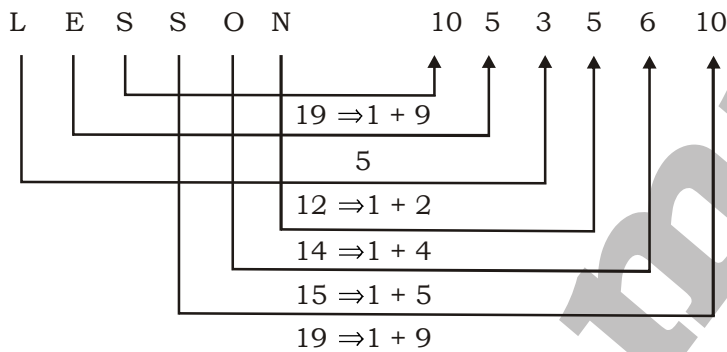
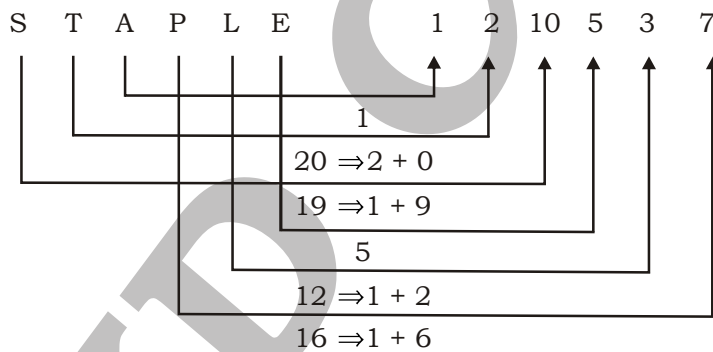


SSC MOCK TEST - 325 (SOLUTION)

1. (C) Umbrella protects us from Rain. Similarly, Dam checks Flood.
2. (A) As, BORE $\Rightarrow 2 + 15 + 18 + 5 = 40 \Rightarrow 40 \div 4 = 10$
Similarly, HOTEL $\Rightarrow 8 + 15 + 20 + 5 + 12 = 60 \Rightarrow 60 \div 5 = 12$
3. (B) Except Bat, others are birds.
4. (C) Except 5943, the sum of others number is 22.
5. (B) As,



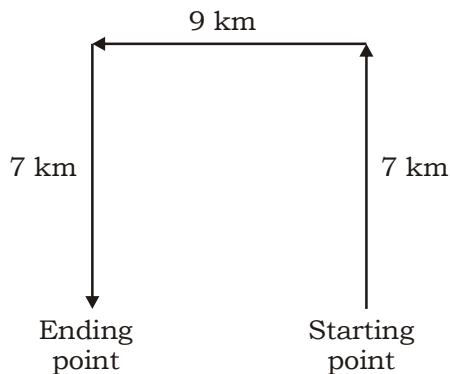
Similarly,



6. (A) $157 + 28 = 185$
 $185 + 56 = 241$
 $241 + 84 = 325$
 $325 + 112 = 437$

7. (B) C L D M F O I R
-
- $+1$ $+2$ $+3$
 $+1$ $+2$ $+3$

8. (C)



So, She is 9 km far from the starting point.

9. (C) As, $14 \times 27 = 378 \Rightarrow 3 \times 7 \times 8 = 168$

Similarly, $21 \times 24 = 504 \Rightarrow 5 \times 0 \times 4 = 0$

10. (D) xmrjd/xmrjd/xmrjd

11. (D)

12. (C) **In the first column,**

$$181 + 243 = 424$$

In the second column,

$$245 + 343 = 588$$

In the third row,

$$78 + 195 = 273$$

13. (A) $225 \div 15 + 8 - 4 \times 16 = 31$

After changing - and \times ,

$$225 \div 15 + 8 \times 4 - 16 = 31$$

$$15 + 32 - 16 = 31$$

$$47 - 16 = 31$$

$$31 = 31$$

14. (D) $S^- \longleftrightarrow P^+ \text{ --- } T^+$



Hence, S is the sister-in-law of T.

