



DEV LULLA SIR'S

Lulla Classes

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SCHOLARSHIP CUM ADMISSION TEST

LSAT MOVING TO STD 10

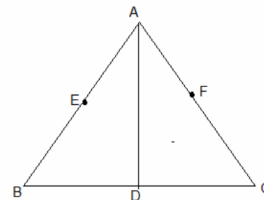
Time 1 hrs Marks : 150

General Instructions

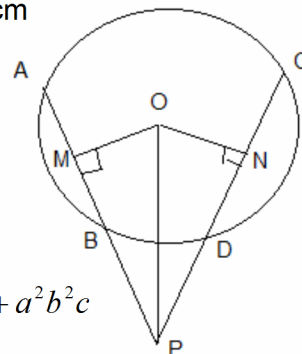
1. This booklet consists of 50 questions. Time allowed will be 60 minutes
2. The answer sheet, OMR, is provided separately. DO NOT tamper with/ Mutilate the OMR or the booklet
3. Submit OMR sheet when asked for by the invigilator. Write all the details which are requested for in capital letters.
4. Side spaces of the question paper booklet may be used for rough work.
5. Marking System: The total test is of 150 marks. +3 marks will be awarded for every correct answer and -1 will be awarded for every incorrect answer.

ANSWER THE BELOW GIVEN QUESTIONS ON THE OMR SHEET ONLY

1. ----- is value of $\sqrt{20 + \sqrt{20 + \sqrt{20 + \dots}}}$
(a) -5 or 4 (b) -4 or 5 (c) 4 and -4 (d) 5 and -5
2. ----- is sum of all odd Integers between 2 and 100 divisible by 3.
(a) 17 (b) 867 (c) 876 (d) 786
3. Length of minute hand of a clock is 14 cm. Area swept by minute hand in 5 minutes is -----.
(a) 153.9 cm^2 (b) 102.6 cm^2 (c) 51.3 cm^2 (d) 205.2 cm^2
4. A lot consists of 14 ball pens of which 20 are defective and others are good. Tina will buy a pen if it is good, but will not buy it if it is defective. The shopkeeper draws one pen at random and gives it to her. Probability that she will buy that pen is -----.
(a) $\frac{5}{36}$ (b) $\frac{20}{36}$ (c) $\frac{31}{36}$ (d) $\frac{31}{144}$
5. Three equal cubes are placed adjacently in a row. ----- is ratio of total surface area of new cuboid to that of sum of surface area of three cubes.
(a) 9 : 7 (b) 7 : 9 (c) 9 : 5 (d) 5 : 9
6. If 2 is a zero of polynomial $g(z) = pz^2 - 3(p-1)z - 1$, then ----- is value of p .
(a) $-\frac{5}{2}$ (b) 0 (c) $\frac{5}{2}$ (d) $\frac{2}{5}$
7. Side of square ABCD is 20% longer than side of square PQRS. Then area of ABCD is -----% more than area of PQRS.
(a) 20% (b) 24% (c) 40% (d) 44%
8. In adj. fig. \overline{AD} is angle bisectors of $\angle EAE$, $\angle AEC = 110^\circ$ and $\angle DCE = 20^\circ$. If $\angle DAE = 30^\circ$ and $\angle EBD = 10^\circ$, then $\angle AEB =$ -----.
(a) 110° (b) 120°
(c) 150° (d) 160°
9. Surface area of a foot ball is $100 \pi \text{ cm}^2$. ----- is volume of air in it.
(a) $\frac{200}{3} \pi \text{ cm}^3$ (b) $\frac{350}{3} \pi \text{ cm}^3$ (c) $\frac{500}{3} \pi \text{ cm}^3$ (d) $\frac{400}{3} \pi \text{ cm}^3$



