	l est B	ooklet - IX
Roll No.		Test Postdet
		Test Booklet series/ No.
		25339
Name of the Ca	andidate:	
Signature of the	e Candidate:	
Time 2 1/2 Hour	rs	Maximum Marks: 270
a) A separate appropriate b) Only blue / their own bi c) For each quired to each questi this. 05. a d) No change in	pooklet comprising of 05 sections in question carries 2 marks. OMR sheet will be provided. Cand a place on the OMR sheet itself. black ball point pen is to be sued to all point pens. Use of pencils is strict estion, there are four probable answerselect correct answer and darken ons in the OMR sheet. For example	didates are required to indicate their answers at an ownite on the OMR sheet. Candidates should bring thy prohibited. Wers out of which only one is correct. The candidate is bubble against the correct option provided against e, if your answer for questions No. 05 is D answer like
well as thos b) About one spend too n it and move c) The total tir d) There will b * No change *There is o you darken OMR sheet *Do not use	ate must carefully read the instruction before atterminate may be needed to answer much time on a particular question. It is not to the next one. This will help him would be 150 minutes without a eabell at the half time. It is allowed in the answer once written is allowed in the answer once written is allowed in the answer once written is allowed in the correct answer for each que more than one bubble your answer. It is whitener of correction fluid on OMF or the office of the OMF of the must not be done on the OMF of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the correction fluid on OMF or the office of the of	each question. Therefore, the candidate should not If a question is found difficult to answer he may leave m to save time. ny break. wed. lestion, darken only one bubble for each question. If er will be treated as wrong. Do not fold or deface the
Signature	of Investigator	Signature of Centre Superintendent
	1X-202	2 (ETSS) P-1

Section - A Mathematics

- 1. Which of the following is an irrational number?
 - a) 16
 - b) √(12/3) c) √12

 - d) \100
- 2. The product of a rational and an irrational number is:
 - a) Always an integer
 - b) Always a rational number
 - c) Always an irrational number
 - d) Sometimes rational and sometimes irrational
- 3. The sum of three consecutive multiples of 7 is 357. Find the smallest multiple.
 - a) 112
 - b) 126
 - c) 119
 - d) 116
- 4. How many linear equations in x and y can be satisfied by x = 1 and y = 2?
 - a) only one
 - b) two
 - c) infinitely many
 - d) three
- 5. The diagonals of a parallelogram:
 - a) Equal
 - b) Unequal
 - c) Bisect each other
 - d) Have no relation
- 6. The angles of quadrilateral are in the ratio 4:5:10:11. The angles are:
 - a) 36°, 60°, 108°, 156°
 - b) 48°, 60°, 120°, 132°
 - c) 52°, 60°, 122°, 126°
 - d) 60°, 60°, 120°, 120°
- 7. Tally marks are used to find
 - a) Class Interval
 - b) range
 - c) frequency
 - d) upper limit

- a) 19²
- b) 11²
- c) 24²
- d) 13²

9. How many natural numbers lie between 92 and 102?

- a) 17
- b) 18
- c) 19
- d) 20

10. By what number should 81 be divided to get a perfect cube?

- a) 3
- b) 6
- c) 7
- d) 9

11. Cube root of 15625 is:

- a) 5
- b) 15
- c) 25
- d) 35

12. Half percent written as a decimal is

- a) 0.2
- b) 0.02
- c) 0.005
- d) 0.05

13. 80% of a number added to 80 gives the result as the number itself, what is the number.

- a) 200
- b) 300
- c) 400
- d) 480

14. The value of $x^2 - 2x + 1$ when x = 1 is

- a) 1
- b) 2
- c) -2
- d) 0.