15. (D) 2. Person \rightarrow 5. Market \rightarrow 3. Watch \rightarrow 1. Buy \rightarrow 4. Keep

16. (C) Let the age of Shayam = x year

Then, age of Ram = 2x year and age of Shohan = 4x years

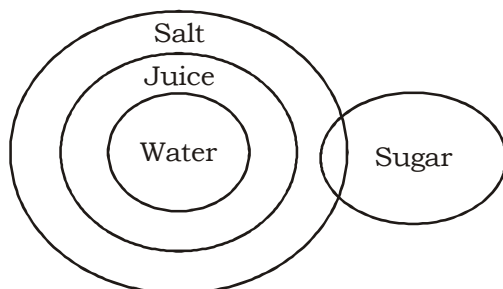
$$4x > 2x > x$$

On arranging the above data, we get

Sohan > Ram > Shyam > Mohan

So, Sohan is the eldest.

17. (C)



I. True II. True III. False

Hence, only conclusions I and II follow.

18. (D) 19. (B) 20. (B)

21. (A) As, $97 + (9 \times 7) = 160$

$$(160 - 97) \times 2 = 126$$

Similarly, $85 + (8 \times 5) = 125$

$$(125 - 85) \times 2 = 80$$

22. (C) 23. (B) 24. (C) 25. (C)

26. (C) Transactions made via UPI (Unified Payments Interface), USSD, AEPS (Aadhaar Enabled Payment System) and RuPay cards will be eligible for participation under this scheme.

27. (C) The compound zinc oxide (ZnO) is called philosopher's wool. Alchemists, as part of their rituals, would burn zinc in air and collect the residue, which formed into white woolly tufts. They called it lana philosophica in Latin, meaning philosopher's wool.

28. (D) Corynebacteria are characterized by their diverse origins. They are found in numerous ecological niches and are most often used in industry for the mass production of amino acids and nutritional factors.

29. (A) X-ray computed tomography (CT) is a medical imaging method employing tomography created by computer processing. This technique is used to generate a three-dimensional image of the inside of an object.

31. (A) The Archaeological Survey of India is an attached office of the Ministry of Culture. Under the provisions of the AMASR Act of 1958, the ASI administers more than 3650 ancient monuments, archaeological sites and remains of national importance.

32. (B) Active transport is the movement of molecules across a cell membrane from a lower concentration to a region of higher concentration against the concentration gradient.

33. (C) IRNSS is an indigenously developed Navigational Satellite system. IRNSS is an acronym for The Indian Regional Navigation Satellite System (IRNSS). IRNSS is officially called NAVIC (Navigation with Indian Constellation). Operated by ISRO (Indian Space Research Organisation).

34. (C) IndiGo was the first airline in India to have launched an ESG report. IndiGo announced that it has signed an agreement with CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun to join hands in deploying sustainable aviation fuel (SAF) in India and across the world.

35. (A) A solar eclipse happens when the moon positioned between Earth and the sun, and the moon casts a shadow over Earth.

36. (D) The National Human Rights Commission (NHRC) of India is a Statutory public body constituted on 12 October 1993. The chairman of NHRC can be a retired Chief Justice of India.

37. (C) Hyder Ali is an Indian Ruler who defeated the British in their early stage of the rule in India. Hyder Ali was the Sultan of the Mysore kingdom in south India. He is well known as the father of the famous ruler Tipu Sultan. He was in command of the entire Mysorean army by 1759.

