under the classification of:
A *	Rural roads
B *	Urban roads
C *	National highway
D *	State highway
E *	None of the above
Marks *	1
Answer *	b

67

Question Description *	Crushing strength of good building stone should be at least
A *	50 MPa
B *	100 MPa
C *	150 MPa
D *	200 MPa
E *	None of the above
Marks *	1
Answer *	a

68

Question Description *	Water/cement ratio law is suggested by
A *	Power
B *	Brownian
C *	Duff Abraham
D *	Feret
E *	None of the above
Marks *	1
Answer *	c

69

Question Description *	The compaction energy imparted by the rammer on the soil, for the standard Proctor test is about
A *	595 kJ/m^3
B *	300 kJ/m^3
C *	6065 kJ/m^3
D *	1000 kJ/m^3
E *	None of the above
Marks *	1
Answer *	a

70

Question Description *	The soundness test of cement is done to determine its
A *	free lime content
B *	durability in sea water
C *	iron oxide content
D *	alumina content
E *	None of the above
Marks *	1
Answer *	a

71

Question Description *	For the unconfined compression test, while plotting the Mohr circle, the radius is equal to:
A *	c_u
B *	q_u
C *	σ_1
D *	σ_3
E *	None of the above
Marks *	1
Answer *	a

72

Question Description *	The vacuum dewatering method requires that the coefficient of permeability of soil is:
A *	greater than 10^{-3} cm/s
B *	between 10^{-3} to 10^{-5} cm/s
C *	less than 10^{-5} cm/s
D *	less than 10^{-2} cm/s
E *	None of the above
Marks *	1
Answer *	b

73

Question Description *	Identify the correct relation between the dissolved solids (DS), total solids (TS) and suspended solids (SS).
A *	DS = TS+SS
B *	DS = TS-SS
C *	TS = DS/SS
D *	DS = SS-TS
E *	None of the above
Marks *	1
Answer *	b

74

Question Description *	The A-line in the plasticity chart is constructed using the following relation between plasticity index (IP) and liquid limit (w_L):
A *	$I_P = w_L - 20$
B *	$I_P = 0.73\ (w_L - 20)$
C *	$I_P = 0.73\ (20 - w_L)$
D *	$I_P = 20 - w_L$
E *	None of the above
Marks *	1
Answer *	b

75

Question Description *	A clockwise moment (+M) is applied at one end A of the beam. Other end B is hinged. The carryover moment at end B is
A *	0
B *	M/2
C *	-M
D *	–M/2
E *	None of the above
Marks *	1
Answer *	a

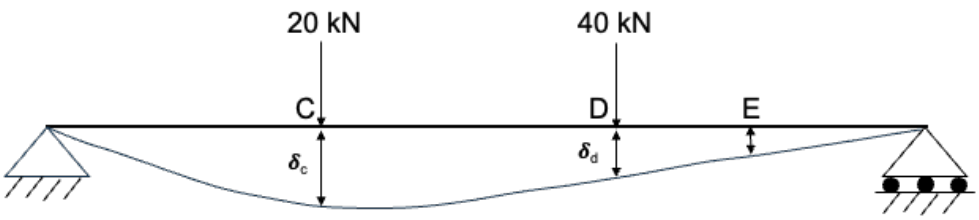
76

Question Description *	In the direct shear test on sand, the shear and the normal stresses at failure are 0.6 kg/cm^2 each. Then the angle of internal friction is
A *	31^o
B *	33^o
C *	36^o
D *	45^o
E *	None of the above
Marks *	1
Answer *	d

77

Question Description *	A clay layer is expected to settle 12 cm under loading settles 3 cm at the end of one month. The degree of consolidation is:
A *	25%
B *	50%
C *	60%
D *	56%
E *	None of the above
Marks *	1
Answer *	a

78

Question Description *	The beam shown in the figure carries loads of 20 kN at C and 40 kN at D, causing a deflection of 6 mm at E. The load required at E, for producing a deflection of 8 mm at C and 5 mm at D is: 
A *	40 kN
B *	60 kN
C *	20 kN
D *	50 kN
E *	None of the above
Marks *	1
Answer *	b

79

Question Description *	A soil sample has a void ratio of 0.5 and a specific gravity of soil solids 2.65. Its dry density is:
A *	17.3 kN/m^3
B *	9.8 kN/m^3
C *	16 kN/m^3
D *	15.5 kN/m^3
E *	None of the above
Marks *	1
Answer *	a

80

Question Description *	Radius of curve, for a design velocity of 40 kmph and a coefficient of friction of 0.43 is:
A *	20 m
B *	30 m
C *	28 m
D *	25 m
E *	None of the above
Marks *	1
Answer *	b