- a) -7z
- b) $z^2 4y^2$
- c) $x^2y xy^2 + y^2$
- d) 12a 9ab + 5b 3

16. If a triangle and a parallelogram are on the same base and between same parallels, then the ratio of the area of the triangle to the area of parallelogram will be:

- a) 1:2
- b) 3:2
- c) 1:4
- d) 1:3

17. The area of a triangle is 150 cm and its sides are in the ratio 3:4:5. What is its perimeter?

- a) 10 cm
- b) 30 cm
- c) 45 cm
- d) 60 cm

18. The surface area of cuboid-shaped box having length=80 cm, breadth=40cm and height=20cm is:

- a) 11200 sq.cm
- b) 13000 sq.cm
- c) 13400 sq.cm
- d) 12000 sq.cm

19. If the diameter of the base of a cylindrical pillar is 4 m and its height is 21 m, then the cost of construction of the pillar at Rs. 1.50 per cubic meter is:

- a) Rs. 396
- b) Rs. 400
- c) Rs. 410
- d) Rs. 420

20. (a) is equal to

- a) amer
- b) am-n
- c) amn
- d) an-m

21. $3^2 \times 3^4 \times 3^5$ is equal to

- a) 3
- b) 3²
- c) 33

d) 3³

- a) 453
- b) 435
- c) 354
- d) 345

23. A cuboid has how many faces?

- a) 2
- b) 4
- c) 6
- **d**) 3

24. How many edges does a cuboid have?

- a) 12
- b) 8
- c) 6
- d) 4.

25. A triangle whose sides are 15cm, 36cm, and 39cm is

- a) Right angled
- b) Equilateral
- c) isosceles
- d) none of above

26. Which of the listed side lengths CAN be sides of a right triangle?

- a) 7, 8, 9
- b) 6, 7, 8
- c)4,5,6
- d) 3, 4, 5

27. The average of three numbers is 77. The first number is twice the second and the second number is twice the third. Find the first number.

- a) 33
- b) 66
- c) 77
- d) 132

28. The difference between the highest and the lowest value of the observations in a data is called:

- a) Mean
- b) Range
- c) Total frequency
- d) Sum of observation

29.	The sum of the probabilities of all events of a trial is
	a) 1
	b) greater than 1

- c) less than 1 d) between 0 and 1
- 30. A dice is thrown once. Probability of getting a number 3 or 4 is
 - a) 1/6
 - b) 2/3
 - c) 1/2
 - d) 1/3
- 31. 20 trucks can hold 150 metric tonnes. How much will 12 trucks hold?
 - a) 80 metric tonnes
 - b) 90 metric tonnes
 - c) 60 metric tonnes
 - d) 40 metric tonnes.
- 32. A man walks 20 km in 5 hours. How long would he take in walking 32 km?
 - a) 3 hours
 - b) 4 hours
 - c) 6 hours
 - d) 8 hours
- 33. The common factor of 10ab, 30bc, 50ca is
 - a) 10
 - b) 30
 - c) 50
 - d) abc
- 34. The factorisation of 12ab + 15ab is
 - a) 3ab (4a + 5b)
 - b) $3a^2b (4a + 5b)$
 - c) 3ab (4a + 5b)
 - d) 3a2b2 (4a + 5b)
- 35. If ABC is an isosceles with AB=AC, if A = 80, then ABC will be
 - a) 100°
 - b) 80°
 - c) 50°
 - d) 40°

- 36. Sum of three angles of a triangle is equal to:
 - a) 200°
 - b) 180°
 - c) 360°
 - d) 240°
- 37. Find the measure of an angle which is 32° less than its supplement.
 - a) 75
 - b) 74
 - c) 73
 - d) 72
- 38. The compound interest on Rs:1000 at 10% p.a) for 2 years is
 - a) Rs:190
 - b) Rs:210
 - c) Rs:1210
 - d) Rs:200
- 39. The time periods and rate for a sum taken at 8% p.a. for $1\frac{1}{2}$ years compounded half yearly are
 - a) n = 3, R = 4%
 - b) n = 6, R = 2%
 - c) n = 3, R = 2%
 - d) n = 6, R = 4%
- 40. The median of the data: 4, 6, 8, 9, 11 is
 - a) 6
 - b) 8
 - c) 9
 - d)11
- 41. The area of a circle of radius r is
 - a) $1/2\pi r^2$
 - b) r2
 - c) πr2.
 - d) $1/4\pi r^2$
- 42. If the circumference of circle is 64π then the area of circle (in terms of π) is
 - a) 664 cm²
 - b) 1024π cm²
 - c) 1050π cm²
 - d) 512π cm²