38. (D) The BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) is a multilateral fund, supported by donor governments and managed by the World Bank.
40. (D) Nitroglycerine is a liquid chemical substance used for making Dynamite by mixing highly sensitive Nitroglycerine with sawdust & powdered Silica.
41. (B) Bajirao was appointed as Peshwa at the age of 20 years under the reign of Chhatrapati Shahu. Chhatrapati Shahu (Shahu Bhosale I) was the fifth Chhatrapati of the Maratha Empire. He was the grandson of Chatrapati Shivaji Maharaj.
42. (A) He is appointed by the President of India. ... The Attorney General of India is the highest law officer of the country. He is responsible to assist the government in all its legal matters.
43. (D) Black soil is most suited for the cultivation of cotton. Black soil is a volcanic origin. Black soil is also called as cotton soil.
45. (B) Fundamental rights in India are the rights guaranteed under Part III (Articles 12-35) of the Constitution of India.
46. (B) The Indian National Congress, on 19 December 1929, passed the historic 'Purna Swaraj' - (total independence) resolution - at its Lahore session. A public declaration was made on 26 January 1930 - a day which the Congress Party urged Indians to celebrate as 'Independence Day'.
47. (B) In telecommunications and signal processing frequency modulation FM conveys information over a carrier wave by varying its instantaneous frequency. FM is most commonly used for radio and television broadcasting.
49. (B) Born on 25th August 1981 in Manali, Shiva Keshavan is the first Indian Luger who has the honour of being the youngest luge Olympian in the history of the sport. Shiva has set various records in the Asian Championship.
50. (B) The Union Cabinet approved the continuation of Pradhan Mantri Awaas Yojana (Rural) for another three years till March 2024.
51. (B)
$$P(x, y) = \left[\frac{mx_2 + nx_1}{m+n}, \frac{my_2 + my_1}{m+n} \right]$$

$$= \left[\frac{3 \times 8 + 2 \times 4}{3+2}, \frac{3 \times 5 + 2 \times -5}{3+2} \right]$$

$$= \left(\frac{32}{5}, \frac{5}{5} \right) = (32, 5)$$
52. (C) $a^3 + b^3 = 432$
 $(a + b)(a^2 + b^2 - ab) = 432$
 $18(a^2 + b^2 - ab) = 432$
 $a^2 + b^2 - ab = \frac{432}{18} = 24$
 $\therefore (a - b)^2 + ab = a^2 + b^2 - 2ab + ab$
 $= a^2 + b^2 - ab = 24$
53. (D)
$$\frac{8}{9} \text{ of } \left(5\frac{1}{2} \div 2\frac{1}{4} \text{ of } 6 \right) \div \left(9 \div \frac{3}{4} \text{ of } \frac{4}{5} \right) \text{ of } \left(8 \times \frac{2}{3} \div \frac{4}{5} \right)$$

$$= \frac{8}{9} \text{ of } \left(\frac{11}{2} \div \frac{54}{4} \right) \div \left(9 \div \frac{3}{5} \right) \text{ of } \left(8 \times \frac{2}{3} \times \frac{5}{4} \right)$$

$$= \frac{8}{9} \text{ of } \left(\frac{11}{2} \times \frac{4}{54} \right) \div \left(9 \times \frac{5}{3} \right) \text{ of } \left(\frac{20}{3} \right)$$

$$= \frac{8}{9} \times \frac{11}{27} \div 100$$

$$= \frac{8}{9} \times \frac{11}{27} \times \frac{1}{100} = \frac{22}{6075}$$

54. (A) $\frac{1}{\sec \theta - \tan \theta} - \frac{1}{\cos \theta}$

$$= \frac{1}{\frac{1}{\cos \theta} - \frac{\sin \theta}{\cos \theta}} - \frac{1}{\cos \theta}$$

$$= \frac{\cos \theta}{1 - \sin \theta} - \frac{1}{\cos \theta}$$

$$= \frac{\cos^2 \theta - 1 + \sin \theta}{\cos \theta(1 - \sin \theta)}$$

$$= \frac{1 - \sin^2 \theta - 1 + \sin \theta}{\cos \theta(1 - \sin \theta)}$$

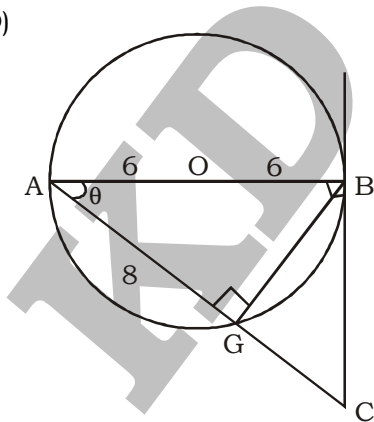
$$= \frac{\sin \theta(1 - \sin \theta)}{\cos \theta(1 - \sin \theta)} = \tan \theta$$

55. (A) Radius = $\frac{28}{2} = 14$ cm

$$\text{Area of circle} = \pi r^2 = \frac{22}{7} \times 14^2 = 616 \text{ cm}^2$$

$$\text{Area of Sector} = 616 \times \frac{150}{360} = 256.66 \text{ cm}^2$$

56. (D)