10. In 1 hour, A walks twice the distance that B walks in same period. In 5 hours, A walks 6 miles more than what B walks in 8 hours. ----- miles does B walk per hour.
 (a) 4 (b) 2 (c) 3 (d) 5
11. If m is prime and n is a composite number and $m + n = 240$ also their LCM is 4199, ----- is value of m and n .
 (a) 13, 227 (b) 17, 223 (c) 19, 221 (d) 123, 217
12. If $H(y) = y^2$ and $g(z) = z^3$ then HCF of $h(b) - h(a)$ and $g(b) - g(a)$ is -----.
 (a) $(a + b)$ (b) $a^2 - b^2$ (c) $b - a$ (d) None
13. Volume of a cone $(V) = \frac{1}{3} \pi r^2 h$. ----- is formula if we make r as the subject it.
 (a) $r = \sqrt{\frac{3V^2}{\pi h}}$ (b) $r = \sqrt{\frac{V}{3\pi h}}$ (c) $r = \sqrt{\frac{3V}{\pi h}}$ (d) $r = \sqrt{\frac{V}{3\pi h}}$
14. A certain sum becomes 3 times itself in 4 years at compound interest. In ----- years does it become 27 times itself.
 (a) 15 years (b) 12 years (c) 36 years (d) 21 years
15. A cat sights a rat at a distance of 200m away from it and starts running towards it at 20m/sec. At this moment, the rat notices the cat and moves away from it at a speed of 15m/sec. After ----- time will the cat be able to catch the rat ?
 (a) 20 sec (b) 40 sec (c) 60 sec (d) 80 sec
16. Area of ring is 16.94 cm^2 and area of a outer circle is 55.4 cm^2 . Find perimeter of inner circle is ----- cm.
 (a) 22 cm (b) 26.4 cm (c) 38.4 cm (d) 29.04 cm
17. In adj. fig., O is centre of circle. A, B, C and D are concyclic and $AB = CD$. If $\angle MON = 120^\circ$, ----- is measure of $\angle OPN$.
 (a) 20° (b) 30° (c) 40° (d) 60°
18. If $\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = -1$ and $abc = 2$, then ----- is value of $ab^2c^2 + a^2bc^2 + a^2b^2c$
 (a) 4 (b) -4 (c) 2 (d) -2
19. If $a = (2^{-2} - 2^{-3})$, $b = (2^{-3} - 2^{-4})$ and $c = (2^{-4} - 2^{-2})$ then ----- is value of $(a^3 + b^3 + c^3)$.
 (a) $\frac{-9}{1024}$ (b) $\frac{-9}{2048}$ (c) 0 (d) 1
20. Absolute value of $12 \times (-3) + 12 - 15$ is -----.
 (a) (-39) (b) (-41) (c) 39 (d) 41
21. Weight of an object is 100N. Its mass will be ($g = 10 \text{ m/s}^2$)
 (a) 10 kg (b) 100 kg (c) 1000 kg (d) 1 kg
22. On a planet a freely falling object falls through a height. h in \sqrt{h} secs. Find the acceleration due to gravity on that planet.
 (a) 2 m/s^2 (b) 4 m/s^2 (c) 6 m/s^2 (d) 8 m/s^2
23. If an object covers distance directly proportional to the square of time lapsed then acceleration is
 (a) Increasing (b) Decreasing (c) constant (d) none
24. The mass of an object at centre of earth will be
 (a) Zero (b) Infinity (c) Remains unchanged (d) None



25. An electron revolves round the nucleus in circular orbit. The necessary centripetal force develops from
 (a) Nuclear force (b) Electrostatic force (c) Gravitational force (d) Magnetic force
26. Which of the following is not scalar.
 (a) Distance (b) speed (c) g (d) G
27. Golden temple is India's longest gurudwara
 (a) Largest gurudwara (b) oldest (c) Both (a) and B (d) None
28. The ozone layer restricts
 (a) Visible light (b) Infra red (c) uv ray (d) x ray
29. Light year is the unit of
 (a) Distance (b) speed (c) time (d) none
30. Which is the brightest star in our galaxy.
 (a) Pole (b) Sirius (c) charon (d) Venus
31. Which cell-organelle is responsible for producing lysosome ?
 (a) Mitochondria (b) Golgi body (c) Plastid (d) Nucleus
32. Plasmolysis is the result of the process of -
 (a) Entry of water in the cell (b) Loss of water by the cell
 (c) Osmoequation through the vacuole (d) Digestion through the food vacuole
33. Which component is not included in phloem -
 (a) Sieve cell (b) companion cell (c) collenchyara (d) phloem parenchyma
34. Which kind of substance are the antibodies ?
 (a) Enzymes (b) Hormones (c) Blood protein (d) Fibrous protein
35. Which substance is not present in vacuole of a plant – cell -
 (a) Amino acid (b) sugar (c) protein (d) glycogen
36. Which scientist gave chemical condensate law ?
 (a) Bose-Einstein (b) Dalton (c) Avogadeo (d) pascal
37. Which of the following colloids is in the liquid medium of liquid substance ?
 (a) Foam (b) Emulsion (c) Aerosol (d) Gel
38. What is the number of protein and electron in $^{31}_{15}P$ respectively ?
 (a) 15, 15 (b) 15, 31 (c) 31, 15 (d) 15, 16
39. Which particles possess positive electric charge ?
 (a) X – rays (b) β – Particles (c) Y – radiations (d) α – rays
40. The number of protons & neutrons in tritium is –
 (a) 1 & 2 (b) 2 & 1 (c) 1 & 3 (d) 3 & 1

From the four selection given, encircle the word or phrase that best completes the sentence. For instance, if the appropriate answer is (d) encircle the letter like (d)

41. Ismail is so ----- that, in a class of about eighty students, you may have hardly had time to notice him.
 (a) self effacing (b) selfish (c) self critical (d) self-opinionated
42. He ----- a rare disease, when he was working in the village.
 (a) Suffered (b) contracted (c) infected (d) took
- Some parts of a sentences given below are underlined. If there is any mistake it is one of the underlinked parts. Identify that part and blacken the code (a,b,c) of that part against the question in the answer sheet. If there is no mistake then mark the code of No error.
43. An open administration will not help (a) if government rules are complicated and incomprehensible (b) for the affected public. (c) No error. ((d)
44. Although I took my birth in an Indian village (a) I had the rare privilege of having my education in England (b) where my father was a physician. (c) No error. (d)

Select the alternatives which you consider both most correct and most effective according to the requirements of standard written English. If you think that the original sentence is the best. Mark 'E' which means 'No improvement' is needed."