- 43. What is the perimeter of a circle if the radius is 7 m?
 - a) 8 m
 - b) 2 m
 - c) 44 m
 - d) 22 m
- 44. If we add, 7xy + 5yz 3zx, 4yz + 9zx 4y and -3xz + 5x 2xy, then the answer is:
 - a) 5xy + 9yz + 3zx + 5x 4y
 - b) 5xy 9yz + 3zx 5x 4y
 - c) 5xy + 10yz + 3zx + 15x 4y
 - d) 5xy + 10yz + 3zx + 5x 6y
- 45. If we multiply 5x and (-4xyz), then we get:
 - a) 20x2yz
 - b) -20x2yz
 - c) x²yz
 - d) -2xyz

Section – B Intelligence and Reasoning

Direction (Q 46-48) Find the missing term based on the relationship of the given words.

- 46. FILM: ADGH:: MILK:?
 - a) ADGF
 - b) HDGE
 - c) HDGF
 - d) HEGF
- 47. EIGHTY: GIEYTH:: OUTPUT:?
 - a) TUOTUP
 - b) TUOUTP
 - c) UTOPTU
 - d) UOTUPT
- 48. TALE:LATE:: ?: CAFE
 - a) FACE
 - b) CAEF
 - c) CEFA
 - d) FEAC

Direction (Q 49-51) Select the number based on the relationship as shared between the first two numbers

49. 583 : 488 : : 293 : ?

- a) 581
- b) 291
- c) 378
- d) 487

50. 432 : 24: : : 735 : ?

- a) 81
- b) 25
- c) 105
- d) 73

51. 63:9::?:14

- a) 56
- b) 94
- c) 68
- d) 42

Direction (Q 52-54) Complete the Series with the help of given options.

52. BYCXDWE?

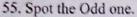
- a) S
- b) T
- c) U
- d) V

53. DMP, FLN, HKL, JJJ, ?

- a) MIH
- b) III
- c) LIH
- d) MII

54. 37, 47, 58, ?, 79, 95

- a) 71
- b) 69
- c) 68
- d) 67



- a) Ornate
- b) Pleasant
- c) Decorate
- d) Beautify

56. Select the group of letters that does not belong to the group.

- a) EF LM
- b) KJ SR
- c) XW HG
- d) ED YX

57. Choose the number that is different from the rest.

- a) 6450
- b) 1776
- c) 2392
- d) 3815

58. Select the pair which is different from the other three.

- a) Day Night
- b) Clever Foolish
- c) Clear Blurred
- d) Arrive Come

59. Which of the following pair of numbers is different from the other three pairs?

- a) 28, 4
- b) 63, 7
- c) 56, 8
- d) 35, 5

Directions: (Q60-62) A solid cube of each side 4 cm has been painted all faces. If it is then cut into cubical blocks each of side 2 cm, answer the following questions.

- 60. How many cubes are there in all of a edge 2 cm?
 - a) 2
 - b) 4
 - c) 8
 - d) 16

61. How many cubes are there in all of an edge 4cm

- a) 0
- b) 2
- c) 4
- d) 8

62	How many cubes have only one face painted?
	b) 2 c) 4 d) 8
63	If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that of
	b) CPNCBZ
	c) CPOCBZ d) CQOCBZ

64. In a certain code '415' means 'milk is hot'; '18' means 'hot soup' and '895' means 'soup is tasty'. What number will indicate the word 'tasty'

- a) 9
- b) 8
- c) 5
- d) 4

65. If 'yellow' means 'red', 'white' means 'green', 'red' means 'orange', 'blue' means 'white' and 'green' means 'blue', then the colour of sky is:

- a) white
- b) green
- c) blue
- d) yellow

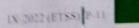
66. Four girls A, B, C and D are sitting in a circle. B and C are facing each other. Which of the following is definitely true?

- a) A is to the left of C
- b) D is to the left of C
- c) And D are facing each other
- d) A is not between B and C

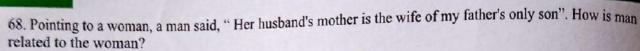
67. A man travels 100 km towards South. From there he turns right and travels 100 km and again turns right to travel 50km. Which direction is he in from his starting point?

- a) North
- b) North-East
- c) East
- d) South-West

ROUGH



ode?