In $\triangle AGB$,

$$BG^2 = AB^2 - AG^2 = 12^2 - 8^2 = 80$$

$$BG = \sqrt{80} \text{ cm}$$

In $\triangle AGB$ and $\triangle ABC$

$$\tan \theta = \frac{BG}{AG} = \frac{BC}{AB}$$

$$BC = \frac{BG}{AG} \times AB = \frac{\sqrt{80}}{8} \times 12 = 6\sqrt{5} \text{ cm}$$

57. (B) Let the MP = ₹ 100

$$CP = 100 \times \frac{70}{100} = ₹ 70$$

$$\text{Again, MP} = 70 \times \frac{130}{100} = ₹ 91$$

$$\text{Now, SP} = 91 \times \frac{80}{100} = ₹ 72.8$$

$$\therefore \text{Profit\%} = \left(\frac{72.8 - 70}{70} \times 100 \right) \% = 4\%$$

58. (C) Let the present age of A and B be $8x$ and $15x$ respectively.

ATQ,

$$\frac{8x - 8}{15x - 8} = \frac{6}{13}$$

$$104x - 104 = 90x - 48$$

$$14x = 56$$

$$x = 4$$

$$\therefore \text{Required ratio} = (8 \times 4 + 8 : 15 \times 4 + 8) \\ = 40 : 68 = 10 : 17$$

59. (C) $1330x558y2$ is divisible by 88 so it must be divisible by 11 and 8.

For divisibility by 11:

The Difference of Sum of Digits at Even and Odd Places should either be zero or be divisible by 11.

$$(1 + 3 + x + 5 + y) - (3 + 0 + 5 + 8 + 2) = 0 \text{ or a multiple of } 11$$

$$9 + x + y - 18 = 0 \text{ or a Multiple of } 11$$

By taking the above expression equal to 0.

$$x + y = 9$$

60. (A) $\frac{2 + \sqrt{3}}{2 - \sqrt{3}} + \frac{2 - \sqrt{3}}{2 + \sqrt{3}} + \frac{\sqrt{3} + 1}{\sqrt{3} - 1}$

$$= \frac{(2 + \sqrt{3})^2 + (2 - \sqrt{3})^2}{(2 - \sqrt{3})(2 + \sqrt{3})} + \frac{(\sqrt{3} + 1)(\sqrt{3} + 1)}{(\sqrt{3})^2 - (1)^2}$$

$$= \frac{4 + 3 + 4\sqrt{3} + 4 + 3 - 4\sqrt{3}}{(4 - 3)} + \frac{(3 + 1 + 2\sqrt{3})}{3 - 1}$$

$$= \frac{14}{1} + \frac{4+2\sqrt{3}}{2}$$

$$= 14 + (2 + \sqrt{3}) = 16 + \sqrt{3}$$

61. (B) Total work = $42 \times (7 + 5 + 8) = 840$ unit
 Work done by (B + C) in 21 days = $21 \times (5 + 8) = 273$ unit
 Work left = $840 - 273 = 567$ unit

$$\text{Time taken by A to complete remaining work} = \frac{567}{7} = 81 \text{ days}$$

$$\text{Whole work is completed in} = 81 + 21 = 102 \text{ days}$$

62. (B) Let the income of B = ₹ 100

$$\text{Income of A} = 100 \times \frac{125}{100} = ₹ 140$$

$$\text{Income of A after increase of 25\%} = 140 \times \frac{125}{100} = ₹ 175$$

$$\text{Income of B after decrease of 20\%} = 100 \times \frac{80}{100} = ₹ 80$$

$$\text{Total income of A and B before} = 100 + 40 = ₹ 240$$

$$\text{Total income of A and B after} = 175 + 80 = ₹ 255$$

$$\text{Increased} = 255 - 240 = ₹ 15$$

$$\therefore \text{Increased \%} = \left(\frac{15}{240} \times 100 \right) \% = 6.25\%$$

63. (C) A can complete the $\frac{2}{3}$ work in 8 days.