45. He has not only violated the law but also he has escaped punishment.

(a) Violated not only the law but also he has escaped punishment.
 (b) Violated not only the law but he has escaped punishment also.
 (c) Not only violated the law but also escaped punishment.
 (d) Not only violated the law but has escaped punishment.
 (e) No Change

46. We live in this terrestrial theatre of universal deterioration

(a) this deteriorating world
 (b) this world always deteriorating
 (c) this world which is always deteriorating
 (d) this world which is perverting
 (e) No change

In each of the following questions parts of a logically and thematically connected sentences are given in a jumbled form. Their possible ordering is given in answer choices. Pick up the correct ordering.

47. Jawaharlal' Nehru

P : under the Cabinet Mission Scheme

Q : Was the first to articulate

R : long before such an assembly was set up

S : the idea of a Constituent Assembly

The proper sequence should be

(a) SRPQ (b) RPQS (c) PQSR (d) QSRP

48. George Bernard Shaw considered

P : a considerable portion of his wealth

Q : so in his will he left behind

R : Current English spelling indefensible

S : for reforms in spelling

The proper sequence should be

(a) RSQP (b) RQPS (c) QRPS (d) QRSP

First and the last sentence of a well connected paragraph are given and coded as questions.

The intervening sentences are jumbled up with regard to their sequence in the paragraph. Pick up the correct order of jumbled up sentences from the answer choices.

49. S_1 : Since the sixties there has been an increasing interest in human neurophysiology, which deals with the neural bases of mental activity and behaviour.

S_6 : So far the journal has published a mixture of articles including reports and investigations.

P : It has a format which is very similar to that of "Brain and Language", a sister journal.

Q : Since then, a number of journals devoted entirely to this area of research have appeared.

R : Before the 1960's when this field was the concern of a small number of investigations, research articles were scattered in various neurological journals.

S : "Brain and Cognition" is one such journal.

The proper sequence should be

(a) RQSP (b) QRSP (c) QSPR (d) RSPQ

50. S_1 : The 'age of computers' is considered to have begun in 1946
 S_6 : And now it is difficult to find a field where computers are not used
P : Those early computers were huge and heavy affairs, with problems of speed and size.
Q : It was only with the introduction of electronics that the computers really came of age.
R : But computers were in use long before that
S : That had several rotating shafts and gears which almost always doomed them to slow operation.
The proper sequence should be
(a) RPQS (b) PRSQ (c) PRSQ (d) PRQS



Solutions

1.	(b) -4 or 5	26.	(c) g
2.	(b) 867	27.	(a) Largest gurudwara
3.	(c) 51.3 cm^2	28.	(d) x ray
4.	(c) $\frac{31}{36}$	29.	(a) Distance
5.	(b) 7 : 9	30.	(b) Sirius
6.	(c) $\frac{5}{2}$	31.	(b) Golgi body
7.	(d) 44%	32.	(b) Loss of water by the cell
8.	(d) 160°	33.	(c) collenchyara
9.	(c) $\frac{500}{3} \pi \text{ cm}^3$	34.	(c) Blood protein
10.	(c) 3	35.	(d) glycogen
11.	(c) 19, 221	36.	(a) Bose-Einstein
12.	(c) $b - a$	37.	(b) Emulsion
13.	(c) $r = \sqrt{\frac{3V}{\pi h}}$	38.	(a) 15, 15
14.	(b) 12 years	39.	(d) α - rays
15.	(b) 40 sec	40.	(a) 1 & 2
16.	(a) 22 cm	41.	(a) self effacing
17.	(b) 30°	42.	(b) contracted
18.	(a) 4	43.	(c) <u>No error</u>
19.	(b) $\frac{-9}{2048}$	44.	(a) <u>I had the rare privilege of having my education in England</u>
20.	(c) 39	45.	(c) Not only violated the law but also escaped punishment.
21.	(a) 10 kg	46.	(c) this world which is always deteriorating
22.	(a) 2 m/s^2	47.	(d) QSRP
23.	(c) constant	48.	(a) RSQP
24.	(c) Remains unchanged	49.	(c) QSPR
25.	(b) Electrostatic force	50.	(a) RPQS