- a) Son
- b) Brother-in-law
- c) Uncle
- d) Father-in-law

69. Uma ranked 8 from the top and 37 from bottom in class. How many studnets are there in the class?

- a) 47
- b) 46
- c) 45
- d) None of these.

70. In each of the following which number can be placed at the sign of interrogation?

	The state of the s		_
	3	7	
a) 14	2	4	
h) 10			

8	3
1	7

1	6
2	?

aj	IT
41	19
U	19

c) 18 d) 11

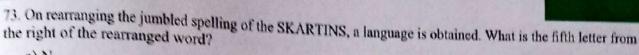
71. In the following matrix which number when place at the sign of interrogation shall complete the matrix.

3		5	8
7		3	7
5		8	?
3	15	120	168

- a) 3
- b) 5
- c) 8
- d) 7

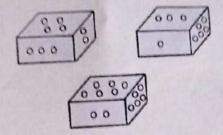
72. Starting from the fifth letter from left, if twelve letters are written in reverse order, then which letter will be the seventh to the left of the fourteenth letter from right?

- a) N
- b) H
- c) L
- d) O

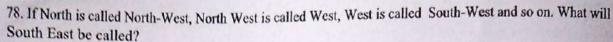


- a) N
- b) K
- c)R
- d) S

Directions (Q74-75) The figures given below show three positions of the same dice having 1, 2, 3, ... 6 circles on its six faces. Answer the following questions based on this dice.



- 74. The number of circles on the face opposite to the one having three circles is:
 - a) 6
 - b) 5
 - c) 7
 - d) None of the above
- 75. What is the number of circles on the face at the bottom of the first cube?
 - a) 6
 - b) 1
 - c) 5
 - d) None of the above
- 76. A three centimeter cube has been painted blue on all its sides. It is cut into one centimeter cubes. How many cubes will be there with two sides painted blue?
 - a) 8
 - b) 4
 - c) 6
 - d) 12
- 77. Ram is brother of Shyam and Mahesh is the father of Ram. Jagat is the brother of Priya and Priya is daughter of Shyam. Who is the uncle of Jagat?
 - a)Shyam
 - b) Mahesh
 - c) Ram
 - d) None of these



- a) East
- b) West
- c) North-East
- d) South East
- 79. O, P, Q, R, S and T are standing on a bench according to their height. P is taller than O but shorter than S. Only S is taller than T. R is shorter than P but taller than Q. Who is the shortest?
 - a) O
 - b) O
 - c) P
 - d) Cannot be said.
- 80. Among five friends, A is heavier than B; C is lighter than D; B is lighter than D but heavier than E. Who among them is the heaviest?
 - a) B
 - b) C
 - c) A
 - d) Can't Say

Section – C English

81. Spot the error in the following sentence:

I visited Ram's and Sita's house and found the couple missing.

- a) I visited
- b) Ram's and Sita's house
- c) and found the couple missing.
- d) No error

Directions (Q 82-85) Read the following passages and answer the question that follow:

Passage

The moon's role in causing tides is much more high and important than that of the Sun. The reason is that the moon enjoys more proximity to the earth than the sun. As such its force is greater than that of the sun in attracting the surface water. Tides are of immense importance. In trade, navigation and fishing, tides are very useful. During the high tide, the water depth near the coast goes up and helps big ships to reach the ports. Kandla port in Gujarat and Diamond Harbour in West Bengal owe their very existence to the tides only. The significance of both London

and Kolkata also depends on the tides. Tides also keep the harbours clear of refuse and mud brought down by rivers and thus they do not allow the harbours to be silted. Commonly, the tidal rivers are navigable. For the purpose of generating electricity, tidal waves are harnessed. Tides do not allow the sea water to be frozen by keeping the sea water in motion. Tides are also used by the fishermen for sailing into the sea and returning to the habour. In countries like Canada, U.K., France and Japan, tidal power stations are set up.