$$\text{A can complete the whole work} = \frac{8}{2} \times 5 = 20 \text{ days}$$

$$\text{B can complete the } \frac{3}{5} \text{ work in 9 days.}$$

$$\text{B can complete the whole work} = \frac{9}{3} \times 5 = 15 \text{ days}$$

$$\text{C can complete the 40\% work in 4 days.}$$

$$\text{C can complete the whole work} = \frac{4}{40} \times 100 = 10 \text{ days}$$

$$\text{Let the total work} = 60$$

$$\text{(A + B + C)'s 1 day work} = \left(\frac{60}{20} + \frac{60}{15} + \frac{60}{10} \right) = 3 + 4 + 6 = 13$$

$$\therefore \text{Number of days taken by A, B and C together to complete the work} = \frac{60}{13} = 4 \frac{8}{13} \text{ days}$$

64. (C) A's speed = $\frac{2000}{5} = 400$ m/minute

B's speed = $\frac{2000}{8} = 250$ m/minute

C's speed = $\frac{2000}{10} = 200$ m/minute

Distance covered by C in 2 minutes = $200 \times 2 = 400$ m

Distance covered by B in 1 minute = 250 m

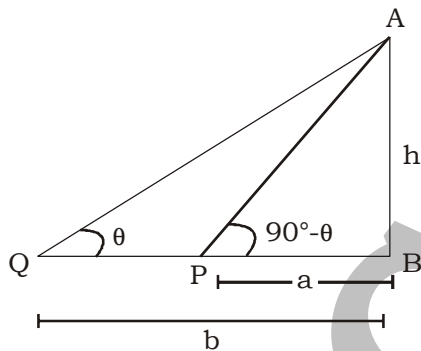
Relative speed of A with respect to C = 200 m

Time = $\frac{400}{200} = 2$ minutes

Relative speed of A with respect to B = 150 m

Time = $\frac{250}{150} = \frac{5}{3}$ minutes

65. (A)



Let AB is tower.

AB = h unit (Let)

$\angle AQB = \theta$ and $\angle APB = 90^\circ - \theta$

PB = a and BQ = b

In $\triangle AQB$,

$$\tan \theta = \frac{AB}{BQ}$$

$$\tan \theta = \frac{h}{b} \dots\dots(i)$$

In $\triangle APB$,

$$\tan(90^\circ - \theta) = \frac{AB}{PB}$$

$$\cot \theta = \frac{h}{a} \dots\dots(ii)$$

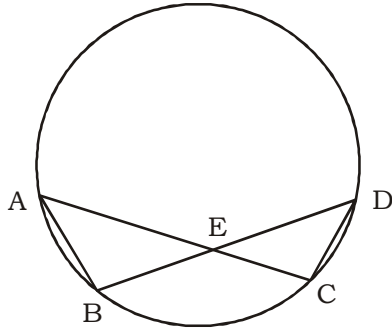
Multiplying equation (i) and (ii), we get

$$\tan \theta \cdot \cot \theta = \frac{h}{b} \times \frac{h}{a}$$

$$h^2 = ab$$

$$h = \sqrt{ab}$$

66. (D)



$$\angle BEC = 130^\circ$$

$$\angle DEC = 180^\circ - 130^\circ = 50^\circ \text{ (straight line)}$$

In $\triangle DEC$,

$$\angle ECD + \angle DEC + \angle EDC = 180^\circ$$

$$20^\circ + 50^\circ + \angle EDC = 180^\circ$$

$$\angle EDC = 180^\circ - 70^\circ = 110^\circ$$

$$\angle BAC = \angle EDC \quad \text{(Angles made on the same arc)}$$

$$\therefore \angle BAC = 110^\circ$$

67. (A) Volume of cylinder = Volume of sphere

$$\pi r^2 h = \frac{4}{3} \pi r^3$$

$$\frac{h}{r} = \frac{4}{3}$$

$$\therefore \frac{\text{Total surface area of cylinder}}{\text{Surface area of sphere}} = \frac{2\pi rh + 2\pi r^2}{4\pi r^2}$$

$$= \frac{2\pi rh}{4\pi r^2} + \frac{2\pi r^2}{4\pi r^2} = \frac{h}{2r} + \frac{1}{2}$$

$$= \frac{4}{6} + \frac{1}{2} = \frac{7}{6} = 7:6$$

68. (B) Selling price = ₹ 1162

Discount = 17%

$$\text{Marked price} = \frac{1162}{83} \times 100 = ₹ 1400$$

It discount is not given, then selling price = ₹ 1400

Now, profit = 40%

$$\therefore \text{Cost price of an article} = \frac{1400}{140} \times 100 = ₹ 1000$$

69. (A) Total number of students in a class = 180

$$\text{Number of students in class A} = 180 \times \frac{60}{100} = 108$$

$$\text{Number of students in class B} = 180 - 108 = 72$$

Let the average score of students from village A = x

$$\text{The average score of students from village B} = x \times \frac{125}{100} = 1.25x$$

ATQ,

$$108 \times x + 72 \times 1.25x = 180 \times 44$$

$$108x + 90x = 7920$$

$$198x = 7920$$

$$x = \frac{7920}{198} = 40$$

∴ Average score of students from village B = $40 \times 1.25 = 50$

$$70. (D) \frac{(\sec \theta + \tan \theta)(1 - \sin \theta)}{\operatorname{cosec} \theta (1 + \cos \theta)(\operatorname{cosec} \theta - \cot \theta)} = \frac{\left(\frac{1}{\cos \theta} + \frac{\sin \theta}{\cos \theta}\right)(1 - \sin \theta)}{\frac{1}{\sin \theta}(1 + \cos \theta)\left(\frac{1}{\sin \theta} - \frac{\cos \theta}{\sin \theta}\right)}$$

$$= \frac{\frac{(1 + \sin \theta)}{\cos \theta} \times (1 - \sin \theta)}{\frac{1}{\sin \theta}(1 + \cos \theta)\left(\frac{1 - \cos \theta}{\sin \theta}\right)} = \frac{(1 - \sin^2 \theta)}{\cos \theta} = \frac{1}{\sin \theta} \left(\frac{1 - \cos^2 \theta}{\sin \theta}\right)$$

$$= \frac{\cos^2 \theta}{\sin^2 \theta} = \cos \theta$$

71. (A) Total number of marks obtained by A in all the subjects together

$$= 150 \times \frac{90}{100} + 130 \times \frac{50}{100} + 120 \times \frac{90}{100} + 100 \times \frac{60}{100} + 60 \times \frac{70}{100} + 40 \times \frac{80}{100}$$

$$= 135 + 65 + 108 + 60 + 42 + 32 = 442$$

72. (C) Marks obtained by all the students together in Chemistry

$$= \frac{130}{100} \times (50 + 80 + 60 + 65 + 65 + 75 + 35)$$

$$= \frac{130}{100} \times 430 = 559$$

Marks obtained by all the students together in Computer science

$$= \frac{40}{100} \times (80 + 70 + 70 + 60 + 90 + 60 + 80)$$

$$= \frac{40}{100} \times 510 = 204$$

∴ Required ratio = 559 : 204

73. (A) Means obtained in all the subjects together by

$$B = 150 \times \frac{100}{100} + 130 \times \frac{80}{100} + 120 \times \frac{80}{100} + 100 \times \frac{40}{100} + 60 \times \frac{80}{100} + 40 \times \frac{70}{100}$$

$$= 150 + 104 + 96 + 40 + 48 + 28 = 466$$

$$D = 150 \times \frac{80}{100} + 130 \times \frac{65}{100} + 120 \times \frac{80}{100} + 100 \times \frac{80}{100} + 60 \times \frac{60}{100} + 40 \times \frac{60}{100}$$

$$= 120 + 84.5 + 96 + 80 + 36 + 24 = 440.5$$

$$F = 150 \times \frac{70}{100} + 130 \times \frac{75}{100} + 120 \times \frac{65}{100} + 100 \times \frac{85}{100} + 60 \times \frac{40}{100} + 40 \times \frac{60}{100}$$

$$= 105 + 97.5 + 78 + 85 + 24 + 24 = 413.5$$

$$G = 150 \times \frac{65}{100} + 130 \times \frac{35}{100} + 120 \times \frac{50}{100} + 100 \times \frac{77}{100} + 60 \times \frac{80}{100} + 40 \times \frac{80}{100}$$

$$= 97.5 + 45.5 + 60 + 77 + 48 + 32 = 360$$

∴ B gets maximum marks.