- 82. Why does the moon play a greater role than sun in causing tides?
 - a) The moon is closer to the earth earth as compared to the sun.
 - b) The moon has greater gravitational pull.
 - c) The moon shines in night.
 - d) None of the above.
- 83. How are tides useful for the economy of the country?
 - a) Tides bring treasure of sea with them.
 - b) During high tides, big ships can reach the ports thus opening new vistas for business.
 - c) Tides destroy enemies of the country.
 - d) None of the above.
- 84. How are tides useful in cold countries?
 - a) They bring fish for eating.
 - b) They bring water for drinking.
 - c) They don't allow sea water to be frozen.
 - d) They keep the port silted.
- 85. How can tides solve the power problem of the world?
 - a) Electricity is being produced through tidal waves.
 - b) Tidal waves keep the steamers in motion.
 - c) Tidal waves melt the ice and save power.
 - d) None of the above.
- 86. What is the antonym of 'Foremost'
 - a) Hindmost
 - b) Unimportant
 - c) Disposed
 - d) Mature
- 87. Choose the correct synonym of 'Rectify'
 - a) To build
 - b) Correct
 - c) Destroy
 - d) To command

88. Choose the most	suitable preposition
Do you know the rea	son his absence?
a) on	
b) of c) for	
d) None	
a, treate	
89. Choose the corre Mount Everest is in .	ct article to complete the sentence
a) a	Himalayas
b) the	
c) of	
d) None	
	stence by choosing the correct form of the verb given in brackets.
She will a) got	(get) you a new pair of jeans on your birthday.
b) gotten	
c) get	
d) getting	
91.Choose the correc	et tense for the sentence given below:
I have been workin	g all day.
a) Past perfect	
b) Present Perfec	
c) Present Indefin	nite
d) Present Perfec	t Continuous
92. Choose the corre	et Indirect Narration of following Sentence:
I shall say again,	"You stole Hari's book."
a) I said again th	at he stole Hari's book.
b) I will say agai	n that you stole Hari's book.
c) I shall say aga	in that you stole Hari's book.
d) None of the a	bove
93. Choose the corre	ect passive voice
She spoke to the offi	cial on duty.
a) The official or	duty was spoken to by her

		ial was spoken to by her on duty. spoken to by the official on duty. the official to be spoken to on duty.	
94	She	visit her grandparents' house during holidays.	
	a) dare to	nouse during holidays.	
	b) ought to		
	c) can		
	d) might		
95	Spot the con a) Comittee		
	b) Committee		
	c) Committe		
	d) Committe	ey	
96	b) To catch a	correct meaning of the idiom: to catch a tartar ranted criminal with great difficulty a dangerous person with disaster with a person who is more than one's match	
97.	We are goin a) because b) so c) but	ng to walk in the mountainsplay football.	
	d) or		
98.	I never buy (a) preposition (b) adverb (c) adjective (d) noun	fruit at the grocery store. The word "never" is	
99.	Which is the a) strongest b) stronger c) as strong d) much stro	e correct comparative form? "I'm strong, but my brother is" onger	

- 100. What is the feminine of bachelor?
 - a) Gentlewoman
 - b) Heroine
 - c) Dame
 - d) Spinster

Section – D General Science

- 101. An example of fossil fuel is
 - a) Wood
 - b) Animal waste
 - c) Coal
 - d) All of these
- 102. Which one of the following gases is used in combustion?
 - a) Hydrogen
 - b) Oxygen
 - c) Nitrogen
 - d) Carbon dioxide
- 103. Burning of charcoal in a closed room will produce
 - a) Carbon dioxide
 - b) Nitrogen dioxide
 - c) Carbon monoxide
 - d) All of these
- 104. Majority of cells cannot be seen directly with our naked eyes because:
 - a) Organisms are generally unicellular
 - b) Cells are microscopic
 - c) Cells are present only inside the body
 - d) Cells are grouped into tissues
- 105. Cells which lack nuclear membrane are
 - a) eukaryotic cells
 - b) prokaryotic cells
 - c) single cells
 - d) multicells

106. The mode of reproduction in Hydra is

- a) asexual
- b) sexual
- c) both (a) and (b)
- d) none of these

107. Viviparous organisms are the ones which

- a) Produce eggs
- b) Produce young ones
- c) Both I and II
- d) None of these

108. The force between two charged bodies is called

- a) muscular force
- b) gravitational force
- c) magnetic force
- d) electrostatic force

109. The hearing range of human ear is

- a) 20 Hz to 20,000 Hz
- b) less than 20 Hz
- c) more than 20,000 Hz
- d) 20 Hz to 25,000 Hz

110. Sound cannot travel through

- a) vacuum
- b) air
- c) water
- d) solids

111. Band of seven colours is called

- a) VIBGYOR
- b) spectrum
- c) dispersion
- d) reflection

112. The amount of light entering the eye is controlled by

- a) eye lens
- b) cornea
- c) iris
- d) ciliary muscle

- 113. Which of the following is a liquid at room temperature?
 - a) Iron
 - b) Bromine
 - c) Iodine
 - d) Phosphorus
- 114. Flow of electron is called
 - a) Electroplating
 - b) Electric current
 - c) Electrodes
 - d) Electrolyte
- 115. Which is the largest planet in solar system?
 - a) Mercury
 - b) Mars
 - c) Jupiter
 - d) Saturn
- 116. Greenhouse gas is
 - a) nitrogen
 - b) methane
 - c) carbon dioxide
 - d) both (b) and (c)
- 117. Agents that pollute water, soil and air is known as
 - a) pollutants
 - b) waste
 - c) effluent
 - d) garbage
- 118. The percentage of nitrogen in air is
 - a) 21%
 - b) 78%
 - c) 12%
 - d) 87%
- 119. Microorganisms that causes disease are also known as
 - a) pathogens
 - b) fungi
 - c) antigen
 - d) microbes

- 120. Cortisone hormone is secreted by:
 - a) Medulla of adrenal
 - b) Cortex of adrenal
 - c) Pancreas
 - d) Thyroid

Section – E Social Science/ G.K.

- 121. Subsidiary Alliance was imposed on Awadh in
 - a) 1800
 - b) 1801
 - c) 1810
 - d) 1815
- 122. Who was called the Father of the Indian Unrest by the British?
 - a) M. K. Gandhi
 - b) B. G. Tilak
 - c) Motilal Nehru
 - d) Bhagat Singh
- 123. Which of the following movement is associated with Chitta Ranjan Das?
 - a) Quit India Movement
 - b) The Salt March
 - c) Non-Cooperation Movement
 - d) None of these
- 124. The idea of widow remarriage was advocated by
 - a) Dayanand Saraswati
 - b) Jyotirao Phule
 - c) Periyar
 - d) Pandita Ramabai
- 125. Which of the reforms movement was founded by H.L.V. Derozio?
 - a) Young Bengal
 - b) Brahmo Samaj
 - c) Veda Samaj
 - d) Aligarh Movement

- 126. Sustainable Development is
 - a) A right Balance between use of resources and conservation of resources
 - b) Allow the resources to be renewed
 - c) Promote recycling of technological devices
 - d) Allow clearing of forests to construct apartments
- 127. The basis of classification of resources are
 - a) level of development and use
 - b) origin
 - c) stock and distribution
 - d) all of these
- 128. The velocity of winds is related to
 - a) The direction in which they blow
 - b) Pressure gradient in the direction of their flow
 - c) The amount of moisture they carry
 - d) The nearness to the sea
- 129. Which of the following determine the use of land?
 - a) Soil and topography
 - b) Climate and vegetation
 - c) Availability of water
 - d) All of these
- 130. Overgrazing is responsible for causing
 - a) soil depletion
 - b) Floods
 - c) earthquake
 - d) landslide
- 131. Name the process in which deep wells are bored to take out petroleum and natural gas.
 - a) Quarrying
 - b) Drilling
 - c) Shaft mining
 - d) Open cast mining

- 132. MLAs are the elected representatives of ______
 a) State Legislature
 b) Rajya Sabha
 c) Vidhan Sabha
 d) Jila Parishad
- 133. Which agriculture is referred as Slash and Burn agriculture?
 - a) Intensive farming
 - b) Shifting agriculture
 - c) Primitive farming
 - d) Plantation agriculture
- 134. When was our Constitution adopted and was enforced?
 - a) 26 January, 1950
 - b) 15 August, 1947
 - c) 2 October, 1950
 - d) 26 November, 1949
- 135. A dispute regarding the election of the president is referred to the:
 - a) Election commission
 - b) Parliament
 - c) Supreme Court
 - d) Vice president