74. (C) Total marks obtained by A, B and C together in History = $\frac{60}{100} \times (70 + 80 + 90)$

$$= \frac{60}{100} \times 240 = 144$$

Total marks obtained by E, F and G together in Maths = $\frac{150}{100} \times (80 + 70 + 65)$

$$= \frac{150}{100} \times 215 = 322.5$$

∴ Required less% = $\left(\frac{322.5 - 144}{322.5} \times 100 \right) \% = 55.34\% \approx 55\%$

75. (B) Total marks obtained by all the students together in Geography

$$= 60 + 40 + 70 + 80 + 95 + 85 + 77 = 507$$

∴ Required average = $\frac{507}{7} = 72\frac{3}{7}$

MEANINGS IN ALPHABETICAL ORDER

Almanac	an annual calendar containing important dates and statistical information such as astronomical data and tide tables	पंचांग
Beatific	blissfully happy	सुखी
Bellicose	demonstrating aggression and willingness to fight	लड़ाकू
Belligerent	hostile and aggressive	युद्धरत
Cumbersome	large or heavy and therefore difficult to carry or use; unwieldy	बोझिल
Dilapidated	(of a building or object) in a state of disrepair or ruin as a result of age or neglect	जीर्ण
Exquisite	extremely beautiful and, typically, delicate	उत्कृष्ट
Grotesque	comically or repulsively ugly or distorted	विचित्र
Idiosyncrasy	a mode of behavior or way of thought peculiar to an individual	लत
Marvel	be filled with wonder or astonishment	चमत्कार
Militant	combative and aggressive in support of a political or social cause, and typically favoring extreme, violent, or confrontational methods	आतंकवादी
Panacea	a solution or remedy for all difficulties or diseases	रामबाण
Rebuke	express sharp disapproval or criticism of (someone) because of their behavior or actions	फटकार
Recompense	make amends to (someone) for loss or harm suffered; compensate	बदला चुकाना
Shallow	of little depth	उथला
Stoic	a person who can endure pain or hardship without showing their feelings or complaining	उदासीन

SSC MOCK TEST - 325 (ANSWER KEY)

- | | | | |
|---------|---------|---------|----------|
| 1. (C) | 26. (C) | 51. (B) | 76. (B) |
| 2. (A) | 27. (C) | 52. (C) | 77. (A) |
| 3. (B) | 28. (D) | 53. (D) | 78. (A) |
| 4. (C) | 29. (A) | 54. (A) | 79. (A) |
| 5. (B) | 30. (A) | 55. (A) | 80. (B) |
| 6. (A) | 31. (A) | 56. (D) | 81. (C) |
| 7. (B) | 32. (B) | 57. (B) | 82. (A) |
| 8. (C) | 33. (C) | 58. (C) | 83. (C) |
| 9. (C) | 34. (C) | 59. (C) | 84. (B) |
| 10. (D) | 35. (A) | 60. (A) | 85. (A) |
| 11. (D) | 36. (D) | 61. (B) | 86. (B) |
| 12. (C) | 37. (C) | 62. (B) | 87. (A) |
| 13. (A) | 38. (D) | 63. (C) | 88. (C) |
| 14. (D) | 39. (D) | 64. (C) | 89. (A) |
| 15. (D) | 40. (D) | 65. (A) | 90. (A) |
| 16. (C) | 41. (B) | 66. (D) | 91. (C) |
| 17. (C) | 42. (A) | 67. (A) | 92. (A) |
| 18. (D) | 43. (D) | 68. (B) | 93. (C) |
| 19. (B) | 44. (C) | 69. (A) | 94. (C) |
| 20. (B) | 45. (B) | 70. (D) | 95. (A) |
| 21. (A) | 46. (B) | 71. (A) | 96. (D) |
| 22. (C) | 47. (B) | 72. (C) | 97. (A) |
| 23. (B) | 48. (C) | 73. (A) | 98. (B) |
| 24. (C) | 49. (B) | 74. (C) | 99. (D) |
| 25. (C) | 50. (B) | 75. (B) | 100. (D) |